



380

DEVELOPMENT OF SUSTAINABLE AQUACULTURE PROJECT

**A project implemented by the
WorldFish Center**

**Funded by the
U.S. Agency for International Development (USAID)
(Cooperative Agreement 388-A-00-00-00068-00)**

**PROGRESS REPORT
(1 January 2003 - 31 March 2003)**

Prepared by

**WorldFish Center, Bangladesh Office
House No 22B, Road 7, Block F
Banani, Dhaka - 1213, Bangladesh
Tel: +(880-2) 8813250
Fax: +(880-2) 8811151**

May 2003

SH
207
P251
DHS
2003

0000016516

INTRODUCTION

The Development of Sustainable Aquaculture Project (DSAP) was authorized by USAID under the Cooperative Agreement # 388-A-00-00-00068-00 on 28 June 2000. This technical progress report covers activities for the three months of the project, 1 January 2003 through 31 March 2003. Financial reporting for the Project is handled separately from the WorldFish Center (previously called ICLARM-The World Fish Center) headquarters in Penang, Malaysia.

The main thrust of the Development of Sustainable Aquaculture Project is to sponsor on-farm aquaculture production demonstrations implemented through co-operating NGO partners. These demonstrations are expected to show farmers and their neighbors the profitability of managed aquaculture systems as small business operations. Both small ponds and integrated rice and fish systems, based on research proven production results, are the target of these demonstrations. The Project also has a research component directed to understanding and exploring additional production options, improving the technology transfer process and monitoring the impact of the adopted aquaculture practices.

This quarter was highlighted by (i) the identification and selection of new partner NGOs, (ii) the negotiations and finalization of the 2003 work plans and budgets of partner NGOs, (iii) approval of research projects by the Research Grant Technical Committee and (iv) the first meeting of the Steering Committee of the "Research for Sustainable Aquaculture Development Project".

Details about the support of on-farm demonstrations, research, training and administrative actions are given in the respective sections of this report.

DEMONSTRATIONS AND NGO ACTIVITIES

As outlined in the previous progress report (October-December 2002) the results of the 2002 performance assessments were discussed individually with the partner NGOs during the 2003 work plan/budget negotiations in January 2003. After these negotiations the 2003 work plans and budgets of 24 out of 27 partner NGOs were approved. The collaboration with three partner NGOs, namely: ACD, Caritas and Padakhep, was put on hold because of insufficient performance/transparency or disagreement with the partnership approach of the project. Consequently the support to about 2,000 demonstration farmers of 2001/02 and 2002/03 will, unfortunately, be discontinued this year. The project regrets in particular that Caritas, a long time partner and perhaps one of the best NGOs in regard to the implementation of aquaculture demonstrations, was unable to integrate any form of sustainability in its aquaculture dissemination program after more than one year of intensive discussions/debates.

In order to replace the NGOs put on hold and to increase the number of partners as per DSAP strategy 2002-2005 (cf. technical progress report Jan-March 2002) and according to the capacity of the project 11 new partner NGOs were selected following the same selection process as last year. Thirty four (34) NGOs were initially identified, twenty one (21) of them were invited and participated in an orientation workshop organized in Dhaka on 6 February 2003. Finally, eleven (11) NGOs, of which five (5) involved in the 2002/03 associate-partner program, were selected and invited to present a work plan and budget for the 2003/04 extension effort. The evolution of the number of partner NGOs since inception, outlined in attachment 1, indicates that the project is currently collaborating with thirty five (35) partner NGOs, thirteen (13) NGOs out of a total of forty eight (48) have dropped out the program either by withdrawal or by putting on hold.

The currently contracted partners NGOs employ 273 field staff: 35 Program Coordinators and 238 Field Assistants. These partners are committed to implement about 11,900 new demonstrations in 2003/04 program (cf. attachment 2) and to continue providing technical

assistance to approximately 11,000 farmers supported by 24 partner NGOs during the previous production cycles (2001/02 and 2002/03) as well as secondary adopters who entered the Demonstration Farmer Groups (cf. attachments 3 and 4).

A one-day training course on monitoring and evaluation for all 35 partner NGOs was completed in four batches at our regional offices in Bogra, Comilla, Jessore and Mymensingh on 9 and 12 March 2003. Following this training course the partner NGOs are presently monitoring the evolution of the old and new farmer groups (carried forward, drop-out, secondary adopters and new demo farmers). Detailed information about this monitoring will be provided in the next progress report, when the selection of new farmers for the aquaculture season 2003/04 will be completed.

Meanwhile support to partner NGOs through on-the-job training of NGO staff, frequent field visits, attending partner NGOs' extension meetings, rallies/farmer field days and national/regional coordination meetings continued as usual during the reporting period. Fish harvesting of the 2002-2003 aquaculture season is nearly completed and only a few will continue during the next quarter. The partner NGO extension workers supported by the Research Assistants (extension), continue to provide valuable advice and to support the proper use of the pond record books as harvest proceeds.

During the reporting period 73 rallies were organized bringing the total number of rallies conducted during the 2002/03 season to 306 (implementation of 100%). A total of nearly 28,000 persons, of which approximately 21,000 were interested neighbors, participated in these rallies/farmer field days (cf. attachment 5).

The pond record book was slightly modified incorporating the suggestions from the farmer focus group discussions organized during the previous quarter. Thirty thousand (30,000) pond record books were printed and distributed to the regional offices for distribution to all the members of the supported Demonstration Farmer Groups (2001/02, 2002/03 and 2003/04) through the partner NGOs.

Funds for the 1st quarter were released to all 35 partner NGOs of the 2003/04 extension program. Full details of the funds release status and the final situation of the 2002 budgets are given in attachments 6 and 7.

RESEARCH

Impact assessment of adopted aquaculture practices

Year 2000-2001 data: The final report on the pond book data of 2000-2001 is under preparation. It will be published as a DSAP working paper from the WorldFish Center, Bangladesh.

Year 2001-2002 data: The data of the pond book for the aquaculture year 2001-2002 have been entered into the computer. Verification, scrutiny and analysis of the data are proceeding. Necessary computer programs have been made to analyze the data. Preliminary results have also been found out. The draft report is expected to be completed by May 2003. The final report, after validation, will be published in June as a DSAP working paper from the WorldFish Center, Bangladesh.

Year 2001-2002 data: Economic Impact Assessment: Analysis of this data set is going on. Some of the facts of this data analyzed earlier were used by USAID. Further analysis and reporting of the study will be completed soon and a working paper will be published by the WorldFish Center, Bangladesh in June 2003.

