

University Links.

No 3. March 2003

Editorial

This issue sees the inclusion of recently approved research awards from the Community Based Fisheries Management Project funded by DFID (UK) and the Development of Sustainable Aquaculture Project supported by USAID, both managed through the World Fish Center (formerly ICLARM). Their addition illustrates the widening scope of this newsletter and increasing cooperation of fisheries research activities within Bangladesh. Despite being a Bangladesh based initiative, contributions from individuals and institutions anywhere who are engaged in fish related activities are always welcome.

The development of a coherent approach to research in Bangladesh was strengthened by the inaugural session of the Fisheries Research Forum of Bangladesh on 12 Nov 2002 in Dhaka. Over 60 representatives from all parts of the fisheries sector attended and formalisation of such a body was overwhelmingly endorsed. Minutes of this meeting are available from the Editor. An executive committee met on 30 January 2003 and formalised a constitution and operating mechanism. The next full meeting of the Forum is scheduled for 27 April 2003, when the focus will be on coastal issues.

The Support for University Fisheries Education and Research (SUFER) project has realigned its approach to funding research. In the past individuals from participating universities and their partners from other institutes and NGOs approached the Project with ideas for funding. This did not generally provide a coherent strategy to meet research needs particularly towards the poverty focused objectives of the Project. SUFER through direct involvement of the sector, ranging from landless wild fry collectors to large scale private hatchery owners and the donor community, identified three key areas in which the project could significantly contribute to poverty focused research and support initiatives to influence policy change within the sector. Consequently, future research funding will be on issues that focus on the poor in coastal communities, the improvement of spawn quality and environmental concerns principally relating to wetland management. Major partners in all or some of these areas include the Empowerment of Coastal Fishing Communities (FAO funded), MACH and GEF Projects (see Issue 2) with five key NGOs. Support to developing pro poor aquaculture continues through previously funded awards.

Chris Morrice (SUFER Project Coordinator)

cmorrice@ugc.org

Edited Abstracts from completed Research Awards funded by SUFER

Institutional and Socio-political Context of Coastal Fishing Communities in Bangladesh

Dr Iftekhar Uddin Chowdhury, Prof. & Chair, Department of Sociology, Chittagong University
image@spnetctg.com

(Purpose: To identify the factors in relation to institutional and socio-political contexts from both micro [internal and external social relations of fishing communities, their access to local power structure, decision making processes, NGOs and other private or public institutions, social history, religion, migration, etc.] and macro [national policies and institutional issues, legislation process, donor's role and overall marginalisation of coastal fishing communities] perspectives.)

Duration: 1 August 2001 – 31 August 2002

Abstract: Lying in the delta of three great rivers – the Ganges, the Brahmaputra and the Meghna, and covering 36,000 sq. km., the coastal areas of Bangladesh comprise about 8% of the total population of the country who depend mainly on fisheries for their livelihoods. As a result, marine fisheries sector plays an important role in the national economy in terms of economic generation, employment and nutrition. Over the last fifteen years, a number of socio-economic changes have taken place, which have tremendous impact on the livelihoods of this fisher folk.

Traditionally the fishermen belong to a single endogamous group of Hindu caste system with strong kindred of recognition of kinship and affinity who have been engaged in this profession from ancient times. These artisanal fisher folk have rigid religious and psychological barriers, which tend to prohibit change of habit and profession. Moreover, high population, landlessness and other socio-economic reasons are encouraging other communities, especially the rural Muslims to change their profession to fisheries in the coastal areas. Therefore, the livelihood of traditional fisher folk is being jeopardized and has reached a fragile point of existence.

The absence of institutional or formal credit and alternative employment, particularly for fishermen during off-season, has greatly fostered the selling of catches at abnormally low prices as part of credit agreements by money-lending Dadondars. These money-lending operations have generated a permanent chain of indebtedness among the fishermen. The huge growth of number of households, fishermen and number of gears and mechanized boats used have created a number of specific problems in relation to institutional and socio-political issues in these fishing communities. The problems lie with organizations, other neighboring communities, government agencies, piracy, discrimination, human rights and local power structure explore highly neglected situation of the fishermen in the coastal areas.

