



Present Scenario, Problems and Prospects of Inland Fishing of West Bengal, India

KEYWORDS

Aquaculture, Inland fishing, Fish processing

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ABSTRACT *In West Bengal, inland aquaculture has emerged as a fast growing enterprise. West Bengal has been able to secure the leading position in fish production for seven successive years and rewarded accordingly by the Central Govt. as best productivity award. In this regard, this present paper is concerned with the present scenario, problems and prospects of inland fishing in West Bengal. The total production of inland fish is mainly consumed in the state and remaining is exported to other states. South 24 Parganas is the highest productive area of inland as well as marine fish. Fish processing also carried out in this state. Fishes are exported primarily to Japan followed by Vietnam and China. However fishery sectors in West Bengal are facing different types of problems. In spite of this, inland fisheries are a sunrise sector of economy as well as rural development of West Bengal.*

INTRODUCTION:

Fish farming is the principal form of aquaculture. In West Bengal, inland aquaculture has emerged as a fast growing enterprise and has been able to secure the leading position in fish production for seven successive years and rewarded accordingly by the Central Govt. as best productivity award. West Bengal is the only state in India, where fishes have been cultivated in every kind of water bodies' i.e. brackish water, sweet water, sewage water and marine water as well. The present paper is an attempt to access to the West Bengal inland aquaculture with respect to its resource base, production trends, major productive areas, seasonal variation in production, cultivation scenario, fish processing, marketing, problems and future prospects.

STUDY AREA:

In the present research proposal has selected the state of West Bengal in India, which is in the monsoon belt. The latitude is 21°30'N-27°17'N and longitude is 85°51'E-89°52'E. As a consequence, it has extensive potential aqua cultural area in the form of rivers and canals (2,526 km), reservoirs (0.17 lakh hectares), tanks and ponds (2.76 lakh hectares), flood plain lakes (0.42 lakh hectares) and brackish water (2.10 lakh hectares).

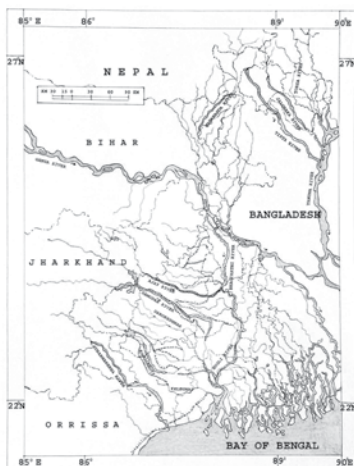


Fig 1: Drainage Map of West Bengal

OBJECTIVES:

The main objectives of the paper are to study the present scenario of inland fishing in West Bengal and identify the present problems of inland fishing and their remedies.

METHODOLOGY:

Pre-field: The present paper is mainly based on literature study i.e. different types of articles, books, theses etc. in details to build up a clear idea on this topic.

Field: The field study involves collection of map from NAT-MO. The secondary data and information have been collected from different offices.

Post-field: The collected information has been studied through different analytical and interpretative methods. Data collected from secondary sources have been processed, studied, explained and presented for the present paper.

INLAND WATER RESOURCES OF WEST BENGAL:

The potential areas of inland fishing in west Bengal are follows-

Total inland water bodies (lakh ha.)	5.45
Rivers and canals (km.)	2526
Reservoirs (lakh ha.)	0.17
Tanks and ponds (lakh ha.)	2.76
Flood plain lakes (lakh ha.)	0.42
Brackish water (lakh ha.)	2.10

Source: Fishery resources and their utilization of West Bengal

FISH PRODUCTION TRENDS AND DEMAND IN THE STATE:

The total production of inland fish was 13.380 lakh ton in the year 2012-13. They are mainly consumed in the state; a large amount of inland fish is exported to Delhi, Uttar Pradesh, Madhya Pradesh, Bihar and other adjoining states. About 78 percent of the fish caught in the state

is marketed as fresh or chilled and forms of staple food. About 6 percent of the catch is used for drying and curing. Frozen fish production accounts for 12 percent and about 4 percent is used for reduction to fish meal.

The current availability of fish and per capita consumption at 9 kg the state is facing a shortage of over 90 thousand tons. The fish requirement of the state by the end of 2010-11 had been estimated at over 14.71 lakh tons assuming the total population. The demand will be more in view of the increasing fish consumption.