Long-term Impact Monitoring (RESTORE): As mentioned in the last progress report a long-term participatory impact monitoring study has been commissioned in 2002 in four of the DSAP working regions namely, Bogra, Mymensingh, Comilla and Magura. A selection of a total of 320 farmers for this study has been made of which 240 will participate as the target demonstration farmers receiving extension support and advice for the 2003/04 aquaculture season. Farmers beyond these 240 will remain with the concerned NGOs as their demonstration farmers so that the target farmers can be replaced in case some decline to continue with the partner NGO and/or with the RESTORE program.

As part of long term impact monitoring, baseline information of the selected farmers for the period May 2002-April 2003 (dry and wet season) are now being collected using the RESTORE questionnaires/formats. Information on the past wet season has already been collected on a recall basis. Collection of the dry season information is currently being monitored and recorded continuously based on repeated visits. The collection of all baseline information of the target farmers will be completed by the end of the next quarter.

In order to measure the impact of the Integrated Agriculture Aquaculture (IAA) intervention on the target farmers, a set of control farmers is necessary to enable comparison. With that purpose in view, the selection of control farmers is going on in each of the four working regions. The same PRA principles and two-way wealth ranking procedures are being followed to select the control farmers. A total of 128 control farmers will be selected. The selection of control farmers has been completed fully in three of the four regions (Bogra, Magura and Comilla) and partially in one region (Bogra). The selected control farmers will not be given any kind of support (financial, technical and others). But for their participation in the program, the DSAP will compensate them in kind with a token gift for their required time for cooperating with us in providing information. The selection of control farmers will be completed by the end of April 2003.

Supplementary studies: The long-term impact monitoring study (to be analyzed using RESTORE software) does not accommodate some of the important indicators to assess full impact. For this reason, the decision for undertaking some supplementary studies has been made. As part of that, it has been planned to commission studies on the consumption patterns and livelihood issues of the selected target as well as control farmers. A questionnaire for the consumption and the livelihood surveys has already been finalized.

Year 2002-2003 data: Following the monitoring and evaluation training course mentioned earlier and as part of their regular monitoring and evaluation program, the partner NGOs are presently evaluating the demo farmer performance 2002/03 by monitoring a random sample of the pond record books (minimum 5%). Data collection supported by the project field based staff will be completed by June 2003.

Collaborative Research with BFRI

The first meeting of the Steering Committee of the “Research for Sustainable Aquaculture Development Project” was held in the Ministry of Fisheries and Livestock on 27 January 2003 under the chairmanship of Mr. Md Abdul Huq, Secretary, Ministry of Fisheries and Livestock. The committee approved the annual work plans and the budget for the year 2002-2003 (July 2002 –June 2003).

The research projects of the collaborative research program between the Bangladesh Fisheries Research Institute and the WorldFish Center are carried out as planned at BFRI with their scientists. Details of the technical progress of the different research projects as well as the financial progress as of 31 March 2003 are specified in attachment 8.

A “trainers’ training” for 24 BFRI scientists was organized from 5 to 8 February 2002 at BFRI headquarters in Mymensingh.

Research grants to Universities

A total of 10 research grants were awarded to the University teachers as of 31 December 2002. However, in response to a new invitation for research grants for 2003, nine concept notes were received. These proposals were reviewed and full proposals including the comments of the reviewers were received from the principal investigators. The full proposals were submitted to the Research Grant Technical Committee (RGTC) of the WorldFish Center in its first meeting held on 6 February 2003. The RGTC, after threadbare discussion, finally approved 5 new research grants. The status of research grants awarded so far is presented in attachment 9. Release of the first installments of funds for the newly awarded grants was made to the principal investigators. In addition, two new concept notes were reviewed, which will be subsequently processed for consideration.

TRAINING

The training program 2003 with regard to the training needs of the partner and associate-partner NGOs as well as for hatchery managers, nursery operators and seed peddlers for the period January-December 2003 was finalized. The training will be focused on the training of trainers (ToT) of the partner NGOs field staff, including a foundation and two refresher courses for newly recruited staff (in 2003) and two refresher courses for those recruited earlier (in 2000, 2001 and 2002). The number of field staff of the partner NGOs (Program Officers and Field Assistants) that participated or is participating in the ToT program since inception of the project is highlighted in attachment 10. These tables indicate an overall field staff dropout of 25.6 percent, whereas the higher dropout of Program Officers (36.4%) is of more concern than that of the Field Assistants (23.7%). The dropout is due to putting on hold of cooperating NGOs (15.5%) and to resignation/dismissal of field staff (10.1%).

During the reporting period the following training courses were organized:

- Four remaining batches of the joint fourth refresher-training course for partner NGO field staff recruited in 2001 and the second refresher-training course for staff recruited in 2002 were organized from 4 to 30 January 2003 in Bogra, Barisal and Mymensingh. A total of 47 Field Assistants and 11 Program Coordinators participated in a 6-day theoretical and practical course on aquaculture-oriented participatory approaches;
- Five batches of the 3-day foundation-training course for partner NGO field staff recruited in 2003 were organized from 15 March to 3 April 2003 in Barisal, Jessore and Dhaka. A total of 119 Field Assistants and 13 Program Coordinators participated in this course;
- Five batches of the first refresher-training course on aquaculture oriented participatory approaches for partner NGO field staff recruited in 2003 were organized from 15 March to 3 April 2003 in Barisal, Jessore and Dhaka. A total of 119 Field Assistants and 13 Program Coordinators participated in a 3-day theoretical training course;
- Four batches of a 1-day training course on monitoring and evaluation for partner NGOs were organized on 9 and 12 March in Bogra, Comilla, Mymensingh and Jessore. A total of 29 managers and 35 Program Coordinators were trained;

10 Program Coordinators and 6 Research Assistants (extension) participated in a one-day review cum training meeting on GIFT seed production in rice based ecosystems organized in Dhaka on 6 February 2003. The progress of the pilot GIFT trials was reviewed, different technical options were reviewed and solutions for major problems were identified and discussed.

A one-day national annual evaluation meeting with associate-partner NGOs was held in Dhaka on 2 March 2003. Representatives from 58 out of 65 invited partners attended this first national evaluation meeting. One representative per region presented the achievements and lessons learnt of the 2002/03 extension effort of the associate-partner NGOs. All participating partners committed to continue and to increase their aquaculture dissemination

program. The project agreed to intensify field visits and training according to the project's capacity.

ADMINISTRATION

The list of Project personnel as of 31 March 2003 is attached (cf. Attachment 11). The contract of Mr. Hasan Ahmed Chowdhury, Research Associate (training) that expired on 31 December 2003 was not renewed by mutual consent, allowing Mr. Chowdhury to focus on his PhD study.

