# Status of Fishery Sector in Assam- An Outlook

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***Abstract***

*Assam has tremendous prospect to bring blue revolution by using its vast water resources. As one of the major segment of agriculture, it has been observed that productivity becomesstatic during last few years. However, allied sector like fishery, poultry, livestock etc., seem to be more remunerative. Therefore, in this paper an attempt is being made to examine the status of fishery sector in Assam with the help of secondary data. The analyzed data showed that though Assam has potentialities regarding fishery sector, but the sector is not used in an optimized way to grab highest benefit.*

***Key words:*** *Blue revolution, fishery sector, optimization etc.*

**Introduction :**

The economy of Assam is predominantly an agrarian economy with more than 85 % of the population living in rural areas. Fishery sector contributes more than 2 % of GSDP to the state economy and plays important role in providing livelihood to a significant proportion of the population in the state. There are about 3.91 lakh hectare of surface water areas in the State in the form of rivers, beel, derelict water bodies and ponds and tanks. Scientific fish farming in the State, in natural water bodies has been mostly traditional Capture fisheryonly. As a result productivity of fishery is low and state has to import large amount of fish from outside the state. The scientific fish farming is practiced generally in individual and community tanks. Recently emphasis has been given for scientific fish farming in beelsand community tank through awareness, training, government support and subsequent bank linkage. There is a positive trend in fish productivity during recent past.

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Some relevant literatures regarding the fishery sector of Assam is tried to contextualise in this study. SK Das (2003-04) have said that the aquaculture not only plays an important role in nutrition but also in the rural economy of the State. A pilot project conducted with a group of resource poor tribal farmers revealed that a production of about 1 800 kg/ha/yr could be achieved from small seasonal homestead ponds through integrated use of locally available biological resources. This implies an excellent opportunity for improving the rural economy through the development of small-scale fish culture enterprises. In this project, a greater emphasis was placed on improving the knowledge and skills of the farmers and their farming practices so that in the future they would be in a position to expand their activities with financial assistance made available locally. Bora V. and Sharma (2000) have submitted that the wetland resources of north east India have great potential to be utilize for aquaculture some minor groups of fishes which have tremendous economic importance are listed. Some suggestion for fishery development in the region for both major crops and commercially important potential aquarium are provided in the articles.

Assam is one of the richest state in the country with surface water resources where beelfisheries and pond & tank fisheries alone occupies about 1.40 lakh hectares area. Besides swamps and low-lying areas, two major rivers and their tributaries have a high growth potential for scientific fish farming/ fishing and could play a pivotal role in the socio- economic development and employment generation in the State. By keeping in view the importance of fishery sector in Assam, this paper tries to evaluate the present status of fishery sector with the help of some relevant secondary information.

**Objectives :**

- To examine the status of fishery sector in Assam.
- To find out the growth rate of fishery sector in Assam.
- To highlight some problems of fishery sector in Assam.

**Methodology :**

To fulfil the objective of this paper secondary data have been used. The secondary data have collected from different sources like Department of Fishery, Directorate of Economics and Statistics, NEDFi Data Bank, Research Articles at different levels et.

**Fishery Sector in Assam :**

Fishery sector could play a pivotal role in the socio-economic development and employment generation in the State. Department of Fishery has been implementing a number of schemes in the State with a view to achieve self-sufficiency in fish production and socio-economic development of poor section of the society. Fish farming is gradually gaining popularity in the State, as farmers have taken up fish seed farming and fish farming on commercial scales as a result of extensive awareness campaign by the Department. Fish production in the State during 2009-10 is 218 thousand tones which is 5.82 percent higher than 2008-09.

In view of the importance of the sector in providing nutrition to the people, employment generation and livelihood to the rural sector, and in view of the bright prospects for the sector to grow further, State Government has been giving due emphasis to the sector. Total annual plan allocation for the sector during 2009-10 was '3990.00 lakh. Government is also facilitating easy institutional credit to the sector.

Considering the potential of the fishery sector on rural employment, income and livelihood, Government has been making number of positive interventions for sustainable development of the sector and to meet the ever increasing demand for fish. The focus is on bridging the gap between the demand and supply of fish. Government is also taking various initiatives for conservation and propagation of local fish species including the indigenous fish having ornamental value. The fish seed production and its marketing are also regulated under the provisions of newly framed Assam Fish Seed Rules, 2010 to ensure quality fish seed to the farmers. Several infrastructures have been developed to support the growth of the fishery sector. Some important achievement of establishment of fresh water prawn hatcheries, State Fishery Laboratory, Hygienic Fish Markets, 380 ha of nursery and Rearing Area, 48 Mini fish seed hatcheries and 2 fish feed mills.