Fish Marketing System in Coastal Areas of Bangladesh

A. N. M. Nurul Kareem, Prof. & Chairman, Department of Marketing, Chittagong University
rabbanee@ctgu.edu

(Purpose: To analyze the functioning of the fish marketing system, which originates in coastal communities and to develop recommendations to improve the livelihoods of poor participants in the fish commodity chain.)

Duration: 1 August 2001 – 31 August 2002

Abstract: Mainly due to population growth, there is a gap between supply and demand for fish and fish products in Bangladesh. Narrowing the gap not only requires increasing production but also improvements to the post-harvest activities including all aspects of the marketing and distribution chain. The study covered six coastal villages and three large fish markets. A total of 300 fishermen and 300 traders were interviewed. The deep-sea catch is variously sold directly to 'aratdars' (52%), floating paiker (32%) or local landing place (5%). Time between catching, and landing by percentage of catch at each selling point was '7 to 10 days' (78%), '1 day' (17%) and '2 to 4 days' (5%) respectively. There is a long chain of intermediaries from fishermen to consumers comprising of moneylenders, local paiker, aratdar, mahajan, faia, dalal, wholesaler and distributor. About 11% of fishermen sell to consumers directly. Ninety five percent of fish is preserved by ice and 3% preserved through cold storage. The main packaging systems are among the respondents; the main packaging systems used were 'bamboo made basket' (73%), 'wood made box' (15%) and 'plastic tray' (8%). Fish are generally packed in layers of about 2.5 cm. Further; extra cleats on the covers may be used to serve to protect the upper layer fishes from quality deterioration. Most respondents wanted "comfortable and scientific packaging system" to protect the quality of fish from deterioration, and freshness ensured. The main problems in fish marketing were identified as lack of easy access to credit, poor infrastructure, absence of adequate marketing information, lack of security at sea for fishermen, lack of modern communication facilities, absence of adequate transportation system, exploitation through dadandari system, absence of logistic support for efficient distribution and lack of adequate storage facilities.

Mass Production of Stockable Sized Fry of *Ompok pabda* (Hamilton)

Dr Md. Fazlul Awal Mollah, Prof., Department of Fisheries Biology & Genetics, Faculty of Fisheries, BAU ffbau@mymensingh.net

*(Purpose: To establish a technique, which would ensure mass production of stockable sized fry of *Ompok pabda*, an indigenous environment friendly species of fish)*

Duration: 1 June 2001 – 31 October 2002

Abstract: The total study consisted of five experiments. i) optimization of Pituitary Gland (PG) extract and Human Chorionic Gonadotropin (HCG) dosages for induced breeding of *Ompok pabda*, ii) effects of different feeds on the larvae, iii) feeding frequency effect and iv) stocking density effects on larvae and fry respectively under laboratory conditions, v) effects of different feeds on growth and survival of fry in grow-out ponds.

Approximately 500 wild *Ompok pabda*, (initial mean weight of 49.8 ± 6.36 g) were reared in ponds from March to September. Among the four doses of PG tried, 18 mg PG/kg body weight showed the best result in the form of ovulation rate (66%), fertilization rate (88%) and hatching rate (761%). For males, a PG dose of 12 mg/kg body weight of fish was used. Subsequently for dose optimization of HCG, 3 breeding trials were conducted in hapa preset in a pond during the period of June to August 2002. From four single HCG doses to females 1 iu/g body weight showed the best response for ovulation. For males, a single HCG dose of 0.5 iu/g body weight of fish gave a satisfactory response.

Of the four feeding regimes tested, feeding just Tubificid worms gave best result in terms of growth performance and survival. Natural mortality and mortality due to cannibalism were also lower on this diet. Both the growth performance and survival rate were the lowest for the larvae reared only on artificial feed although some shoot fries were produced. The optimal frequency of feeding for larvae of *Ompok pabda* with live Tubificid worms out of four regimes was feeding a frequency of four times/day in respect of growth performance, health condition and survival rate.

Fry of *Ompok pabda* were stocked in nine cisterns with under three stocking densities of which 100 fry/cistern gave the best result in terms of growth and survival rate.