After approval by the Regional Inspector General of USAID Manila, KPMG Malaysia was contracted to conduct the Recipient Contracted Audit of the years 2001 and 2002 following the donor's "Guide for Financial Audit contracted by Recipient".

The usual assortment of meetings, visitors and field visits were attended during the period January to March 2003. The most important were:

1. Dr. Paul Thompson, Officer-In-Charge and Mr. Johannes Janssen, Project Leader participated in the first Steering Committee Meeting of the collaborative research program with BFRI 'Research for Sustainable Aquaculture Development Project' organized by the Ministry of Fisheries and Livestock on 27 January 2003;
2. Organized a three-day field trip for Mr. Latifur Rahman, CTO, USAID Dhaka to visit field activities in Jessore and Magura from 28 to 30 January 2003;
3. Mr. Johannes Janssen, Project Leader delivered a lecture on management of the Development of Sustainable Aquaculture Project and the collaborative research program between BFRI and WorldFish during the Training of Trainers course organized for BFRI scientists by the Bangladesh Fisheries Research Institute (BFRI) on 8 February 2003 in Mymensingh;
4. Dr. Md. Ferdous Alam, Research Coordinator and Mr. Johannes Janssen, Project Leader participated in the first meeting of the Research Grant Technical Committee organized by the WorldFish Center Bangladesh on 6 February 2003;
5. Mr. Naseem Aleem, Field Coordinator, Mr. Reazul Karim, Research Associate and Dr. Khondker Murshed-e-Jahan, Research Associate/fellow facilitated the one-day orientation workshop for new partner NGOs organized by the WorldFish Center Bangladesh on 6 February 2003;
6. Mr. Johannes Janssen, Project Leader, Mr. Naseem Aleem, Field Coordinator and Mr. Reazul Karim, Research Associate facilitated the one-day workshop on the evaluation of the associate-partner program 2002 organized by the WorldFish Center Bangladesh on 2 March 2003;
7. Mr. Johannes Janssen, Project Leader met with Dr. Marc Verdegheem, Inland capture fisheries and Aquaculture Department, University of Wageningen to discuss support to two PhD students of BAU/Wageningen for using the RESTORE approach and software;
8. Organized a two-day field trip for Ms Jeannie Harvey, Gender Adviser, USAID Dhaka to visit field activities in Bogra and Jessore;
9. Dr. Md. Ferdous Alam, Research Coordinator delivered a presentation of the Development of Sustainable Aquaculture Project to 'old' and 'new' Peace Corps Volunteers on 25 March 2003.

ATTACHMENTS

- Attachment 1** Cooperating partner-NGOs 2000/01 to 2003/04
- Attachment 2** Status of partner NGO staff and new demonstrations in 2003/04
- Attachment 3** Geographical distribution of aquaculture demonstrations supported by WorldFish-NGO aquaculture extension effort 2002/03 (NGO wise)
- Attachment 4** Geographical distribution of aquaculture demonstrations supported by WorldFish-NGO aquaculture extension effort 2002/03 (number wise)
- Attachment 5** Final status of rallies and farmer days realized during extension effort 2002/03
- Attachment 6** Final status of 2002 budget and fund released to partner NGOs
- Attachment 7** Status of 2003 budget and fund released to partner NGOs as of 31 March 2003
- Attachment 8** Progress of collaborative research program with BFRI
- Attachment 9** Status of research projects with the Universities as of 31 December 2002
- Attachment 10** Status of extension workers of partner NGO 2000/01-2003/04
- Attachment 11** USAID-funded staff list as of 31 March 2003

Attachment 1 Cooperating partner-NGOs aquaculture season 2000/01 to 2003/04

	2000/01	2001/02	2002/03	2003/04	Total
	ADI ARSHI BAIC BS Caritas CARP CIRUP CRED DSS GRAMAUS JC PPSS ¹ PRANTEC RASDO RRC SEVA ¹ SOP ¹ SPP STAR ¹ TMSS UTTARAN ¹	ADI ARSHI ¹ BAIC BRAC ¹ BS Caritas CARP CIRUP CRED DSS ¹ FHD GRAMAUS ¹ JC ORD PRANTEC RASDO ¹ RRC SPP TMSS	ACD ¹ ADI BAIC BS BUK Caritas ¹ CARP CIRUP COAST CRED DJKS DMG FHD JC LDRO ORD OREDAR PADAKHEP ¹ PAGE PP PRANTEC RRC SARA SATU SPP TMSS VPKA	ADI BAIC BS BUK CARP CDS (Chandradip) CIRUP COAST CRED DJKS DMG FHD GRAMAUS GRASUK ISWA JC LDRO LIPP LUSTRE ORD OREDAR PAGE POSD PP PRANTEC Proshika RRC SARA SATU Shristy Shushilan SPP TMSS VPKA WE	
Total	21	19	27	35	
Carried over	-	16	14	24	
New	21	03	13	11	48
Dropout	-	05	05	03	13