Inland fish production trends and growth rates in West Bengal during 2004-05 to 2012-13

Year	Inland (Lakh tons)	Growth rate (%)
2003-04	9.880	+ 4.46
2004-05	10.355	+ 3.88
2005-06	10.900	+ 2.88
2006-07	11.810	+ 8.72
2007-08	12.645	+ 6.49
2008-09	12.947	+ 2.48
2009-10	13.260	+ 1.41
2010-11	12.460	- 4.11
2011-12	12.900	+ 2.00
2012-13	13.380	+ 1.22

Source: Handbook of Fisheries Statistics, 2012-2013; Department of Fisheries, Government of West Bengal

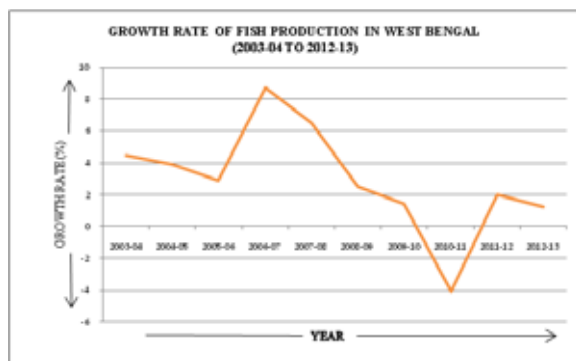


Fig 2: Growth rate of inland fish in West Bengal during 2003-04 to 2012-13

SEASONAL VARIATION IN PRODUCTION OF FISH:

Inland fish can be cultivated throughout the year with little extra support during summers when water levels are majorly affected. However marine fishes in the inshore waters linked to the seasonal variations increase in temperature during summer and induce faster growth in shrimps but reduces size maturity resulting in low fecundity and low production. For cage culture operations of fish, the higher temperature is not favourable.

MAJOR PRODUCTIVE AREAS IN WEST BENGAL:

South 24 Parganas is the highest productive area of inland as well as marine fish aggregating to a total value of 3.3 lakh tons in the year 2009-10 followed by Paschim Medin-

ipur, North 24 Parganas, Burdwan and Nadia.

Fig 3: Top five fish producing districts in West Bengal



Following is the table including the total water body (lit)

Source: Fishery resources and their utilization of West Bengal

CULTIVATION SCENARIO IN WEST BENGAL:

West Bengal has been able to create a production of fish seeds in so far as inland fishery is concerned. 75 percent of the total demand for fish seeds is made by West Bengal alone. To induce greater utilization of modern and scientific technology in pisciculture, training is being imparted at the state, district and grass-root levels to fishermen in inland fisheries. As many as 12000 dwelling units as well as ponds and tanks area of 2351 hectares have been pressed after dredging, in cultivation of fish model fishermen in villages of each of which contains 100 dwelling units, community halls, credit societies, roads, sanitation etc. have been constituted in six districts of the state.

District wise water area (all source except river, khal / canal & reservoir) & Inland Fish Production during last Five years.

Sl. No	Name of the District	Available Water area	Fish Production				
			2008-09	2009-10	2010-11	2011-12	2012-13
1	Darjeeling (DGHC/GTA)	60	290	343	401	514	550
2	Darjeeling (Siliguri)	894	1630	1646	1358	1190	1136
3	Jalpaiguri	2460	28505	30090	27958	24423	20820
4	Cooch Bihar	5478	21165	21590	19839	23505	22112
5	Uttar Dinajpur	6493	18813	21555	25868	34001	35537
6	Dakshin Dinajpur	11189	36528	41675	37308	56072	54809
7	Malda	14132	38422	41031	39407	56929	58351
8	Murshidabad	20599	88050	102689	84971	78734	79680
9	Nadia	10260	97199	97255	89411	59695	88543
10	Birbhum	17903	70655	66035	58257	63353	65925
11	Burdwan	33135	115192	109544	115107	130690	136791
12	Hooghly	20153	86299	90351	88660	93173	83337
13	Howrah	5673	42286	46772	44271	36105	42341
14	North 24-Parganas	61378	176650	180038	173834	169308	182280
15	South 24-Parganas	66996	178212	163771	173315	172041	164030
16	Purulia	18575	42497	50740	34864	41045	44725
17	Bankura	24670	64065	66410	49455	71814	61050
18	Paschim Medinipur	16126	61064	63347	56593	63617	53902
19	Purba Medinipur	26714	127188	131114	125274	113816	141745
TOTAL		362897	1294710	1325996	1246151	1290025	1337664

Source: Handbook of Fisheries Statistics, 2012-2013; Department of Fisheries, Government of West Bengal

FISH PROCESSING IN WEST BENGAL:

Now West Bengal processes fishes and sells or exports in forms of fresh fish, dried fish, processed and canned fish, frozen shrimps, canned shrimps/prawns, lobsters, fish paste, fish pickle, fish seed etc. out of the 21 fish and fish processing units approved in the eastern region where 15 are located in West Bengal like the first ever sea food processing zone was flagged in the state of West Bengal in Chakgaria, South 24 Parganas, fish processing centres at Junput, dry fish farm at Junput and Haripur. This leaves enough room for investors to invest in value added fish products in the state as compared to its counter parts in other states of India.

