

Development Projects of Bangladesh Fisheries Research Institute

1. Project Title : **Establishment of Shrimp Research Center in Bagerhat**
2. a) Sponsoring Ministry/Division : Ministry of Fisheries and Livestock
b) Executing Agency : Bangladesh Fisheries Research Institute
3. Objective of the Project :
 - a. To establish a modern shrimp research center in Bagerhat with all required facilities for sustainable development of the shrimp resources of Bangladesh.
 - b. To carry out demand driven research for development of appropriate technologies for increasing production, disease diagnosis and control, post-harvest handling, processing and quality control of shrimp.
 - c. To create modern training and demonstration facilities for dissemination of new technologies to the shrimp farmers and entrepreneurs.
4. Location of the Project :

<u>Place</u>	<u>Upazila/District</u>
Bamorta Union	Bagerhat Sadar, Bagerhat
5. Cost of the Project (In Million Taka) :

I) Total	: 2268.00
II) GoB	: 2268.00
III) PA (RPA)	: -
IV) Others	: -
6. Project Implementation Period :

I) Date of Commencement:	July 2005-06
II) Date of Completion	: June 2010-11

7. Targets

- Establishment of a modern shrimp research center;
- Creation of training and technology testing and demonstration facilities;
- Development of economically viable, socially acceptable and environmentally compatible shrimp culture technologies in Bangladesh;
- Development of shrimp disease diagnostics facilities and control protocols;
- Development of post-harvest handling and transportation and quality control protocols;

- Conservation of biodiversity and coastal ecosystem management;
- Supply of improved low-cost Golda PL to the farmers on a limited scale;
- Development shrimp culture policy guidelines.

8. Outputs

- An international standard lead Shrimp Research and Training Center;
- Shrimp production will be increased from 400-500 kg /ha to 1500-2000 kg/ha after introducing the technology based shrimp culture and best resource management practices in Bagerhat region.
- Sustainable and increased shrimp production in Bangladesh;
- Improved socio-economic condition of the shrimp farmers;
- Poverty reduction through employment generation; and
- Increased foreign exchange earnings.

1. Title of the Project : **Jatka Conservation, Alternate Income Generation for the Jatka Fishers and Research Project**

2. a) Sponsoring Ministry/Division : Ministry of Fisheries and Livestock
b) Executing Agency : Department of Fisheries & Bangladesh Fisheries Research Institute

3. Objectives of the Project

Broad Objective

To conduct broad based research on biology and environment aspects of hilsa fisheries both in the riverine and coastal ecosystems.

Specific Objectives

- Precisely identification of breeding and nursery grounds of hilsa and the changes occurred;
- Population dynamics of hilsa including estimation of maximum sustainable yield (MSY) and biomass;
- Impact assessment of environmental and meteorological factors on hilsa biology and production;
- Impact assessment of the implementation of different management options on hilsa production, breeding success, egg production and *jatka* abundance;
- To study the proximate composition of hilsa of different sizes and habitats;
- To study the maturity status under different size and age classes of hilsa and determine the extent of sex reversal;
- To study the frequency of spawning of hilsa; and
- *In situ* observation of the movement/migration of *jatka* and hilsa by telemetric method.

4. Location of the Project : Place Upazila/District
RS, BFRI Chandpur

5. Cost of the Project (In Million Taka) : I) Total : 400.00
II) GoB : 400.00
III) PA (RPA) : -
IV) Others : -

6. Project Implementation Period : I) Date of Commencement: July 2009
II) Date of Completion : June 2013

7. Outputs/Outcomes

- Continuous generation of information on the changes in hilsa spawning and nursing grounds with special reference to ecological and hydrological aspects;
- Estimation of maximum sustainable yield (MSY) and biomass of hilsa;
- Comprehensive knowledge on the minimum size and age of hilsa maturity and possible factors related to such changes and sex reversal information;
- Understand the impact of environmental and meteorological factors on hilsa biology and production;
- Information on the frequency of spawning of hilsa within a year;
- Generation of information on the proximate composition of hilsa;
- Development of *in situ* monitoring system of jatka/hilsa movement/migration pattern;
- Improved and updated hilsa management action plan (HFMAP) for Bangladesh;

1. Project Title : **Impact of Aquaculture Drugs and Chemicals on Aquatic Ecology and Productivity**

2. a) Sponsoring Ministry/Division : Ministry of Fisheries and Livestock (MoFL)
b) Executing Agency : Bangladesh Fisheries Research Institute (BFRI)

3. Objectives of the project
 - To make check list of chemicals and drugs used in aquaculture and fish feed in Bangladesh and identification of their sources.
 - To study the impact of drugs and chemicals on aquatic ecology (water, sediment, bio-diversity of pond and fish productivity).
 - To study the residual deposition of toxic chemicals and drugs in fish and shrimp.
 - To make awareness among the farmers/entrepreneurs regarding the toxic effect of chemicals/drugs in aquatic environment through training, workshop, publication etc.

