

Aquaculture Practices Freshwater aquaculture

Indian Major Carps and exotic carps are largely cultured in the country. Culture Practices are mainly improved-extensive and semintensified. Beside Carp aquaculture monoculture of Tilapia, Rajpuli, Thai pangus are also practiced. Average fish production in the ponds is 2839 kg/ha/year. Freshwater prawn (M. rosenbergii) is also cultured along with carps all over the country. Mono-culture is mostly concentrate in the southern region of the country. Average yield is about 618 kg/ha/year.

Brackish water aquaculture

It is widespread in Satkhira, Khulna, Cox's Bazar and Bagerhat District. Tiger Shrimp P. monodon and giant prawn M. rosenbergii are the major species of shellfish cultured in those areas. M. rosenbergii is largely cultured in southwest region of the country. Culture practices of shrimp are improved extensive in nature. Annual yield is 618 kg/ha.

Fish Hatchery

Fish hatchery especially carp hatchery started to come up in late seventies. At present there are 873 private and 77 government fish hatcheries/Fish Seed Multiplication Farms in the country. The following species bred in the hatcheries. These are - *L. rohita*, *L. calbasu*, *C. cirrhosus*, *C. catla*, *H. molitrix*, *C. idellus*, *A. nobilis*, *M. piceus*, *C. carpio*, *P. sutchi*, *P. gonionotus*, *C. batractus*, *A. testudinius*, *M. gulsha*, *O. pabda*, *Tor tor* etc.

In the year 2008 a total of 425,858 kg hatching was produced from private & government hatcheries. Presently collection of fish seeds from natural grounds has gradually reduced to about 1872 kg from 22,000 kg in 1987.

Shrimp Hatchery

In 2008 there were about 57 P. monodon (Bagda) hatchery and 70 M. rosenbergii (Galda) hatchery. In Bagda hatcheries about 51000 lakh of post larvae (PL) were produced. Almost all Bagda hatcheries are located in Cox's Bazar region, but major culture grounds are situated in southwest region of Bangladesh. The produced PLs are transported to southwest region by aircrafts.

Export of Fish & Fish Products

There are 133 fish processing plants in the country of which 75 plants are in operation. Annual production capacity of 75 plants is about 3,396.28 MT. Out of 75 plants European Commission has approved 65 plants. HACCP has already been introduced in fish processing establishments. Major importing countries are European countries, USA and Japan. About 98% of total fish products are exported to those countries. Remaining are exported to the countries in Southeast Asia and Middle East.

Year	Shrimp		Other products		Total Value
	Quantity	Value	Quantity	Value	
2003-2004	42943	2152.77	11198	210.70	2363.47
2004-2005	46533	2281.59	16844	290.13	2571.72
2005-2006	49317	2698.35	19512	331.49	3029.84
2006-2007	53361	2992.33	20343	360.56	3352.89
2007-2008	49907	2863.92	25992	532.36	3396.28

Types of Product exported

Major export items of fish products are raw shrimp block frozen, IQF shrimp and white fish, PUD and P&D shrimp block frozen, consumer pack of raw frozen shrimp, dry, salted and dehydrated fish and a little quantity of value added shrimp products.

Fish Inspection & Quality Control

DoF has three inspection and quality control stations located at Khulna, Chittagong and Dhaka facilitated with testing laboratories. DoF is entrusted with the responsibility to ensure the quality of the products as Competent Authority.

Fish Cooperatives/Societies/Associations

There are few leading fisheries associations for the development of socio-economic condition of the beneficiaries, to resolve their relevant problems and to improve their professional skills. Some of those are,

1. National Fishermen Society
2. Small-scale Fishermen Society
3. National Shrimp Farmers Association
4. National Shrimp Hatchery Owners Association
5. National Fish Culturist Association.

Campaign for Boosting Fish Production and Resource Conservation

Campaign for boosting fish production and resource conservation fish week/fortnight has been observed usually in between July and September every year. Creation of awareness for the conservation of fisheries resources is also an objective of this campaign. It is a national programme and is inaugurated by the **Honorable Prime Minister of the Peoples Republic of Bangladesh.**

Fisheries Resources Information of Bangladesh (2007-2008)