The State Fishery Sector has made consistent growth during the 11$^{th}$ plan period. The sector has registered an average growth of around 6.4 % during the 11$^{th}$ plan. Fish production in the state has reached a level of 243 thousand tons during 2011-12 which is 28 % more than that during 2007-08. Production of fish seed during 2011-12 is 4490 million making the state self-sufficient.

Against total allocation of Rs 19,572.50 lakh to fishery sector during the 11$^{th}$ plan period, amount released was Rs 12,342.63 lakh which has been utilized. During this

five-year period, about 10,000 hectare of water area has been developed for scientific fish farming through implementation of different schemes mainly under State Plan, Flagship programme of RKVY (RashtriyaKrishiVikasYojana), World Bank funded Assam Agricultural Competitiveness Project and NFDB (National Fisheries Development Board) benefiting more than 44,000 farmers contribution to additional cumulative production of about 40 thousand ton.

The productivity of fish in individual pond is increased to 2.7 tonnes/hectare during the years under 11th five year plan period from 1.2 tons/hectare before that. In case of beel fisheries and derelict water bodies it is increased upto 1.5 ton/hectare/ year from0.3 ton/hectare/year after development.

The resources wise break up of water bodies in the state is shown in the table:–

**1. The Resources wise break up in the State :**

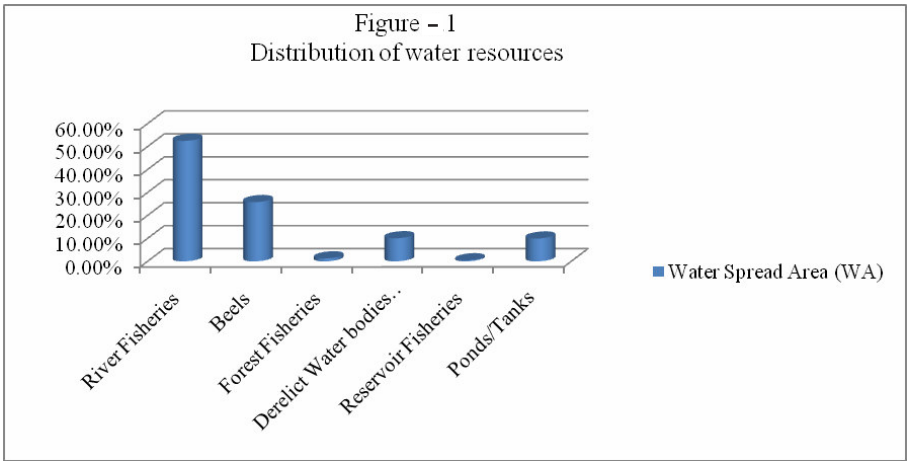
The Table-1 shows the water spread area of fishery resources which includes river fishery, beel, forest fishery, derelict water bodies swamps, reservoir fishery, pond/ tanks fishery in Assam.

**Table -1**
**Distribution of Resources**

| Sl. No. | Resource | Water Spread Area (WA) | Percentage (%) |
|---|---|---|---|
| 1 | River Fisheries | 2,05,000 | 52.49 % |
| 2 | Beels | 1,00,815 | 25.813 % |
| 3 | Forest Fisheries | 5,017 | 1.28 % |
| 4 | Derelict Water bodies swamps | 39,240 | 10.047 % |
| 5 | Reservoir Fisheries | 1,713 | 0.44 % |
| 6 | Ponds/Tanks | 38,767 | 9.93 % |
| | Total: | 390552 | 100 % |

Source: Statistical Hand book, Govt. of Assam, Guwahati, 2008.

Figure – 1
Distribution of water resources




According to the Table-1 large water area is occupied by the River fisheries (52.49%) than the other resources, the lowest is shown in Reservoir Fisheries (0.44%) in Assam.

