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DEVELOPMENT OF SUSTAINABLE AQUACULTURE PROJECT

**A project implemented by the
International Center for Living Aquatic Resources Management (ICLARM)**

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

PROGRESS REPORT (1 April 2001 - 30 June 2001)

Prepared by

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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 report covers activities for the three months of the project, 1 April 2001 through 30 June 2001. Financial reporting for the Project is handled separately from ICLARM headquarters in Penang, Malaysia.

The main thrust of the DSAP is to sponsor on-farm aquaculture production demonstrations implemented through cooperating 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 and improving the technology transfer process.

Our activities are generally on schedule as given in the work plan for 2001. We have completed an extensive planning and recruiting process and are now actively implementing the program. Details about the support for on-farm demonstrations, research, training and administrative actions follow in the respective sections of this report.

DEMONSTRATIONS AND NGO ACTIVITIES

As of the end of June we have cooperative agreements with 18 NGOs with commitments to conduct 7000 on-farm demonstrations (see attached list for specifics). One of our early commitments with the NGO GRAMAUS working in the Mymensingh region fell through as it failed to implement the program as defined in the agreement. Accordingly, GRAMAUS refunded the unused portion of its initial advance and two local NGOs (Foundation for Human Development, FHD, and Organization for Rural Development, ORD) were recruited to take over the GRAMAUS project personnel and demonstration arrangements. Initial training of the NGO trainers has been completed and our research assistants have been deployed in five regions of the country to monitor and support the NGOs in their further implementation of the program. We continue to interact actively with the NGOs as there is a progressive learning and feedback process involved in managing these demonstration efforts. The next NGO coordinating meeting is scheduled for 22 July, after which a round of 3-day follow-up training sessions will be held with the NGO trainers.

RESEARCH

Under the DSAP five small research projects have been funded. The first was to Dr. Mahmudal Karim to direct field studies about the "Feasibility of Early Shrimp Farming with Over-wintered Galda Juveniles." At two different locations late spawned prawn juveniles, *galda* or *golda* (*Macrobrachium rosenbergii*), were held in ponds over the cooler winter months and further grown out in the early warmer spring period. Dr. Karim had authorized support of Tk. 235,500 but completed the work and

submitted a final report and financial accounting claiming the amount of Tk. 162,447. The results clearly show that *golda* juveniles can be cultured over the winter season. The implications are that the hatchery season for *golda* can be extended later in the summer and over-wintered juveniles can give an early start on the production season over that obtained with same year spawn. Dr. Karim is now working with the USAID sponsored ATDP2 program, which has been encouraged to strengthen the collection and marketing linkages to support *golda* aquaculture development.

Four small research grants are now in force with the Bangladesh Agricultural University in Mymensingh:

1. Improved handling and preservation of *golda Macrobrachium rosenbergii* for producing safe and wholesome product. Drs. Md. Kamal and Md. Nazrul Islam, BAU Dept. of Fisheries Technology. Tk. 250,000. 1 April 2001 - 30 March 2002.
2. Cost-profit analysis and market testing of value-added product from silver carp... Dr. Nowsad Alam, BAU Dept. of Fisheries Technology. Tk. 250,000. 1 November 2000 -31 October 2001.
3. Development of an appropriate technology on Azolla based rice-fish farming. Dr. M. H. Mian. BAU Dept. of Soil Science. Tk. 254,800. 19 April 2001 - 1 April 2002.
4. Ecology of euglenophytes in aquaculture ponds and their role in fish production. Dr. Saleha Khan, BAU Dept. of Fisheries Management. Tk. 237,315. 1 June 2001 - 30 May 2002.

Verbal approval has been given to Prof. Ferdous Alam to support a master's degree student studying the cost and availability of local ingredients that could be used in fish feeds. This will be a 1-year study to be formally approved upon acceptance of a revised proposal cleared through proper administration at BAU. Under Prof. Alam's guidance we also expect to initiate baseline studies of selected farms using the ICLARM software program RESTORE following training that is scheduled for August 2001.