1. Water Area	
(a) Closed Water Body (Cultured based)	5,28,390 ha
i Ponds & Ditches	3,05,025 ha
ii Orxow Lake	5,488 ha
iii Shrimp Farm	2,17,877 ha
(b) Closed Water Body (Capture based)	4,04,7316 ha
i River	10,31,563 ha
ii Bheel	1,14,161 ha
iii Kaptai Lake	68,800 ha
iv Flood plain	28,32,792 ha
(c) Marine Fisheries	
i Territorial water	2,680 sq n. miles
ii Exclusive Economic Zone	41,040 sq n. miles
iii Continental shelf	24,800 sq n. miles
iv Coast line	710 km
2. Fish Production	
i Open water (Capture)	25,63,296 mt
ii Closed water (Culture)	10,06,181 mt
iii Marine Fisheries	10,05,542 mt
iv Marine Fisheries	4,97,573 mt
3 (a) Export of Fish & Fish product	
i Quantity	75,899 ton
ii Value (BD TAKA)	3,396.28 crore
iii Contribution to export earning	4.04%
(b) No. of fish processing plants	
i	133
ii No. of licensed plants	75
4. Contribution in GDP	
i	4.07%
5. Fish Intake/Demand	
i Per capita Annual Fish Intake	16.62 kg
ii Annual Total Fish Demand	25.90 lakh mt.
iii Per Capita Annual Fish Needed	18.0 kg
iv Contribution in Annual Protein Supply	58%
6. Fish Hatcher /Nursery	
i Fish Hatchery	950 (Govt. 77 nos)
ii Spawn Production	425858 kg
iii Fingerling Production	62210 lakh
iv Natural Fish Fry collection	2061 kg
7. Shrimp Hatchery	
i Bagda Hatchery	59 (Govt. 2 nos)
ii Galda Hatchery	70 (Govt. 17 nos.)
iii Fry Production (Pls)	(1800 set Bagda-37000 Galda-13800 lakh)
iv Natural Shrimp Fry collection	10000 lakh
8. Other Public sector Fisheries Infrastructure (No.)	
i Fish /Shrimp Training Center	6
ii Shrimp Demonstration Farm	2
iii Fish Landing Center	9
iv Shrimp Landing & Service Center	20
9. Marine Fisheries Unit (No.)	
i Deep sea Fishing Trawlers	127
ii Artisanal Mechanized Boats	21433
iii Artisanal Non-Mechanized Boats	22527
10. Fish Species (No.)	
i Fresh Water Species	260
ii Exotic Fish Species	12
iii Fresh water Prawn Species	24
iv Marine Fish Species	475
v Marine Shrimp Species	36

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BRIEF ON DEPARTMENT OF FISHERIES BANGLADESH



**DEPARTMENT OF FISHERIES
MINISTRY OF FISHERIES & LIVESTOCK
BANGLADESH**

Web : www.fisheries.gov.bd

Bangladesh is a South Asian country located in between latitude 20° 34' and 26° 39' north and longitude 80° 00' and 90° 41' east. The country crisscrosses with hundreds of rivers. The climate of Bangladesh is a unique for aquaculture and fisheries resource management. The Bay of Bengal is situated at the south of the country. Winter lasts only for about 2 months. Temperature and rainfall ranges from 07° to 40° C and 1170 to 3400 mm respectively.

Department of Fisheries

Department of Fisheries (DoF), Bangladesh was first established in the undivided Bengal of the British India in 1908. In 1910 the DoF was abolished through merging with the Department of Agriculture. Again as per recommendation of Mr. T. South Well the DoF became an independent organization in 1917. The DoF was abolished again in 1923. After a long gap following the recommendation of Dr. M. Ram Swami Naidu the DoF was revived in May 1942. Since the inception of the then East Pakistan (now Bangladesh) the DoF has been continued. After the independence of Bangladesh in 1971 the Central Fisheries Department of the then Pakistan merged with the DoF of Bangladesh in April 1975. Later on in 1984 Central Marine Fisheries Dept. merged with the DoF as a Marine Fisheries Wing.

Organisation of DoF

DoF is under the administrative control of the Ministry of Fisheries and Livestock. The Department is headed by a Director General, who is assisted by three Director and two Principal Scientific Officer (equivalent to Director). There are 1553 technical officers of different hierarchy and supporting staffs in the DoF. They render their service to achieve the mission of the DoF. There is administrative set-up at division, district and Upazila levels headed by Deputy Director, District Fisheries Officer and Upazila Fisheries Officer respectively. Besides these, there are three Fish Inspection and Quality Control stations, Marine Fisheries Station, Fisheries Training Centers, Farms and Hatcheries.

Mandate

- To disseminate improved aquaculture technologies through training and demonstration and to render extension advisory services to the focal stakeholders.
- To enhance fisheries resources through enacting conservation and management measures.
- Assist the administrative ministry to formulate policies, acts etc.
- To enforce quality control measures and issuance of health certificates

- To conduct fisheries resources survey and assessment of stock to develop fisheries database for proper planning.
- To facilitate arrangement for institutional credit for fish and shrimp farmers, fishers and fish traders.
- To facilitate alternative income generating activities for rural poor and unemployed people towards poverty alleviation.
- To formulate and implement development projects towards sustainable utilization of fisheries resources to ensure food security.