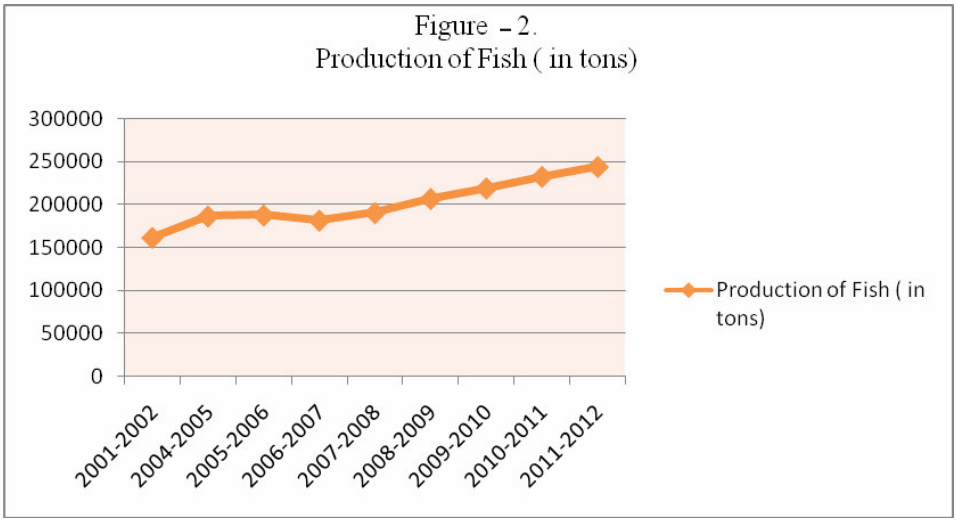
**2. Fish and Fish Seed Production in the State :**

The present level of annual fish production is 1.90 lakh MT during 2007-08 but still far away to reach self-sufficiency in productivity in the state as the estimated demand of 2.86 lakh MT calculated on the basis of minimum nutritional requirement of 11 kg per capita consumption. The gap is partially meet present per capita consumption is about 7.3 kg.

**Table-2**
**Annual Fish Production in Assam**

| Year | Production of Fish Seed (in million nos.) | Production of Fish ( in tons) |
|---|---|---|
| 2001-2002 | 1801 | 161450 |
| 2004-2005 | 2741 | 186314 |
| 2005-2006 | 3207 | 187378 |
| 2006-2007 | 2062 | 181479 |
| 2007-2008 | 3206 | 190320 |
| 2008-2009 | 3429 | 206700 |
| 2009-2010 | 3326 | 218823 |
| 2010-2011 | 4264 | 232339 |
| 2011-2012 | 4490 | 243869 |

Source: Department of Fishery, Govt. of Assam, Guwahati.




The Table-2 shows annual fish seed production and fish production increase over the year. During the year 2001-2002 total fish seed and fish production is 1801 million nos. and 161450 tons and it was increased to 4490 million nos. and 243869 tons during 2011-2012. From the table it is cleared that there is tremendous increased in the fish seed and fish production in Assam, over the period it will able to meet the ever increasing demand for fish in the state. There is a great potential of the fishery sector on generation of rural employment, income and livelihood to the rural sector.

**3. District wise Fish Production in Assam :**

In this section of this chapter an attempt is being made to examine the status of fish production among the districts of Assam from 1993-94 to 1997-98.

**Table-3**

**District Wise Trend in Fish Production in Assam (in Tonnes )**

| District | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|
| Dhubri | 11012 | 11402 | 11605 | 9978 | 10088 |
| Kokorajhar | 5997 | 5592 | 4576 | 4049 | 4150 |
| Bongaigaon | 5434 | 4412 | 3900 | 5050 | 5243 |
| Goalpara | 5547 | 5801 | 5776 | 5812 | 5873 |
| Barpeta | 9173 | 9286 | 9528 | 9760 | 9956 |

| | | | | | |
|---|---|---|---|---|---|
| Nalbari | 12902 | 9762 | 8501 | 8650 | 8766 |
| Kamrup | 9501 | 9642 | 7983 | 9960 | 9985 |
| Darrang | 6365 | 6585 | 8037 | 6727 | 6089 |
| Sonitpur | 5187 | 5451 | 6225 | 5809 | 5802 |
| Lakhimpur | 6533 | 4855 | 6114 | 6098 | 5732 |
| Dhemaji | 2807 | 4193 | 3486 | 3673 | 3857 |
| Marigoan | 6760 | 6804 | 6874 | 6846 | 6892 |
| Nagaon | 12576 | 12630 | 12837 | 12935 | 13065 |
| Golaghat | 2469 | 3289 | 4726 | 4172 | 4178 |
| Jorhat | 6401 | 6627 | 6653 | 6427 | 6488 |
| Sibsagar | 5253 | 5222 | 5318 | 5455 | 5570 |
| Dibrugarh | 6939 | 7292 | 8177 | 7832 | 7870 |
| Tinsukia | 8146 | 8302 | 5379 | 7321 | 7775 |
| KarbiAnglong | 3028 | 3392 | 3110 | 2808 | 2245 |
| N.C. Hills | 521 | 714 | 1120 | 720 | 755 |
| Karimganj | 7447 | 7380 | 10076 | 9457 | 9470 |
| Hailakandi | 2296 | 5181 | 5455 | 5303 | 5485 |
| Cachar | 9347 | 9207 | 9601 | 9765 | 9790 |
| **Total** | **151641** | **153020** | **155057** | **154607** | **155124** |

Source: Directorate of Economics and Statistics, Govt. of Assam , Guwahati.