The effects of three different feeds on the growth and survival rate of *Ompok pabda* were tested in grow-out ponds for a period of three and half months at a stocking density of 24,000 fish/ha⁻¹ in all cases. Sabinco starter-2 feed gave the best growth performance, health condition and survival rate.

Study of Inbreeding Depression of Rohu (*Labeo rohita*) in both Hatchery and Wild Populations of Bangladesh by Allozyme Electrophoresis

Dr Md. Mukhlesur Rahman Khan, Assistant Prof., Department of Fisheries Biology and Genetics, BAU. mukhles@royalten.net

(Purpose: To study the inbreeding effect on growth performance of wild and hatchery populations of rohu, to understand their morphological and genetic variations and to develop genetic improvement to protect those from inbreeding depressions.)

Duration: 1 January – 31 December 2002

Abstract: In the present research, allozyme study was conducted using about 300 samples of rohu collected from three river sources (Halda, Jamuna and Padma) and five different hatcheries covering all the region of Bangladesh. The result shows that among the three river populations, Halda River fish showed the highest genetic variation. Also the variation observed in Jamuna population suggested they were of hatchery origin. The higher heterozygosity observed in the river stocks compared with hatchery populations suggested that hatchery populations were undergoing inbreeding as well as genetic drift. Among the five hatchery populations, three (Natore, Comilla and Arabpur) were different from other two populations by a genetic distance of $D=0.26$. The lowest genetic distance was observed among Mymensingh and Kishoreganj hatchery populations with the genetic distance of $D=0.08$.

The Sustainable Livelihoods Approach of Fish Distribution and Marketing Systems in Gazipur, Bangladesh

Dr Nesar Ahmed, Assistant Prof., Department of Fisheries Management, BAU
nesar_2000@yahoo.com

(Purpose: To identify marketing inefficiencies and poverty alleviation of those involved in fish distribution and marketing systems.)

Duration: 1 January – 31 December 2002

Abstract: The research was concerned with the sustainable livelihood approach to fish distribution and marketing systems in Gazipur, based on existing marketing systems, economic features of marketing activities and social impacts within and around traders communities.

Based on a sample of 40 traders from the two different markets in Gazipur district, the daily supply of fish in Gazipur Sadar and Sripur markets can be estimated at 2-3 tons and 1-1.5 tons respectively. Most of the fish (80%) is imported from outside the area. Forty eight percent of fish supplied to the markets are Indian Major Carp, 13% are hilsa, 9% catfish, 7% small indigenous fish, 6% prawn and shrimp, 5% tilapia and 12% others, including marine fish. The price of fish depends on market structure, species, quality, size and weight and it was found that the price per kilogram of carp increased with size.

All traders made a considerable profit. It was found that 80% of traders households have broadly improved their food consumption, standard of living, purchasing power, choice and ability as an economic sector through fish marketing.

The sustainable livelihoods of traders and associated groups have been affected by higher transport costs, poor road and transport facilities, poor supply of ice, lack of money for this business, poor institutional support and training facilities for sustainable marketing systems. Recommendations offered are: improvement of fish transport, handling and shipment facilities; establishment of ice factories; introduction of modern wholesaling and retailing facilities; training of fish market operators in areas of fish preservation, handling, icing and curing; introduction of fish quality control measure; provision of governmental, institutional and banking assistance; improvement of hygienic conditions of fish landing centers and markets.