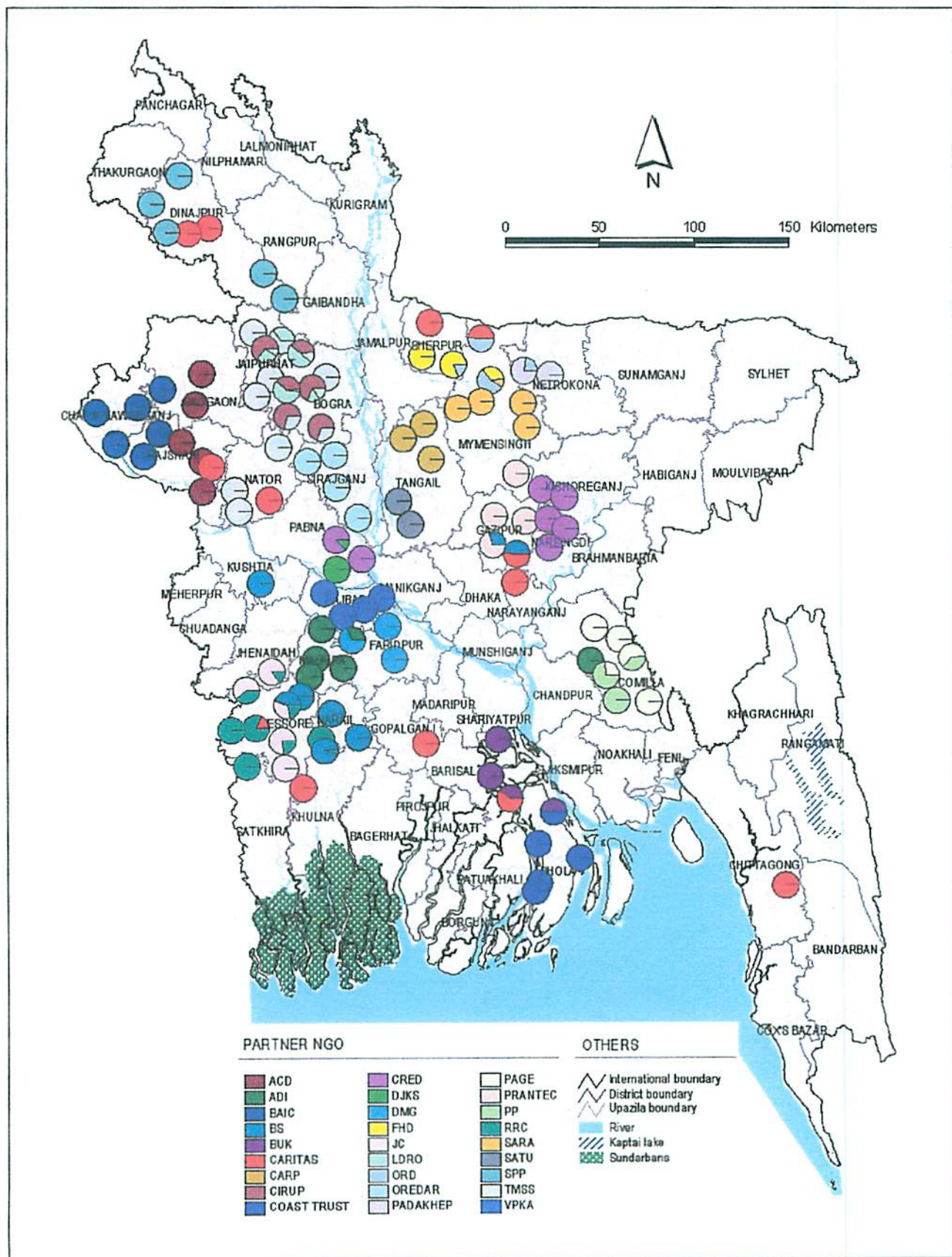
¹ withdrew/put on hold out next season

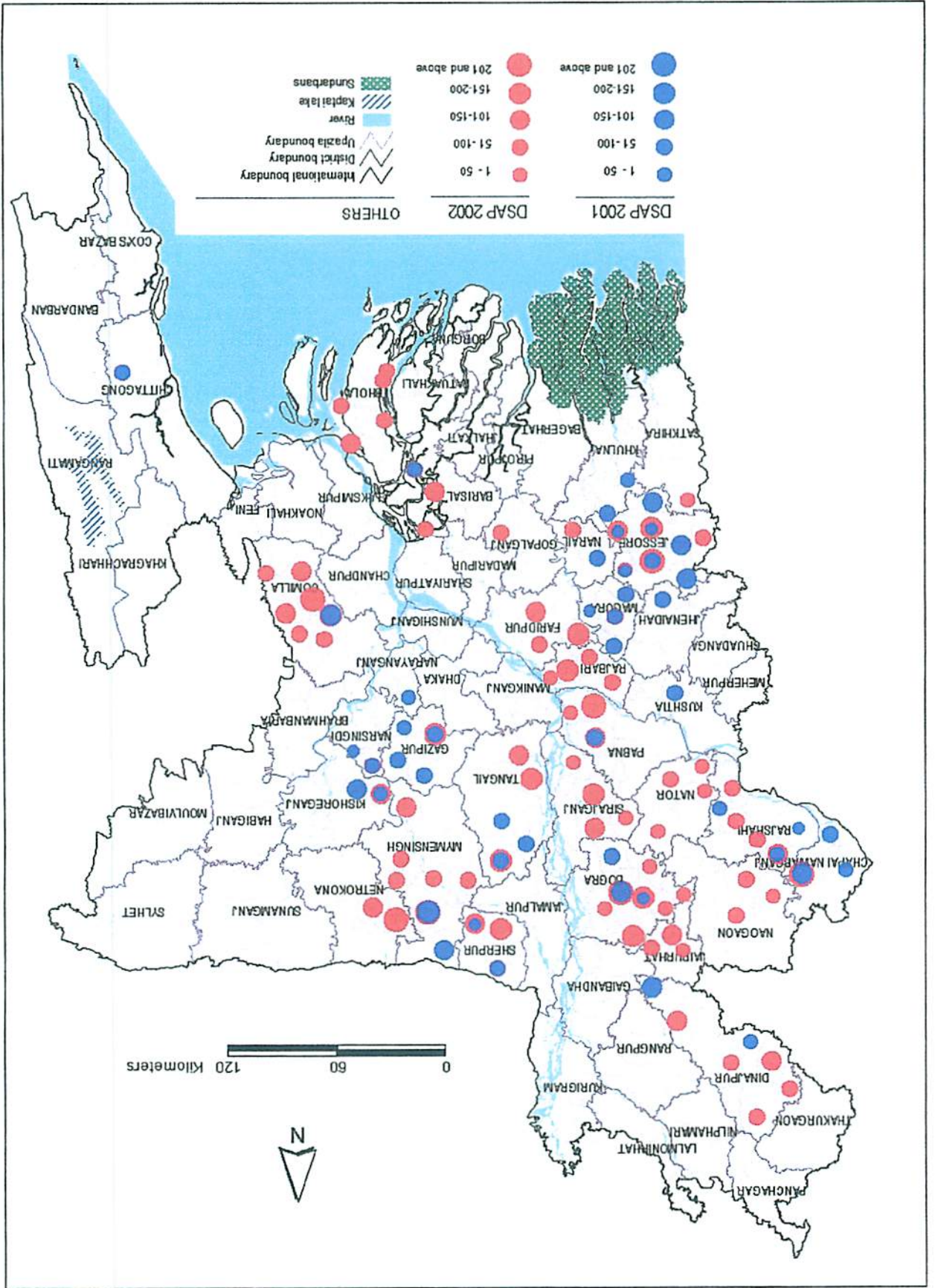
Attachment 2 Status of partner NGO staff and new demonstrations in 2003/04