We also have sent one of our research assistants, Mr. Shameem Kamal to get GIS training from the EGIS and BARC programs and acquired selected data files to assist in our use of GIS in our reporting and recommendation processes, e.g., see attached maps of our Year 2000 demonstration efforts. On a shared basis with other ICLARM projects we expect to recruit an experience GIS staff person in the near future.

We continue to work with data from past demonstration efforts. Two working papers reporting earlier work have been drafted (Fisheries resources and livelihood of the villagers of Chitrapara and Profitability of the farming systems and contribution of small-scale aquaculture in Bangladesh) and will be duplicated and circulated shortly. Information from the Year 2000 pond record books is still being entered into a computer database for further analysis. The pond record book format for the Year 2001 demonstrations has been further modified to facilitate data collection and to leave the recommendations and harvest information with participating farmers.

TRAINING

An assessment of the impact of the 12 training programs given last year to non participating NGOs has been conducted. Of the 149 different NGOs whose 267 field

trainers receiving training in one of the 3-day workshops, 58 have responded to our questionnaire. These respondents indicate that in the Year 2000 they trained 5,153 farmers in the technologies they had learned from ICLARM, with 5,068 doing demonstrations in a combined production area of 1,345 ha. In 2001 they expect to train 19,236 farmers, have 20,116 demonstrations in a combined water area of 2,950 ha. On the basis of this positive feedback we have again scheduled similar training courses in this year and have advertised calling for nominations to attend the different programs.

We have already completed 6-day foundation training courses of 106 DSAP field trainers from 1 April to 11 May 2001. In the first batch 32 senior trainers (15 project coordinators, 8 NGO executives, 8 research assistants and 1 research fellow) participated in the training workshop on recent technology options; research and demonstration systems; training methodology; project implementation, monitoring, evaluation and management aspects. Seventy-four field trainers working with the partner NGOs were then trained in one of three batches with the help of resource people from BAU, BFRI, DOF, and GTI.

We also want to direct specific training to the fish hatchery and nursery operators later this year in collaboration with BFRI. In this regard we have provided editorial support and now printed 1000 copies of a booklet *Genetic Improvement and Conservation of Carp Species in Bangladesh* by M. G. Hussain and M. A. Mazid (74 pp.) for use in this training and as a reference for concerned operations.

The Project provided Mr. Md. Mokarrom Hossain, Aquaculture and Fisheries Specialist with BRAC through whom we coordinate our programs with BRAC, with per diem and registration cost to attend the TILAPIA 2001 conference in Kuala Lumpur 28-30 May and helped arrange a 2-day study tour following the conference.

ADMINISTRATION

A list of the Project personnel as of 30 June 2001 is attached. During the report period two new research assistants have joined the staff, Mr. Mamunor Rashid and Mr. Md. Abdul Kashem. Following a national search Prof. Ferdous Alam from BAU has accepted an appointment starting 1 July to serve as the NGO Coordinator and Researcher with the Project. Headquarters interviewed two candidates for the project leader position and has reached an agreement with Drs. Johannes (Hans) Janssen, a Dutchman with extensive aquaculture development project experience in Africa, who is expected to report on 1 September. Dr. Grover's contract as project leader has been extended through October to allow sufficient overlap with the new project leader to assure an orderly transition.

The ICLARM Bangladesh office has completed a move to a new location, House 22B, Road 7, Block F, Banani, Dhaka 1213, by the end of June. This location, not far from the old office with the same telephone and email addresses, gives added space and upgraded facilities to support ICLARM's programs. The ICLARM Bangladesh office underwent a comprehensive structural and operational review and audit in early June. The audit reports generally noted that our financial and personnel procedures were in order. We do expect to implement some recommendations regarding staffing

and better coordination of financial reporting with headquarters as a result of the review.