**Research Awards and Extensions given under the SUFER Project
September 2002 to March 2003**

Title of Research Proposal	Purpose	Award Holder & Organization		Start Date	Status, partners/ links
Fisheries extension projects in Bangladesh - Assessing their sustainability and socioeconomic impact on the livelihoods of fish farmers	<p>a. Socioeconomic Impact of Fisheries Extension Projects Assess how fish production and fisheries activities have and are contributing to the livelihoods of farm households</p> <p>b. Sustainability and Feasibility of Fisheries Extension Projects Document the changes and causes fish production practices and management resulting from extension interventions.</p>	Dr M. Serajul Islam. & Dr M. Harun-Ar-Rashid Dept. of Agriculture Economics BAU, Mymensingh—2202, Bangladesh	islamms@royalten.net	1 Jan 2003	Department of Fisheries, DANIDA, CARE, FAO, RDRS, DFID
A participatory approach to develop alternative livelihood option for shrimp fry collectors through nursing of hatchery produced <i>Peneaus monodon</i> fry in floating cage.	With stakeholders test and adapt low cost nursery cage and identify management techniques for nursing shrimp post larvae.	Dr Hossain Zamal Prof, Institute of Marine Sciences, University of Chittagong Chittagong - 4331, Bangladesh	zamal@ctgu.edu coastcxb@gshakti.com	1 Feb 2003	Md. Shamsuddoha Senior Coordinator COAST Trust Luciana Building New Circuit House Road Baharchara, Cox's Bazaar
Economic impact of fish diseases on rural freshwater aquaculture of Bangladesh	Assess the level of farmer's knowledge on fish disease and health problems in their system, the extant, frequency of fish disease problem, and the economic loss incurred.	Dr Ali Reza Faruk Assoc. Prof, Dept of Aquaculture, BAU, Mymensingh - 2202, Bangladesh		1 Feb 2003	

Title of Research Proposal	Purpose	Award Holder & Organization		Start Date	Status, partners/ links
Assessment of community-based indigenous knowledge on biodiversity and environment in the Maljhee-Kangsa floodplain	To identify: (i) the current level of knowledge of local communities regarding biodiversity and the environment, (ii) the extent to which that knowledge can be recalled accurately, (iii) if particular knowledge is not currently held by communities, would they be willing to obtain it? And (iv) solutions to constraints to incorporating that knowledge into improved information systems.	Dr Nesar Ahmed Assistant Prof Dept of Fisheries Management, BAU, Mymensingh – 2202	ffbau@mymensingh.net nesar@royalten.net MACH Project Bill Collis wjcollis@dominox.com ARDMCS David Coates coates.business@usa.net	1 Jan 2003	MACH Project & ARDMCS of the FFP, Bangladesh
Application of Cryopreservation in the Indian major carps (<i>Catla catla</i> , <i>Labeo rohita</i> , <i>Cirrhinus mrigala</i>) and silver carp (<i>Hypophthalmichthys molitrix</i>) and bighead carp (<i>Aristichthys nobilis</i>) to improve quality of seed production	i) To assess the feasibility of establishing of a cryopreserved gene bank for the principle cultured carps. ii) To standardise the cryopreservation techniques for carp sperm.	Dr. Md. Rafiqul Islam Sarder & Dr. Md. Fazlul Awal Mollah Dept of Fisheries Biology and Genetics BAU Mymensingh - 2202	Dr Sarder sarderri@royalten.net Dr Mollah ffbau@mymensingh.net	11 Mar 2003	Mr. Francois Rajits, ARDMCS of the FFP, Bangladesh & Dr. A Bart Assoc. Prof. Aquaculture and Aquatic Resources Management Asian Institute of Technology, Thailand
Socio-economic aspects and work environment of poor workers engaged in shrimp/ processing firms in Bangladesh	i) To investigate job security and income of labourers engaged in shrimp processing activities. ii) To analyse gender issues, wage differences and vulnerability. iii) To examine the health hazards and occupational diseases. iv) To document the changes made in	Dr. Md. Ismail Hossain Dept of Fisheries Technology BAU, Mymensingh – 2202.	ihossain@royalten.net	11 Mar 2003	NGO - SHOSILAN