Sl. No	NGO	old FA	new FA	Total FA	PC	Demos	Remarks
1	ADI	7	2	9	1	450	
2	BAIC	6	3	9	1	450	
3	BS	7	2	9	1	450	
4	CARP	4	3	7	1	350	
5	CIRUP	5	1	6	1	300	
6	CRED	7	2	9	1	450	
7	FHD	4	2	6	1	300	
8	Gramaus		5	5	1	250	new partner NGO
9	JC	6	3	9	1	450	
10	LDRO	5	1	6	1	300	
11	ORD	4	2	6	1	300	
12	PRANTEC	5	2	7	1	350	
13	Proshika		6	6	1	300	new partner NGO
14	RRC	7	2	9	1	450	
15	SATU	5	1	6	1	300	
16	SPP	6	2	8	1	400	
17	TMSS	7	2	9	1	450	
Sub total-I (with grant)		85	41	126	17	6,300	
18	BUK	3	4	7	1	350	
19	CDS (Chandradip)		5	5	1	250	new partner NGO
20	COAST Trust	4	3	7	1	350	
21	DJKS	4	3	7	1	350	
22	DMG	5	2	7	1	350	
23	GRSUK		5	5	1	250	new partner NGO
24	ISWA		5	5	1	250	new partner NGO
25	LIPP		5	5	1	250	new partner NGO
26	LUSTER		5	5	1	250	new partner NGO
27	OREDAR	2	5	7	1	350	
28	PAGE	5	2	7	1	350	
29	POSD		5	5	1	250	new partner NGO
	Proshika		6	6	-	300	new partner NGO
30	PP	4	1	5	1	250	
31	SARA	6	1	7	1	350	
32	Shristy		5	5	1	250	new partner NGO
33	SHUSHILAN		5	5	1	250	new partner NGO
34	VPKA	5	2	7	1	350	
35	Welfare Efforts		5	5	1	250	new partner NGO
Sub total-II (without grant)		38	74	112	18	5,600	
Grand total 35 NGOs		123	115	238	35	11,900	

1	ACD			5	1		put on hold
2	CARITAS			8	1		put on hold
3	Padakhep			5	1		put on hold

Attachment 3 Geographical distribution of aquaculture demonstrations supported by WorldFish-NGO extension effort 2002/03 (NGO wise)





Attachment 4 Geographical distribution of aquaculture extension demonstrations supported by WorldFish-NGO aquaculture extension effort 2002/03 (number wise)

Attachment 5 Final status of rallies and farmer days realized during extension effort 2002/03

NGO	Rallies	Demo farmers	Local participants	Total participants
ACD	10	246	310	556
ADI	10	145	1098	1243
BAIC	14	350	821	1171
BS	14	350	1608	1958
BUK	10	248	318	566
CARITAS	8	322	353	675
CARP	10	240	612	852
CIRUP	10	109	1401	1510
COAST TRUST	15	247	578	825
CRED	18	394	837	1231
DJKS	10	250	500	750
DMG	9	250	1488	1738
FHD	10	216	480	696
JC	14	330	1168	1498
LDRO	10	250	653	903
ORD	14	237	609	846
OREDAR	10	250	451	701
PADKHEP	10	236	242	478
PAGE	10	250	785	1035
PP	10	238	547	785
PRANTEC	10	240	785	1025
RRC	10	250	1062	1312
SARA	10	245	162	407
SATU	10	250	654	904
SPP	12	153	674	827
TMSS	18	450	1777	2227
VPKA	10	245	950	1195
Total	306	6991	20923	27914

Attachment 6 Final status of 2002 budget and fund release to partner NGOs

Sl. No.	NGO	# pond/plot	Total budget		balance 2001	installment				approved expenditures	balance 2002
			Initial	revised		Q-1	Q-2	Q-3	Q-4		
1	ACD	250	581,570				174,471	146,817	223,268	488,169	56,387
2	ADI	350	1,382,875			204,800	521,004	439,909	185,178	1,359,283	-8,392
3	BAIC	350	1,448,890	1,769,196	346,480	192,320	569,899	579,156	107,515	1,741,628	53,742
4	BS	350	1,389,400			207,200	481,436	391,533	284,616	1,311,033	53,752
5	BUK	250	459,940				183,976	80,480	189,778	453,060	1,174
6	CARITAS	400	2,390,681				1,195,341	956,272	0	2,146,308	5,305
7	CARP	250	1,010,687	1,024,187		135,000	387,353	352,187	116,132	1,023,660	-32,988
8	CIRUP	250	1,031,000			194,700	370,923	165,047	300,330	1,018,826	12,174
9	COAST trust	250	681,446				204,434	165,654	260,416	605,853	24,651
10	CRED	350	1,381,843		24,135	204,550	515,054	430,072	211,782	1,353,796	31,797
11	DJKS	250	605,160				181,548	179,900	205,499	512,235	54,712
12	DMG	250	639,225				191,768	191,754	186,422	490,090	79,854
13	FHD	250	1,098,275			192,940	367,522	251,116	257,812	963,500	105,890
14	JC	350	1,364,830		13,930	170,008	563,270	406,998	223,506	1,349,570	28,142
15	LDRO	250	1,060,250			151,300	438,155	286,327	39,231	1,033,487	-118,474
16	ORD	250	1,137,650		14,700	250,000	411,219	280,982	161,086	1,120,764	-2,777
17	OREDAR	250	563,688				169,106	199,548	130,478	486,493	12,639
18	Padakhep	250	1,265,225			191,306	361,900	323,535	360,599	1,025,962	211,378
19	PAGE	250	591,570				177,471	102,748	268,330	429,265	119,284
20	PP	250	537,330	529,830			161,199	145,046	177,406	417,466	66,185
21	PRANTEC	250	1,098,635	1,105,835	15,011	171,128	444,008	318,654	150,199	1,109,639	-10,639
22	RRC	350	1,361,986		14,870	213,900	516,585	496,212	23,789	1,301,383	-36,027
23	SARA	250	591,210				177,363	116,293	268,105	465,083	96,678
24	SATO	250	1,169,848			167,462	377,743	295,848	328,795	1,068,779	101,069
25	SPP	300	1,235,796	1,242,547		190,740	393,797	342,922	258,273	1,148,519	37,213
26	TMSS	350	1,705,300	1,721,051	445,660			910,562	339,066	1,721,051	-25,763
27	VPKA	250	586,260				175,878	133,176	252,819	475,369	86,504
	Total (No/Taka)	7,650	28,370,570		874,786	2,837,354	9,712,423	8,688,748	5,510,430	26,620,271	1,003,470
	Total (US\$)		488,979	0	15,077	48,903	167,398	149,754	94,975	458,812	17,295