During the report period Project staff also received numerous visitors, attended meetings and provided counsel about aquaculture development in Bangladesh. Notable among these were the presentation and review of the Northwest Fisheries Extension Project (NFEP2) coordinated by DFID and the concluding workshop the Research Project on Increasing and Sustaining the Productivity of Fish and Rice in the Flood-prone Ecosystems in South and Southeast Asia 12-13 June in Dhaka.

ATTACHMENTS

List of NGO Cooperators

Project personnel

Maps of Year 2000 demonstration effort

**SUSTAINABLE AQUACULTURE PRACTICES DECEMBER 2000 - 2001
NGOs AND FARMER INFORMATION SHEET**

Sl. No	Name of NGO	No. of demonstrations		No. of technologies		Approved budget (Tk)	Funding status and installments released			TOT		Farmers training			
		P	I	P	I		1 st installment	2 nd installment	Final installment	No. participated in		Foundation		Follow-up	
										Foundation	Follow-up	No. participated	No. of batches	No. participated	No. of batches
1	ADI	500					7,50,000			6					
2	ARSHI	500					7,50,000			7			500		
3	BAIC	500					7,50,000			7			500	500	
4	BS	500					7,50,000			6			500		
5	BRAC	500					7,50,000			6			15		
6	CARITAS	600					7,50,000			8			500		
7	CRED	500					7,50,000			6			460		
8	GRAMAUS*	500					1,95,000			6			-		
9	JC	500					7,50,000			7			500		
10	TMSS	500					7,50,000			6			500		
11	CARP	300					4,50,000			5			300		
12	CIRUP	300					4,50,000			6			300		
13	PRANTEC	300					4,50,000			4			300		
14	RASDO	300					4,50,000			5			200		
15	RRC	300					4,50,000			4			300		
16	DSS	200					3,00,000			3			200		
17	SPP	200					3,00,000			4			179		
18	ORD	300					5,55,000			-			300		
19	FHD	200					-			-			200		