Title of Research Proposal	Purpose	Award Holder & Organization		Start Date	Status, partners/ links
	processing activities to improve livelihood of the workers. v) To assess economic benefits of good labour practice. vi) Assess whether conditions of labour force meet international standards.				
Status of Indigenous Technical Knowledge in the conservation of coastal biodiversity	To conserve aquatic biodiversity and environment for sustainable livelihoods of the poor in coastal communities by: <ol style="list-style-type: none"> 1. Determining the current level of knowledge on aquatic biodiversity and the environment. 2. To determine the extent to which this knowledge can be documented accurately. 3. To find solution of constraints by incorporating knowledge through improved information systems. 	Mrs. Anwara Begum Shelly, Director, CARITAS & Prof. M. S. Shah, FMRT Discipline, Khulna University	cfp@bangla.net (Off) Prof. M. S. Shah zakariashah@hotmail.com	1 Mar 2003	
The assessment of standing crops of green mussel (<i>Perna viridis</i>), clam (<i>Meretrix meretrix</i>) and oyster (<i>Crasostrea</i> spp.) and their harvest as a potential alternatives livelihood options for poor individuals groups within coastal communities	<ol style="list-style-type: none"> 1. Provide a reliable estimate of the production potential and natural distribution and economic value of these three genera/species of mollusc in Bangladesh 2. Identify Assoc individuals and communities who might be potential stakeholders and beneficiaries of these presently untapped valuable natural resources. 	Prof. M. A. Wahab, BAU, Mymensingh & M. Nurul Amin, Lecturer, IMS Chittagong University	wahabma@bdonline.com smnabd02@yahoo.com	Mar 2003	ECFCLS, Cox's Bazaar
An assessment of the ability of natural stocks of green mussel	To determine i) Whether bacterial and pollutant	Dr M. Maruf Hossain,	maruf@ctgu.edu	Mar 2003	ECFCLS, Cox's Bazaar

Title of Research Proposal	Purpose	Award Holder & Organization		Start Date	Status, partners/ links
<i>(Perna viridis)</i> , clam (<i>Meretrix meretrix</i>) and oyster (<i>Crasostrea</i> spp.) to meet international standards of food safety regarding unnatural contaminants	contamination exists, ii) if present whether: <ul style="list-style-type: none"> • it/they is/are above internationally agreed limits, • the geographical extent of the problem. iii) Identify suitable environmentally clean areas for culture. iv) Produce a guide in proposing a toxic substances control and coastal resources management. vi) Capacity building and expertise development for future monitoring of stocks to meet hygiene standards.	Prof, IMS, Chittagong University			
Potential for the development of export market for mollusc in coastal Bangladesh	Develop an export market for molluscs from coastal Bangladesh by: <ul style="list-style-type: none"> i) Assessing potential international markets from an economic perspective, ii) Identifying marketing channels, iii) Understanding mechanisms by which the poor fishermen and marketing people can access international markets if they exist. 	Dr. M. Nesar Ahmed Assistant Professor, Dept. Fisheries Management, Faculty of Fisheries, BAU, Mymensingh	nesar@royalten.net	Mar 2003	Fisheries Research Institute, Hanoi, Vietnam. ECFCLS, Cox's Bazaar
Identification of culture techniques for green mussel (<i>Perna viridis</i>), clam (<i>Meretrix meretrix</i>) and oyster (<i>Crasostrea</i> spp.) and their adaptation to local	<ul style="list-style-type: none"> (i) Identify current culture practices in regional countries (ii) Adapt these to local conditions in Bangladesh (iii) Identify individuals and groups 	Md. Shahadat Hossain, Lecturer, IMS, Chittagong University &	hossainms@yahoo.com	17 March 2003	NGO-COAST TRUST, COX'S BAZAR & NGO-SHOSILAN-KHULNA

Title of Research Proposal	Purpose	Award Holder & Organization		Start Date	Status, partners/ links
conditions with the poor and land less targeted as potential producers.	among the poor and land less, particularly from PL collectors and bag net fishermen, who are interested and capable of implementing the simple culture technology (iv) Assess risks of mollusc culture and identify measures to reduce their impact	Dr M. Anisul Haque, Assoc. Prof., FMRT Discipline, Khulna University			ECFCLS, Cox's Bazaar
Identify the potential access rights and governance of the poor and landless in the coastal communities for culture of shellfish in the Bangladesh coast.	To assess access rights and associated governance issues affecting poor fisher folk engaged in invertebrate culture and exploitation of natural stocks.	Dr M.A. Salam Assist. Prof, Dept. of Aquaculture, Faculty of Fisheries BAU, Mymensingh	salam@royalten.net	March 2003	ECFCLS, Cox's Bazaar
Polyculture of tilapia with sea bass in unutilized brown fields in Cox's Bazaar District	To bring into production pond systems, owned by poor rural households, which are lying fallow due to saline intrusion resulting from adjacent or abandoned shrimp farming activities.	Dr. Nani Gopal Das Institute of Marine Sciences, University of Chittagong. Bangladesh	ngdas@abnetbd.com	17 March 2003	NGO - ISDE
Feasibility study on the cage culture of mud crab (<i>scylla serrata</i>) by the poor in coastal communities	i. To establish economical feasibility of mud crab cage, pond and pot culture. ii. To use locally available low cost feed ingredients and resources to be used (trash fish, molluscs, <i>Acetes</i> , <i>Squilla</i> and intestines of cows) as low cost feed. iii. To disseminate cage culture results to the rural poor farmers through their participation.	Dr. Mohammad Zafar Institute of Marine Sciences, University of Chittagong Chittagong - 4331, Bangladesh	zafarims@yahoo.com , zafarimscu@ctgu.edu	17 March 2003	NGO – POPI ECFCLS, Cox's Bazaar