\$ = Tk58.02

March 2003

Sl. No.	NGO	No of planned pond/plot	budget		balance 2,002	installment				remaining budget
			total	WorldFish		Q-1	Q-2	Q-3	Q-4	
1	ADI	450	2,133,008	1,684,641	-8,392	654,552	654,552	187,769	196,161	1,038,481
2	BAIC	450	2,316,206	1,801,222	53,742	621,564	621,564	279,047	225,305	1,125,916
3	BS	450	2,167,232	1,706,420	53,752	597,853	597,853	255,357	201,605	1,054,815
4	BUK	350	1,056,000	672,000	1,174	267,626	168,000	168,000	67,200	403,200
5	CARP	350	1,793,730	1,396,010	-32,988	906,991	208,803	208,803	104,401	522,007
6	CDS (Chandradip)	250	654,527	505,771		202,309	126,443	126,443	50,577	303,462
7	CIRUP	300	1,611,692	1,243,804	12,174	448,777	448,777	173,125	160,951	782,853
8	COAST trust	350	1,307,763	832,213	24,651	308,234	208,053	208,053	83,222	499,328
9	CRED	450	2,230,065	1,746,405	31,797	629,804	629,804	243,399	211,602	1,084,804
10	DJKS	350	1,120,196	712,852	54,712	230,429	178,213	178,213	71,285	427,711
11	DMG	300	1,055,423	671,633	79,854	188,799	167,908	167,908	67,164	402,981
12	FHD	300	1,611,670	1,243,790	105,891	355,057	355,057	266,838	160,947	782,842
13	Gramaus	250	1,209,610	1,048,335		387,084	387,084	137,084	137,084	661,251
14	GRASUK	250	761,503	588,434		235,374	147,109	147,109	58,843	353,060
15	ISWA	250	600,215	463,803		185,521	115,951	115,951	46,381	278,282
16	JC	450	2,093,328	1,659,390	28,142	611,706	611,706	217,989	189,847	1,019,542
17	LDRO	300	1,487,676	1,164,885	-118,474	559,695	559,695	22,748	141,222	723,664
18	LIPP	250	635,859	491,346		196,538	122,837	122,837	49,135	294,808
19	LUSTRE	250	637,258	492,426		196,971	123,107	123,107	49,242	295,455
20	ORD	300	1,618,820	1,248,340	-2,777	464,862	464,862	159,308	162,085	786,255
21	OREDAR	350	1,156,771	736,127	12,639	281,811	184,032	184,032	73,613	441,677
22	PAGE	350	1,026,630	653,310	119,284	142,040	163,328	163,328	65,331	391,986
23	POSD	250	637,588	492,681		197,073	123,170	123,170	49,268	295,608
24	PP	250	828,300	527,100	66,185	144,655	131,775	131,775	52,710	316,260
25	PRANTEC	350	1,865,644	1,441,773	-10,639	546,082	546,082	174,805	185,444	906,330
26	Proshika	600	2,337,362	1,942,507		635,627	635,627	335,627	335,627	1,306,880
27	RRC	450	2,107,239	1,668,243	-36,027	678,087	678,087	156,035	192,062	1,026,183
28	SARA	350	1,085,920	691,040	96,678	179,738	172,760	172,760	69,104	414,624
29	SATO	300	1,579,110	1,223,070	101,069	354,699	354,699	256,836	155,767	767,302
30	Shristy	250	569,737	440,252		176,101	110,063	110,063	44,025	264,151
31	SHUSHILAN	250	613,250	473,875		189,550	118,469	118,469	47,388	284,325
32	SPP	400	2,054,443	1,598,276	37,213	562,356	562,356	236,782	199,569	998,707
33	TMSS	450	2,464,310	1,895,470	-25,763	724,630	724,630	223,105	248,868	1,196,603
34	VPKA	350	1,037,828	660,436	86,504	177,670	165,109	165,109	66,044	396,262
35	Welfare	250	692,918	535,436		214,175	133,859	133,859	53,543	321,261
	Total (No/Tk)	11,850	48,158,831	36,353,316	730,401	13,454,040	11,701,422	6,194,837	4,272,616	22,168,875
	Total (US\$)		830,038	626,565	12,589	231,886	201,679	106,771	73,640	382,090

approved expenditure/disbursed

projected expenditure

1 \$ = 58.02

Taka

March 2003

Attachment 8 Progress of collaborative research program with BFRI

1. Culture potentials of small indigenous fish, bata in semi-intensive culture system

This experiment has been initiated in on-farm and on-station conditions since March 2003 in six ponds for a period of 7 months. There are three treatments with two replicates. In all the treatments rohu (*Labeo rohita*), catla (*Catla catla*) were stocked at a density of 5,000/ha. A small indigenous fish (SIS) bata (*Labeo bata*) has been also stocked in treatments-I, II, and III at a density of 5,000, 7,500, and 10,000/ha, respectively. The initial weight of rohu, catla, mrigal, bata was 9.33 (± 1.18), 10.33 (± 1.41), 7.68 (± 1.53) and 3.417g respectively. After stocking rice bran (70%) and mustard oil cake (30%) are being applied as supplementary feeds at weekly intervals between 9.00-10.00 hours. At monthly interval fish sampling is being done to know the growth performances as well as feed adjustment.

2. Refinement of aquaculture technologies through GO-NGO

The project activities are being implemented with two local NGOs at Muktagacha Upazilla Mymensingh. The following two aquaculture technologies have been selected for their wide scale dissemination.

- Improved nursery management for quality carp seed production
- Integrated rice-fish farming.

Each NGO has 3 demonstrations of each technology. The technology of integrated rice-fish farming is being demonstrated in six plots ranging 60 – 100 decimals in boro season. Seedlings of boro (HYV) have been transplanted in all the rice fields, 3 months old fingerlings of rajpunti (*puntius gonionotus*) of 7.25 ± 1.65 g were stocked at a density of 3,000/ha. Organic fertilizers are being applied in the experimental field as recommended doses. Farmers do not yet use pesticides. Fish will be harvested after rice harvesting.

For the refinement of technology, improved nursery management for quality carp seeds production, pond selection through NGOs is in progress. Nursery ponds will be stocked with carp spawn in the month of May.

3. Low cost agro-based feed trials on carp & catfish in the field condition

Pond preparation has been completed for low cost feed trials in carp and catfish in both on-station and on-farm conditions. Meanwhile, a number of farmer's ponds in Bhaluka have been stocked as per design of the experiment. The first sampling was made on 25 March 2003.