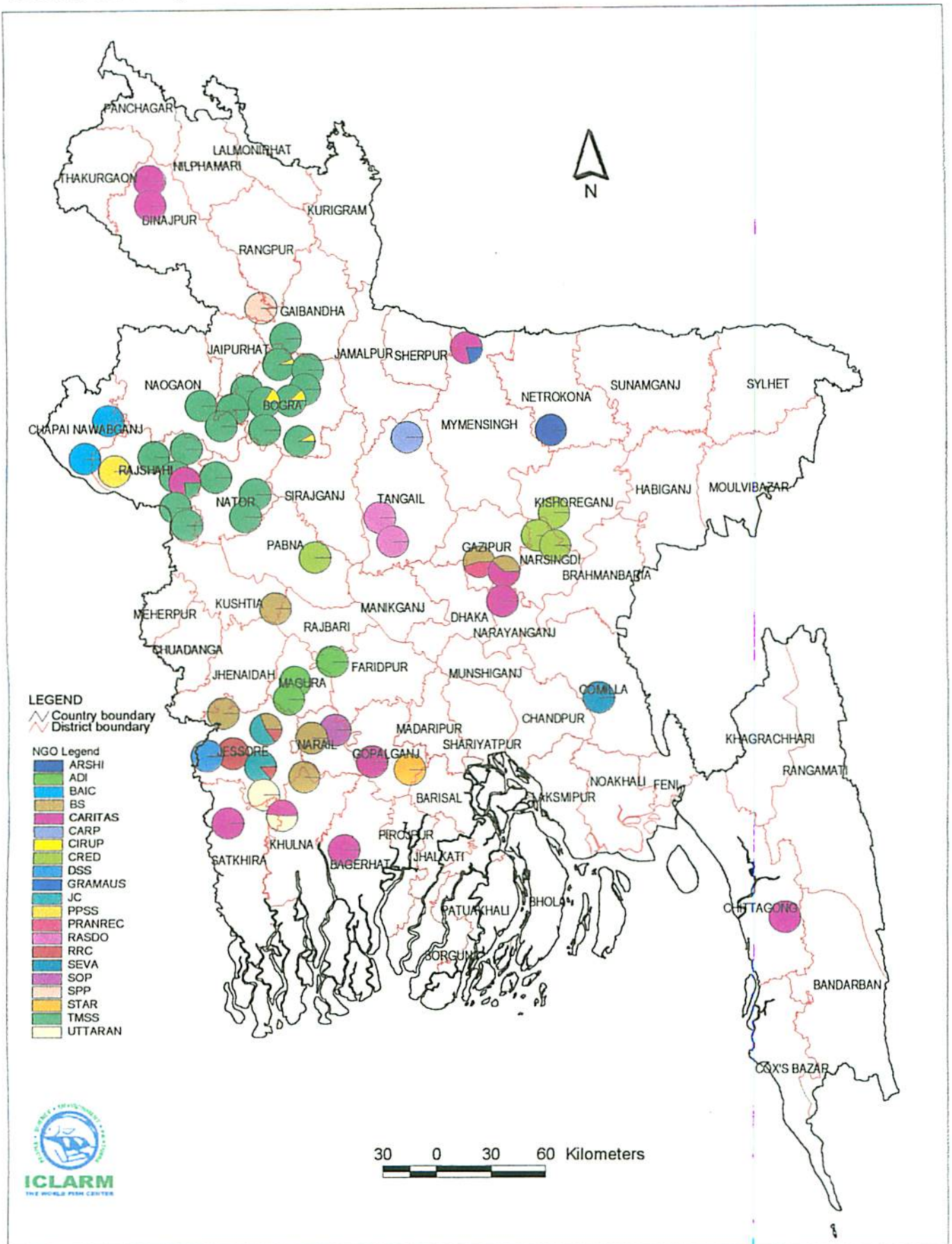
P = Planned; I = Implemented

GRAMAUS made an agreement with ICLARM to operate 500 pond demonstrations in 2001, accordingly they received an amount of Tk. 750,000 as 50% of total allocation. During the period from December 2000 - 24 April 2001, GRAMAUS spent 195,000. Owing to some difficulties of their organizational strategies, they closed down with ICLARM for implementing the demonstrations on 24 April 2001 and rest of the funds of Tk. 5,50,000, GRAMAUS has returned and we allocated another two new partners in the same area.

USAID-FUNDED STAFF INFORMATION AS OF 30 JUNE 2001

Sl. No	Name of Staff	Position	Date Employed
1	Prof. John H. Grover	Senior Aquaculture Scientist & Project Leader	15 Mar 99
2	Prof. Aminul Islam	Integrated Aquaculture Consultant	01 Mar 99
3	Hasan Ahmmed Chowdhury	Research Associate	15 Dec 99
4	Dr. Khondker Murshed -e-Jahan	Research Fellow	24 Jan 01
5	Kh. M Shameem Kamal	Research Assistant	01 Jul 99
6	Manuara Azim	Research Assistant	01 Jul 99
7	Mohammad Abdul Latif Siddique	Research Assistant	11 Mar 01
8	Md. Jahirul Hoque	Research Assistant	11 Mar 01
9	Mohammed Mokhlesur Rahman	Research Assistant	11 Mar 01
10	Bijan Mazumder	Research Assistant	11 Mar 01
11	Md. Mamunor Rashid	Research Assistant	20 Jun 01
12	Md. Abul Kashem	Research Assistant	20 Jun 01
13	Bijoy Bhushan Debnath	Administrative Officer	01 May 90
14	Khan Golam Rasul	Accounts Officer	01 Jun 96
15	Md. Billal Hossain	Data Entry Operator	01 Aug 99
16	Md. Abdur Razzak	Driver	01 May 89
17	Md. Dulal	Driver	01 May 99
18	Tapan Chandra Sarker	Messenger	01 Jul 93
19	Md. Idris Ali	Messenger	01 Jun 98
20	Md. Abdul Wahab	Messenger	01 Sep 98

Distribution of demonstration ponds of RDSAP project according to respective NGO
 ICLARM-NGO Program 2000



30 0 30 60 Kilometers

Figure 1. Location of Whole-farm Study Sites