Glossary of abbreviations

BARDS	Bangladesh Aquaculture Research & Development Society
BAU	Bangladesh Agricultural University
BFRI	Bangladesh Fisheries Institute
CU	Chittagong University
DU	Dhaka University
ECFCLS	Empowerment of Coastal Fishing Communities for Livelihood Sustainability (FAO funded project)
FF	Faculty of Fisheries
FMRTD	Fisheries and Marine Resource and Technology Discipline
FFP	Fourth Fisheries Project
ITDG	Intermediate Technology Development Group
KU	Khulna University
NGO	Non Government Organisation
RDRS	Rangpur Dinajpur Rural Services

Completed and ongoing Research Projects Awarded by the Development of Sustainable Aquaculture Project, World Fish Center, Bangladesh

Grant No	Name of the Project	Principal Investigator Name and Address	Project tenure	Existing status
01	Feasibility of Early Shrimp Farming with over wintered Golda (<i>Macrobrachium rosenbergi</i>) Juveniles	Dr. Mahmudul Karim, Shrimp Culture Specialist, House No.16, Road No. 20, Sector No. 4, Uttara Model Town, Dhaka Bangladesh dmkarim@bdcom.com	One year	Completed and final report available
02	Improved handling and preservation of golda <i>Macrobrachium rosenbergii</i> for producing safe and wholesome product	Drs. Md. Kamal and Md. Nazrul Islam, Prof.s, Department of Fisheries Technology, BAU, Mymensingh, Bangladesh Tel: (091) 55695-97/2359 kamal@royalten.net	One year (April 2001 – March 2002)	Completed and final report available
2003	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, Prof., Department of Fisheries Technology, BAU, Mymensingh, Bangladesh nowsad@royalten.net	One year (November 2001- October 2002)	Completed and final report available
04	Development of an appropriate technology on <i>Azolla</i> based rice-fish farming	Dr. M.H. Mian. Prof., Department of Soil Science, BAU, Mymensingh, Bangladesh soilbau@mymensingh.net	One year (April 2001 – March 2002)	Completed and final report under preparation
05	Ecology of euglenophytes in aquaculture ponds and their role in fish production	Dr. Saleha Khan, Assistant Prof., Department of Fisheries Management, BAU, Mymensingh, Bangladesh salehamk@bdcom.com	One year, (June 2001 – May 2002)	Completed and final report available
06	Economic Analysis of the sustainability of supplementary feed-based aquaculture	Md. Rais Uddin Mia. Assistant Prof., Department of Agricultural Finance, BAU, Mymensingh, Bangladesh Tel: (091) 55695-97/2260	One year, (August 2001 –July 2002)	Completed and final report under preparation
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 Prof. Department of Fish Biology and Genetics BAU, Mymensingh 2202 mukhles@royalten.net	One year (December 2001 - November 2002)	Completed and final report available
08	Socio-economic aspects of freshwater prawn	Dr. Nesar Ahmed, Assistant Prof., Department of Fisheries	One year	Completed and