4. Factors affecting adoption of aquaculture technologies in some selected areas of Bangladesh

The sample areas in Mymensingh, Bogra, and Norshingdi have been selected for conducting the proposed survey. The questionnaire has been prepared through pre-testing of polyculture farmers in Mymensingh region. Collection of data from the selected area is in progress.

5. Carp brood stock development to minimize inbreeding depression in hatcheries

Two hatcheries have been selected at Mymensingh and Jessore region for conducting the designed experiment. Improved and deteriorated carp brood stocks will be evaluated through breeding and growth trials to ascertain the rate of inbreeding in the hatchery populations during the coming breeding season (from May onwards).

6. Indigenous catfish culture in ponds

In this study eight (4+4) farmer's ponds have been selected in Mymensingh and Jessore districts. Two models of mono and polyculture of *Clarias batrachus* along with carps with two replications will be tested in each area. During the coming breeding season (May-June, 2003) seeds will be distributed among the farmers for stocking. One training program for the selected farmers will be conducted in May 2003.

7. Farming system research & development

The program has been revised and resubmitted involving Jessore and Shantahar sub-stations for large-scale adoption of selected technologies in the farmer's field. The designed experiment will be conducted from May 2003.

Financial Progress

Financial Progress up to March 2003 is given below.

Sl. No	Items of Expenditure	TAPP provision (Total)	Budget for 2002-2003 as per TAPP	Fund Released for 2002-2003	Expenditure up to March 2003	Balance
1.	Vehicle and Equipment	32.50	10.50	5.00	3.50	1.50
2.	Salary and allowances	20.00	3.50	1.50	1.00	0.50
3.	Training	61.50	5.25	3.50	2.00	1.50
4.	Research	30.00	7.75	7.75	6.50	1.25
5.	Others (Fuel & maintenance, telephone and contingencies)	18.50	3.00	2.25	2.00	0.25
6.	Total	162.50	30.00	20.00	15.00	5.00

Attachment 9 Status of research projects with the Universities as of 31 March 2003

Grant No	Name of the Project	Principal Investigator Name and Address	Project tenure	Existing status	Funds status
01	Feasibility of early shrimp farming with over wintered Golda (<i>Macrobrachium rosenbergii</i>) juveniles	Dr. Mahmudul Karim, Shrimp Culture Specialist, House No.16, Road No. 20, Sector No. 4, Uttara Model Town, Dhaka Bangladesh E.mail: dmkarim@bdcom.com	One year (October 2000 - May 2001)	Completed and final report available	Approved: Tk. 235,000 Disbursed: Tk. 235,000
02	Improved handling and preservation of golda <i>Macrobrachium rosenbergii</i> for producing safe and wholesome product	Drs. Md. Kamal and Md. Nazrul Islam, Professors, Department of Fisheries Technology, Bangladesh Agricultural University, Mymensingh., Bangladesh Tel: (091) 55695-97/2359 E-mail: kamal@royalten.net	One year (April 2001 - March 2002)	Completed and final report available	Approved: Tk. 250,000 Disbursed: Tk. 250,000
03	Cost-profit analysis and market testing of value-added product from silver carp and involvement of rural low income people in the production and marketing of value added product	Dr. Nowsad Alam, Professor, Department of Fisheries Technology, Bangladesh Agricultural University, Mymensingh, Bangladesh Email: nowsad@royalten.net	One year (November 2001 - October 2002)	Completed and final report available	Approved: Tk. 250,000 Disbursed: Tk. 200,000
04	Development of an appropriate technology on <i>Azolla</i> based rice-fish farming	Dr. M.H. Mian. Professor, Department of Soil Science, Bangladesh Agricultural University, Mymensingh, Bangladesh Email: soilbau@mymensingh.net	One year (April 2001 - March 2002)	Completed and final report under preparation	Approved: Tk. 254,800 Disbursed: Tk. 229,324
05	Ecology of euglenophytes in aquaculture ponds and their role in fish production	Dr. Saleha Khan, Assistant Professor, Department of Fisheries Management, Bangladesh Agricultural University, Mymensingh, Bangladesh Email: salehamk@bdcom.com	One year, (June 2001 - May 2002)	Completed and final report available	Approved: Tk. 237,315 Disbursed: Tk. 237,315
06	Economic analysis of the sustainability of supplementary feed-based aquaculture	Md. Rais Uddin Mia. Assistant Professor, Department of Agricultural Finance, Bangladesh Agricultural University, Mymensingh, Bangladesh Tel: (091) 55695-97/2260 Email:	One year, (August 2001 - July 2002)	Completed and final report under preparation	Approved: Tk. 225,000 Disbursed: Tk. 170,759

Attachment 9 Completed and ongoing Research Projects as of 31 March 2003 (continued)

Grant No	Name of the Project	Principal Investigator Name and Address	Project tenure	Existing status	Funds status
07	Study of inbreeding problems of Thai Pangas (<i>Pangasius sutchi</i>) in Bangladesh using allozyme electrophoresis (Mymensingh region)	Dr. Md. Mukhlesur Rahman Khan Assistant Professor Department of Fish Biology and Genetics Bangladesh Agricultural University, Mymensingh 2202 E-mail: mukhles@royalten.net	One year (December 2001 - November 2002)	Completed and final report under preparation	Approved: Tk. 250,000 Disbursed: Tk. 250,000
08	Socio-economic aspects of freshwater prawn (<i>Macrobrachium rosenbergii</i>) culture development in Mymensingh	Dr. Nesar Ahmed, Assistant Professor, Department of Fisheries Management, Bangladesh Agricultural University, Mymensingh, Bangladesh Tel: (091) 55695-97/2281 Email: nesar@royalten.net	One year (January 2002 - December 2002)	Completed and final report under preparation	Approved: Tk. 126,000 Disbursed: Tk. 126,000
09	Management of Euglenophytes in Aquaculture Ponds for Improving Fish production in Bangladesh	Dr. Saleha Khan, Assistant Professor, Department of Fisheries Management, Bangladesh Agricultural University, Mymensingh, Bangladesh Email: salehamk@bdcom.com	One year (January 2003 - December 2003)	On-going (continuing component)	Approved: Tk. 290,000 Disbursed: Tk. 116,000
10	Study of inbreeding problems of Thai Pangas (<i>Pangasius sutchi</i>) in Bangladesh using allozyme electrophoresis (Bogra region)	Dr. Md. Mukhlesur Rahman Khan Assistant professor Department of Fish Biology and Genetics Bangladesh Agricultural University, Mymensingh 2202 E-mail: mukhles@royalten.net	One year (January 2003 - December 2003)	On-going (continuing component for Bogra)	Approved: Tk. 290,000 Disbursed: Tk. 116,000
11	Development of HACCP Based Quality Management Systems for freshwater Prawn (<i>Macrobrachium rosenbergi</i>) at Field Level for Improved Production, Handling, Preservation and Transportation.	Dr. Md. Kamal Dr. Md. Nazrul Islam Professors, Department of Fisheries Technology, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh, Bangladesh.	One year (1 April 2003- 31 March 2004)	On-going	Approved Tk. 250,000 Disbursed: Tk. 100,000
12	Development of a Low Cost Feed Using Local Feed Ingredients for Culture of Freshwater Prawn (<i>Macrobrachium rosenbergi</i>) in Ponds by Rural Farmers.	Dr. Md. Arshad Hossain Professor, Department of Aquaculture, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh, Bangladesh	One year (1 April 2003- 31 March 2004)	On-going	Approved Tk. 250,000 Disbursed: Tk. 100,000