MARKETING OF PROCESSED FISH:

In West Bengal processed fishes are available in two forms- 1. Frozen fish which are mainly prepared for export purpose; 2. Ready to eat, ready to cook and ready to fry items and these are prepared by three companies. These are- 1. BENFISH, 2. IFB, and 3. TRIVENI.

Fishes are exported primarily through Kolkata and Haldia port to Japan followed by Vietnam and China. Export to Japan only aggregates to a total annual revenue of rupees 650 crore. Out of the total export 90 percent are shrimps and the 10 percent includes ornamental fish, crab, fresh water prawns.

There are few big wholesale fish markets in West Bengal like Howrah fish market (largest fish market in eastern India), Dimond harbour fish market (biggest sea fish market in West Bengal), Baitakkhana Market, B.K.Paul market, Bantala fish market, Baghajatin bazar, Chingrighata fish market, Malancha market (specially for shrimp), Patipukur market for a variety of fishes.

FINDINGS:

- Though agriculture is the main source of economy, inland fishing is another important source in this field of West Bengal due to presence of abundant rivers, canals, beels and ponds.
- There is a huge demand of fish in this state though the production is not sufficient. The total production of inland fish was 13.380 lakh ton in the year 2012-13.
- Inland fish can be cultivated throughout the year with little extra support during summers when water levels are majorly affected.
- South 24 Parganas is the highest productive area of inland as well as marine fish followed by Paschim Medinipur, North 24 Parganas, Burdwan and Nadia.
- Fish processing also carried out in the state of West Bengal and the first ever sea food processing zone was flagged in Chakgaria, South 24 Parganas, fish processing centres at Junput, dry fish farm at Junput and Haripur.
- Fishes are exported primarily through Kolkata and Haldia port to Japan followed by Vietnam and China.

PROBLEMS OF INLAND FISHING IN WEST BENGAL:

Inland fishing in West Bengal had progressed immensely. However fishery sectors in West Bengal are facing different types of problems like-

- The main problem perceived by fish farmers is poaching.
- Water availability to maintain a minimum level of water in the ponds for the fish during the lean months.
- Capital was another major problem in most of the sites.
- Similarly the problem of poisoning of ponds is common in West Bengal.
- There is no effective fishermen's association in West Bengal for the improvement of this kind of activities.
- There is no proper leasing policy to increase the production.
- Decentralization problem of fish production.
- Disease to fish is threatened to the fish farmers.
- Lack of infrastructure development like cold storage, marketing structure, roads, transportation, labour etc.

PROSPECTS OF INLAND FISHING IN WEST BENGAL:

It seems apparent that strategies for increasing fish production from fresh water aquaculture should be directed towards horizontal and vertical growth of the industries. The following components hold the key to the success of these strategies-

- Diversified production through integration with agriculture and other allied sectors.
- Focused attention on seed production especially of carps, shrimps, catfishes and fresh water prawns.
- Conservation of fish diversity and fish habitat with the help of remote sensing technology.
- In expensive solutions to storage facilities for both marine and inland fisheries.
- Effective technology to introduce cage and pen culture in inland water bodies.
- Amendment of leasing policy to increase lease duration to over ten years.
- Decentralize of fish production all over the states.
- Formulations against fish disease.
- Development of infrastructure for both production and post-harvest activities.

CONCLUDING REMARKS:

As a primary activity fishing is a source of economy of West Bengal. Undoubtedly, inland fishing in the sector of economy can play a vital role in rural development, domestic security, habitats, employment generation as well as export earnings. It is also parallel source of income beside agriculture in the rural areas. But there is no sufficient attention in this field. As a result, inland fishing is suffering from various types of problems. In spite of this, it can be said that inland fisheries is a sunrise sector of economy as well as rural development of West Bengal. For this improvement necessary steps and action plans will be needed.

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