4. Location of the project : Place Upazila/District
BFRI Mymensingh,
Shantahar and
Cox's Bazar

5. a) Estimated cost of the project : i) Total : 1797.50
(In Lakh Taka) ii) GoB : 1797.50
iii) PA : -

6. Project Implementation Period : I) Date of Commencement: July 2010
II) Date of Completion : June 2013

7. Targets

- Procurement of scientific equipment to conduct research on drugs/chemicals used in aquaculture in the country.
- Information gathering on the degree of damage of microbial community and fish biodiversity due to use/overdose of drugs and chemicals and to suggest mitigating measures.
- Information gathering on the residual deposition of toxic chemicals and drugs in fish/shrimp.
- Creation of awareness among the fish farmers/entrepreneurs regarding the toxic effect of chemicals/drugs in aquatic environment.

- Training of DoF, BFRI scientists, fish and shrimp farmers, entrepreneurs and other related agencies.
- Creation of BFRI research facilities and improvement of laboratories for installation and commissioning of modern equipment.

8. Outputs/outcomes

- Preparation of checklist of available drug and chemicals used in aquaculture and fish feed and identification of the possible sources.
- Development of appropriate measures to stop the access of the banned or prohibited chemicals/drugs in aquaculture as well as into the fish/shrimp feed items.
- Restoration of aquatic habitat from the toxic effect of chemicals and drugs.
- Development of opportunities to save the shrimp/fish industry that significantly contributes to employment generation and poverty reduction.
- Development of modern facilities for assessment of toxic drugs and chemicals used in aquaculture.
- Obtained positive impact in the international market regarding the safety and quality of our fish and fish products and boost export earning.
- Increased safe fish and shrimp production.
- Reduced poverty through employment generation; and
- Increased foreign exchange earnings.
- Prepared training extension materials and organized trainings/workshops for mass awareness about the harmful effects of toxic chemicals/drugs on human health.

1.. Project Title: **Support to Sustainable Management of the Bay of Bengal Large Marine Ecosystem (BOBLME) Project**

2. Project Period

i) Date of commencement: July 2009
 ii) Date of completion: June 2013

3. Name of the Ministry/Division /Agency responsible for

i) Sponsoring: Ministry of Fisheries & Livestock (MoFL)
 ii) Execution: Bangladesh Fisheries Research Institute (BFRI)
 iii) Other Executing Agencies: Not applicable

4. Source of financing with cost (in Lakh Taka)

Source of financing	¹ In kind (equivalent amount)	² In cash		Total (kind + cash)	Mode of financing (loan/credit/grant etc.)
		Local	FE		
Government of Bangladesh	306.30	192.50	-	498.80	Grant
³ Development Partner (s)	-	-	-	-	-
⁴ Other (specify)	-	-	-	-	-
Grand total	306.30	192.50	-	498.80	Grant

¹ In-kind contributions comprise: National counterpart salaries for workshops, training and local travel; the time of the National Task Force members etc.

² In-cash contribution include: The cost of a full-time contracted national technical advisor/consultant; Associated office space, communications and utilities for work on the project; In-country costs associated with sponsoring project-related national workshops/trainings and the participation of national representatives.

^{3,4} The total budget for regional BOBLME mother project is US\$ 30,993,500 with the GEF allocation of US\$ 12,082,100 and partially supported by Norway, Sida, NOAA, FAO and 8 participating countries. Each member country contribution stands equivalent amount of US\$ 712,500 (in kind US\$ 437, 500 + in cash US\$ 275,000). As a regional project, there is no scope of allocation of funds to individual countries. FAO as the implementing agency will operate the GEF fund.

5. Project background

The BoB is one of the world's 64 Large Marine Ecosystems (LMEs). Located in the monsoon belt, the Bay is bounded by eight countries (Bangladesh, India, Indonesia,

Malaysia, Maldives, Myanmar, Sri Lanka and Thailand). About one-quarter of the world's population resides in the littoral countries of the Bay of Bengal, with approximately 400 million living in the Bay's catchment area, many subsisting at or below the poverty level. As the BOB is a large marine ecosystem and stands by seven other countries, the management of its living resources and its habitats is not only lies responsibility with Bangladesh but also an exclusive task for all the neighboring countries to resolve the existing problems. Eight marginal countries of the BoB have already realized that their need closer link and cooperation for sustainable management of the fisheries resources of the BoB and its large marine ecosystem.

Despite the large number of international and regional and sub-regional institutions and programmes operating in the BoB, none appear to have the mandate, geographical scope and/or capacity to support an initiative based on an LME approach, particularly one that addresses the shared and common issues and barriers characteristic of the BOB. However, it is equally clear that the BoB Programme cannot resolve the aforementioned issues in isolation. Rather it must build on past experience and existing institutions and activities in the region, particularly the exchange of data and information related to coastal and marine environment and fisheries issues, to achieve any significant lasting impact.