	<i>(Macrobrachium rosenbergii)</i> culture development in Mymensingh	Management, BAU, Mymensingh, Bangladesh Tel: (091) 55695-97/2281 nesar@royalten.net	(01 January 2002 – 31 December 2002)	final report available
09	Management of Euglenophytes in Aquaculture Ponds for Improving Fish production in Bangladesh	Dr. Saleha Khan, Assistant Prof., Department of Fisheries Management, BAU, Mymensingh, Bangladesh salehamk@bdcom.com	One year (January 2003 - December 2003)	On-going (continuing component)
10	Study of inbreeding problems of Thai Pangas (Pangasius Sutchi) in Bangladesh using allozyme electrophoresis (continuation for Bogra region)	Dr. Md. Mukhlesur Rahman Khan Assistant Prof. Department of Fish Biology and Genetics BAU, Mymensingh 2202 mukhles@royalten.net	One year (January 2003 to December 2003)	On-going (continuing component for Bogra)

List of proposals awarded by the Development of Sustainable Aquaculture Project in February 2003

Grant No	Name of the Project	Name of the Project	Objectives	Award Start Date	Date of completion
11	Dr. Md. Kamal Dr. Md. Nazrul Islam, Prof.s Department of Fisheries Technology, BAU, Mymensingh. : kamal@royalten.net	Development of HACCP Based Quality Management Systems for Golda, the Freshwater Prawn (<i>Macrobrachium rosenbergii</i>), at Field Level for Improved Production, Handling, Preservation and Transportation	<ol style="list-style-type: none"> 1. To investigate hygiene and sanitary aspects of farm system 2. To investigate chemical composition and food quality of feeds used in golda farms 3. To formulate suitable low cost balance feeds for golda and demonstrate it to the farmer ponds 4. To investigate the level of bacterial contamination, post harvest handling and transportation of prawn at farm level 5. To create awareness among the farmers, suppliers, depot, owners about the HACCP-based quality management system 	1 March 2003	28 February 2004
12	Dr. Md. Arshad Hossain Prof., Dep't. of Aquaculture, BAU, Mymensingh : silke@royalten.net	Development of a Low Cost Feed Using Local Feed Ingredients for Culture of Freshwater Prawn (<i>Macrobrachium rosenbergi</i>) in ponds by rural farmers	<ol style="list-style-type: none"> 1. To formulate and evaluate test diets using locally available ingredients to find out a suitable diet for monoculture of <i>M. rosenbergii</i> in ponds. 2. To formulate and evaluate test diets using locally available ingredients to find out a suitable diet for polyculture of <i>M. rosenbergii</i> with Indian major carps in ponds. 3. To develop a viable culture technology for culture of <i>M. rosenbergii</i> in ponds using low cost feed. 	1 March 2003	28 February 2004
13	Dr. S.M. Rahamatullah Prof., Dep't. of Aquaculture, BAU, Mymensingh	Culture and artificial propagation of freshwater eels (<i>Monopterusuchia and</i>	<ol style="list-style-type: none"> 1. To study and survival rate of two freshwater eels with different food items. 2. To study growth and survival rate of two 	1 March 2003	28 February 2004

	: rahmat@royalten.net	<i>Mastacembalus armatus</i>)	freshwater eels. 3. To study the effect of stocking densities on their growth and survival rate. 4. To find out a suitable technique for the artificial propagation of two freshwater eels.		
14	Dr. Md. Ali Reza Faruk, Assoc. Prof., Department of Aquaculture, BAU, Mymensingh : farukmar@royalten.net	Investigation of diseases and development of strategies for improved health management of Thai pangas (<i>Pangasius sutchi</i>) cultured in rural ponds in Mymensingh district	1. To investigate the impact and occurrence of disease outbreaks of Thai pangas cultured in rural ponds. 2. To establish the cause of unfavourable health and recommend effective mitigative measures and 3. To characterize the pathogens involved.	1 March 2003	28 February 2004
15	Dr. Mostofa A.R. Hossain, Assoc. Prof. Dep't. Fisheries Biology and Genetics, BAU. : marhossain@yahoo.com	Marketing of Small Indigenous Fish Species (SIS) and Socio-economic Aspects of SIS Producer, Intermediaries and retailers with Sustainable Livelihood Approach in Three Fish Markets of Mymensingh	1. To identify, qualitative and quantitative availability of SIS in each of three different types of market (rural, peri-urban and urban), market management inefficiencies and how its impact on the livelihoods of the different parties involved in SIS production, distribution and marketing. 2. To understand livelihood security among farmers, traders and those involved in SIS marketing chain. In this context, benefits for the poor may be generated through the application of alternative marketing systems and production strategy.	1 March 2003	28 February 2004

Research proposals finalized for funding by Community Based Fisheries Management phase 2 (CBFM-2), World Fish Center, Bangladesh.