Attachment 9 Completed and ongoing Research Projects as of 31 March 2003 (continued)

Grant No	Name of the Project	Principal Investigator Name and Address	Project tenure	Existing status	Funds status
13	Culture and Artificial propagation of freshwater eels (<i>Monopterusuchia</i> and <i>Mastacembalus armatus</i>)	Dr. S.M. Rahamatullah Professor, Department of Aquaculture, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh, Bangladesh	One year (1 April 2003-31 March 2004)	On-going	Approved Tk. 250,000 Disbursed: Tk. 100,000
14	Investigation of Diseases and Development of Strategies for Improved Health Management of Thai pangus (<i>Pangasius sutchi</i>) Cultured in Rural Ponds in Mymensingh District.	Dr. Md. Ali Reza Faruk Associate Professor, Department of Aquaculture, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh, Bangladesh	One year (1 April 2003-31 March 2004)	On-going	Approved Tk. 250,000 Disbursed: Tk. 100,000
15	Marketing of Small Indigenous Fish Species (SIS) and Socio-economic Aspects of SIS Producers, Intermediaries and Retailers with Sustainable Livelihood Approach in Three Fish Markets of Mymensingh.	Dr. Mostofa A.R. Hossain Associate Professor, Deptt. of Fisheries Biology and Genetics, Faculty of Fisheries, Bangladesh Agricultural University, Mymensingh Bangladesh	One year (1 April 2003-31 March 2004)	On-going	Approved Tk. 250,000 Disbursed: Tk. 100,000

Attachment 10 Status of extension workers of partner NGO 2000-2003

Program Coordinators

	2000	2001	2002	2003	total	%
Total	8	15	28	35	-	
Carried forward	-	7	7	17	-	
New	8	8	21	18	55	
Drop-out:						
<i>put on hold</i>	1	3	4		8	14.5
<i>resigned/dismissed</i>	0	5	7		12	21.8
Total dropped out	1	8	11		20	36.4

Field Assistants

	2000	2001	2002	2003	total	%
Total	63	50	153	238	-	
Carried forward	-	43	28	121	-	
New	63	7	125	117	312	
Drop-out:						
<i>put on hold</i>	20	13	16		49	15.7
<i>resigned/dismissed</i>	0	9	16		25	8.0
Total dropped out	20	22	32		74	23.7

NGO field staff (Program Coordinators and Field Assistants)

	2000	2001	2002	2003	total	%
Total	71	65	181	273	-	
Carried forward	-	50	35	138	-	
New	71	15	146	135	367	
Drop-out:						
<i>put on hold</i>	21	16	20		57	15.5
<i>resigned/dismissed</i>	0	14	23		37	10.1
Total dropped out	21	30	43		94	25.6

Attachment 11 USAID-funded staff list as of 31 March 2003

No	Name of Staff	Position	Date Employed
1	Drs. Johannes Janssen	Senior Aq. Scientist/Project Leader	01 September 01
2	Prof. Md. Ferdous Alam	Research Coordinator	01 July 01
3	Naseem Aleem	Field Coordinator IAA	01 June 02
4	Dr. Khondker Murshed-e-Jahan ¹	Research Associate/Fellow	24 January 01
5	Reazul Karim	Research Associate	01 November 02
6	Kh. M Shameem Kamal	Research Assistant	01 July 99
7	Ms Manuara Azim	Research Assistant	01 July 99
8	Mohammad Abdul Latif Siddique	Research Assistant (extension)	11 March 01
9	Md. Jahirul Hoque	Research Assistant (monitoring)	11 March 01
10	Mohammed Mokhlesur Rahman	Research Assistant (monitoring)	11 March 01
11	Bijan Mazumder	Research Assistant (extension)	11 March 01
12	Md. Mamunor Rashid	Research Assistant (monitoring)	20 May 01
13	Md. Abul Kashem	Research Assistant (extension)	20 May 01
14	Md Nazim Uddin	Research Assistant (extension)	29 May 02
15	Md Abdur Razzaque	Research Assistant (extension)	29 May 02
16	Syed Arifuzzaman	Research Assistant (extension)	29 May 02
17	Mir Mostaque Ahamed	Research Assistant (extension)	29 May 02
18	Md. Asadul Hoque	Research Assistant (extension)	23 June 02
19	Md. Khabirul Hasan	Research Assistant (monitoring)	9 June 02
20	Ms Chamon Ara Begum	Research Assistant (monitoring)	9 June 02
21	Saiful Islam	Research Assistant (monitoring)	1 July 02
22	Abu Sayed	Research Assistant (monitoring)	1 July 02
23	Md. Shakil Ahmed Khan	Research Assistant (monitoring)	1 July 02
24	Reza Md Ali Kareem ²	Office Manager	10 Feb. 02
25	Bijoy Bhushan Debnath	Administrative Officer	01 May 90
26	Khan Golam Rasul	Accounts Officer	01 June 96
27	Md. Billal Hossain	Data Entry Operator	01 August 99
28	Ms Maksuda Khanam	Data Entry Operator	01 May 02
29	Md. Abdur Razzak	Driver	01 May 89
30	Md. Dulal	Driver	01 May 99
31	Md. Nazrul Islam	Driver	01 October 01
32	Tapan Chandra Sarker	Messenger	01 July 93
33	Md. Idris Ali ³	Messenger	01 June 98
34	Md. Abdul Wahab ³	Messenger	01 September 98
35	Md. Mahade Hasan Babul ³	Messenger	01 July 01

¹ Costs shared DSAP (80%), FRIAP (fisheries co-management project) (20%)

² Costs shared by ICLARM HQ (50%); CBFM (25%) and DSAP (25%)

³ Costs shared by CBFM (50%) and DSAP (50%)