In view of the importance of the BOBMLE to the health, well-being and livelihoods of the millions of people living in the BOBMLE region, the Advisory Committee of the Bay of Bengal Programme (BOBP) requested the FAO to assist in the development of a project proposal that could be submitted to the Global Environment Facility (GEF) and other donors for funding. The BOBP was a long-term regional fisheries programme in which Bangladesh, India, Indonesia, Malaysia, Maldives, Sri Lanka and Thailand were participating, with Myanmar having observer status. In its first two phases, the BOBP aimed to improve the socio-economic conditions of the small-scale fisherfolk in the member countries through the development and promotion of new and innovative techniques and technologies. The third phase of the project was designed to address more directly the serious management problems facing the Bay's fisheries. During this latter phase, the BOBP countries increasingly recognized the need to manage the coastal and marine resources, including the environmental threats to those resources in a coordinated, comprehensive and integrated manner.

The Global Environmental Facility (GEF) is in a unique position to build on and strengthen existing programmes and partnerships in the region through promoting the development of a transboundary perspective and approach to addressing critical issues characteristic of the BOBMLE. The project preparation resources (PDF-B) were approved by the GEF Secretariat to prepare the project "Sustainable Management of the Bay of Bengal Large Marine Ecosystem (BOBMLE)".

In view of the above, FAO implemented one year preparatory phase of BOBMLE project with the BOB countries during 2003-2004. With project preparation resources, the national and regional coordination mechanisms were also put in place to ensure broad-based stakeholder participation in preparing baseline national reports and regional

thematic papers, developing a framework Transboundary Diagnostic Analysis (TDA), and formulating a full-scale project document for GEF and other donor financing. A Regional Project Steering Committee (PSC) was established from the participation of relevant ministries of member countries. From Bangladesh Ministry of Fisheries & Livestock (MoFL) nominated the Joint Secretary (Fish) as the member of the PSC. During the preparatory phase relevant ministries from each of the member countries under the guide lines of FAO constituted a “National Task Force” (NTF) involving all stakeholders from GO and NGOs, and nominated a National Coordinator (NC). Director General, Bangladesh Fisheries Research Institute (BFRI) has been nominated by MoFL as the NC. Also under close cooperation with NTF and NC, a National Consultant was appointed by FAO in each country who prepared a country document on key issues of BoB which was finalized and adopted through national workshop.

GEF strategic funding policy requirement is 1:1 matching fund. The total budget for regional BOBLME mother project is US\$ 30,993,500 with the GEF allocation of US\$ 12,082,100 and the rest by other country/agencies i.e Norway, Sida, NOAA, FAO and 8 participating countries. Each member country contribution stands equivalent amount of US\$ 712,500 (in kind US\$ 437, 500 + in cash US\$ 275,000), which mean 498.80 lakh taka (in cash 192.50 + in kind 306.30) in Bangladeshi currency. For this purpose the present TPP has been prepared to support the country contribution of Bangladesh. As a regional project, there is no scope of showing allocation of funds from BOBLME mother project to individual countries. FAO will operate the GEF fund as the implementer. The member countries reaffirmed the high priority of the BOBLME programme at the Project Appraisal Meeting held in Bangkok in 18-19 June 2007. The project was finally endorsed by GEF on 30 June 2008.

6. Objectives

- (i) Overall: To support BOBLME mother project for the development of a Strategic Action Programme (SAP), whose implementation will lead to enhanced food security and reduced poverty for coastal communities in the BOB region including Bangladesh.
- (ii) Specific: The BOBLME project has been structured into 5 interlinking components. The component wise project cost has been attached in Annex-VIII. Specific objectives as mentioned against each component are stated below:

Component	Objective
Component 1: Project sustainability:	To prepare a Strategic Action Programme (SAP) whose implementation will ensure the long-term institutional and financial sustainability of the BOBLME Programme.
Component 2: Coastal/marine natural resources management and sustainable use	To promote the development and implementation of demonstrative regional and sub-regional collaborative approaches to common and/or shared issues which affect the health and status of the BOBLME.
Component 3: Improved understanding and predictability of the BOBLME	To support activities and participate and share information with other regional and global environmental monitoring programmes that will led to better understanding of the

	BOBLME ecological functions and processes.
Component 4: Maintenance of ecosystem health and management of pollution	To support activities leading to an agreed on set of environmental indicators to measure the health of the BOBLME and the development of a regional collaborative approach to identifying important coastal water pollution issues and to develop remedial strategies.
Component 5: Project management	To establish a cost-efficient project management, M&E, and information dissemination capacity and process leading to the successful implementation of the BOBLME Programme.

7. Expected output

Through supporting regional BOBLME project the country will expected to be benefited an equivalent amount of twenty five crore taka. Moreover, specifically, following output/benefits will be generated from the present project:

- An agreed regional Strategic Action Programme (SAP);
- National Strategic Action Plan for marine and coastal habitats/waters;
- Dependable long-term sustained national production of selected transboundary fish stocks;
- Diversified livelihoods and improving well-being among small-scale fish communities;
- Increased national awareness of other BOBLME relevant activities.
- Development of a better understanding of the BOBLME's large-scale processes and ecological dynamics.