Associate Organisation for fisheries Development Bangladesh Fisheries Research Institute (BFRI)

BFRI is an autonomous organization under the Ministry of Fisheries and Livestock. This institute is established in 1984. Under this institute there are 5 stations located at Mymensingh, Chandpur, Ramgatala, Cox's Bazar, Paikgacha (Khulna) and other substations at Santahar, Jessore & Barishal. These stations conduct basic and applied research on fresh water aquaculture, inland fisheries management, lake management, fish disease, marine fisheries, brackish water aquaculture, fish breeding and genetics etc. Some of the technologies innovated by this institute are being disseminated to the fields.

Bangladesh Fisheries Development Corporation (BFDC)

BFDC is also an autonomous organization under the ministry of Fisheries and Livestock. This corporation is established in 1964. BFDC is mainly involved in harvesting fisheries resources and developing marketing facilities in the country. BFDC has established fish harbour, landing and distribution centres, ice plants and processing plants. In the past BFDC played a vital role to attract the private entrepreneurs in marine resource exploitation and marketing.

Contribution of fisheries Sector

It contributes 4.07% to GDP and 4.04% to foreign exchange earning. Fish provides 58% of national animal protein consumption. Fisheries sector plays an important role in rural employment and poverty alleviation.

Categories of Resources

There are 4 categories of major fisheries resources, those are-
i. Inland open water
ii. Inland closed water
iii. Brackish water

Inland fisheries

Inland fisheries comprises of rivers, estuaries, beels, floodplains, polders, ox-bow lakes, brackish water etc. In early Sixties inland fisheries contributed about 90% of total fish production of the country. Fish production from aquaculture has increased to a great extent but open water fish production is in slow progress. Now only about 41% of total fish production comes from inland open water. There are 260 fish and 24 prawn species in inland fresh water in the country.

Marine Fisheries

The Bay of Bengal is situated in the South of Bangladesh. There is a total of 166,000 sq. km. water area including Exclusive Economic Zone (EEZ). Fishing is only confined within 100 meter depth. About 127 trawlers 44,000 mechanized and non-mechanized boats are engaged in fishing. Pelagic and deep-sea resources are still untapped. In the year 2007-08 fish production was 25.63 lakh metric ton (MT) in which 4.98 lakh MT was marine fish production.

Fish Production

Average annual growth rate of fish production is around 5%. Inland open water is the major source of fish production in the country. But production from closed water bodies is increasing very sharply due to dissemination of adaptive technologies and effective extension services rendered by DoF.

Last 5 years fish production is mentioned below

Year	Source-wise production (MT)			Total
	Inland Open	Closed	Marine	
2003-2004	732067	914752	455207	2102026
2004-2005	859269	882091	474597	2215957
2005-2006	956686	892949	479810	2328545
2006-2007	1006761	955812	487438	2440011
2007-2008	1060181	1005542	497573	2563296

Major group wise contribution in fish production (2007-2008)

There are 260 fresh water and 475 marine fish species and 24 prawn, 36 shrimp species in the country. About 12 exotic species are being cultured in the country.

Contribution of different types of fish to total fish production :

Fresh water carps	34.74%
Hilsa	11.31%
Live fish & cat fish	10.60%
Other inland fish	25.12%
Shrimp and Prawn	8.70%
Marine fish	9.53%

National Fisheries Policy

A national fisheries policy has been adopted to make the aquaculture and fisheries management activities environment friendly and sustainable. The policy has been formulated aiming at the primary objective of increasing fish production through optimum utilization of the available resources. Employment generation and poverty alleviation have also been given importance in fisheries policy.

Development Activities

In addition to the normal activities of the DoF several development projects aiming at boosting up fish production and conservation of fisheries resources. In 2008-2009 a total of 13 investment projects and 3 technical assistance projects are being implemented.

Fisheries Legislation

For fisheries resources conservation, management and maintenance of quality of fish and fish products the following major ordinances and rules are being enforced.

1. Tank Improvement Act, 1939
2. Fish protection & Comertentation Act, 1950 (amended in 1995)
3. The protection and conservation of Fish Rules, 1985 (amended in 2008)
4. The Fish and fish products (inspection and quality Control), ordinance 1983
5. The fish and fish product (Inspection and quality Control) Rule, 1997 (amended in 2008)
6. The Marine Fisheries Ordinance 1983
7. The Marine Fisheries Rules, 1983
8. Shrimp Culture Auker Act 1992