SL No	Title of proposal	Award holder and organization	Research area	Award start date (tentative)	Periods	Status
1.	Fish Sanctuaries and Enhancement of Wetland Fisheries.	Dr. Khan Kamal Uddin Ahmed, SSO, BFRI, Chandpur Station. Chandpur : kkuabd@yahoo.com	Beel Shakla, Beel Shapla and Hural beel, U-zilla:- Sadar & Nasirnagar Dist:- Brahmanbaria	March'2003	3 years	Accepted, subject to revisions
2.	Study on fish catch composition in relation to different types of katha materials in river sanctuary	Md. Mansurul Haque, Lecturer Jahangirnagar University, Dhaka And Dr. Munir Ahmed (Ex. Director) TARA, 1 Purbachal, Northeast Badda, Dhaka-1212 : tarabgd@hotmail.com	Ubdakhali river, U-zilla:-Kalmakanda Dist:- Netrokona	March'2003	2 year	Accepted, subject to revisions
3.	Impact of fish sanctuaries and appropriate sanctuary design for open water river and beel in Methamain Upazila	Syed Ali Azher, SUFO Methamain, Kishoreganj Supervisor: Dr. Somen Dewan Prof., Faculty of Fisheries, BAU (BAU), Mymensingh Enroll: Faculty of Fisheries, BAU, Mymensingh.	Ghor Bahnga Nadi, Dopi beel & Moisharkandi-Boronpur Nadi U-zilla:- Mithamoin Dist:- Kishoreganj	March'2003	3 years	Accepted, subject to revisions
4.	Impact of pollution on water quality and production of small/indigenous fishes (SIS) in Kutir Beel, Narshingdi of Bangladesh.	Nurun Nahar Dept. of Zoology Dhaka University Dhaka : nurunnah@dhaka.net	Kutir beel U-zilla:- Kotiadi Dist:- Kishoreganj	March'2003	1 year	Accepted, subject to revisions

SL No	Title of proposal	Award holder and organization	Research area	Award start date (tentative)	Periods	Status
5.	Impacts of Water pollution on Fisheries Resources of Posna Beel.	Md. Abul Kalam Azad, Lecturer, Inst. Env. Sci. Rajshahi University Rajshahi. : iesru@librabd.net	Posna beel U-zilla:- Kalihati Dist:- Tangail	March'2003	1 year	Accepted, subject to revisions
6.	Study on the impact of pollution on fisheries in three beels of Rangpur District under CBFM Project	Md. Zillur Rahman, SUFO Pirganj, Rangpur Phone: 05227-88021 Supervisor: Dr. Md. Fazlul Awal Mollah Prof., Dept. of Fisheries Biology & Genetics, BAU (BAU), Mymensingh Enroll: Dept. of Fisheries Biology & Genetics, BAU, Mymensingh.	Nandinar beel, Chapandaha beel and Doriar beel U-zilla:- Badarganj & Pirganj Dist:- Rangpur	March'2003	3 years	Accepted, subject to revisions
7.	Cost and Benefits of CBFM Models in Bangladesh.	Md. Sirajul Haque, Prof. Chittagong University Chittagong Phone: 20031-620222	Beel Hatina Mural U-zilla:- Akhaura Dist:- Brahmanbaria	March'2003	1 year	Accepted, subject to revisions
8.	Indigenous / traditional fisheries knowledge and its role in local resources management: a case study on Chitra River (Beel Jaleswas to Dhalgram JR).	Dr. Mahmudul Hasan, Assoc. Prof., Urban & Rural Planning Discipline, Khulna University, Khulna-9208. : drmhasan@khulna.bangla.net Tel: 88-041-720171-3 (off)	Chitra river, U-zilla:- Bagarpara, Dist:- Jessore, and Fatki Nadi, Dist:- Magura	March'2003	1 year	Accepted, subject to revisions