**Figure- 3**
**Trend in the Total Fish Production in Assam**

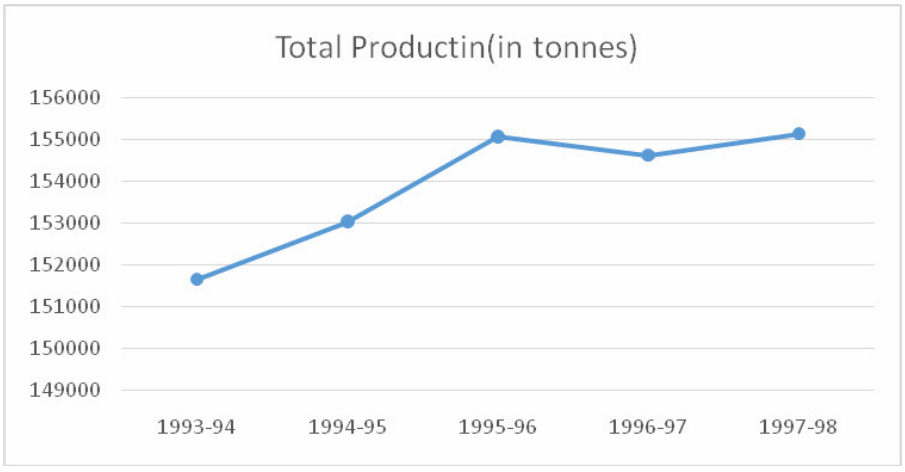


Table-3 and Figure-3 reveal the district wise trend in the total production of fishes in Assam. It also reveals that in the initial years the production of fish is low in most of the districts of Assam but it is slightly increasing over the years.

**4. Growth Rate of Fishery Sector in Assam :**

In this section of this paper the growth rate of fish production in last nine years of Assam is shown. Table-4 shows the growth rate of fish production in Assam.]

**Table-4**
**Growth Rate of Fish Production in Assam.**

| Year | Growth Rate in Production (in %) |
|---|---|
| 2004-05 | 2.9 |
| 2005-06 | 0.9 |
| 2006-07 | -4.5 |
| 2007-08 | 4.8 |
| 2008-09 | 8.3 |
| 2009-10 | 6.15 |
| 2010-11 | 3.85 |
| 2011-12 | 0.61 |
| 2012-13 | 11.22 |

Source: Department of Fishery, Govt. of Assam, Guwahati.

Table-4 shows that the growth rate of fish production in Assam is not stable over the years. The highest growth rate of fish production was in the year 2012-13 and lowest in 2006-07. There may be different influencing factors of fish production in Assam. One of the probable cause is frequent flood in the state.

**Constraints of Increase Fish Productivity :**

**(a)** The reasons for low fish productivity in the culture fisheries of the state are attributed to: non-availability of uniform standard quality seed in the right season, scarcity of balanced fish feed and inadequacy of technology transfer. It is complained that though there is provision under the World Bank aided ARIASP, adequate quantity of fish feed does not reach to fish farmers.

**(b)** The general constraints for low fish productivity due to underutilization of aquatic resources in low lying areas, insufficient rearing tank area in seed production farms for raising fingerling from the fry stage in comparison to volume of fry produced in the state, mortality of fish in both culture and capture fisheries due to Epizootic Ulcerative Syndrome (EUS), causing heavy financial loss to fish farmers. The disease is more prevalent in culture fisheries particularly during the winter months. Moreover several waves of flood during the monsoon season lead to financial loss to the farmers.

**(c)** The state is in a better position to attain self-sufficiency in fish production. The perennial problem of floods, underutilization of aquatic resources and low lying areas, use of unscientific methods in fishing and indiscriminate poaching of brood fish are some of the main reasons for the low fish production in the state.

**(d)** It is important to ensure that fisheries are exploited rationally. Generally the Assam Fisheries Development Corporation leases out the beel fisheries for a duration of one to three years. This leads to overexploitation of fisheries. It may be noted that there is no provision to control overfishing. If provision is made to lease out the beel fisheries for longer duration (seven years as suggested by fisheries officials) then there is incentive for the lessees to develop the beel fisheries.

**Suggestions and Conclusion :**

Fishery sector is get significant importance in the global phenomenon. Proper initiatives and policy implication by the government of the state for the development of the fishery sector will definitely help to generate productive employment and income in the state.In present times many households are getting their livelihood from the fish farming. But due to improper fishing, lack of proper conservation measures fish species are depleting very rapidly in the state. It continues for another few years. Immediate attention from government agencies NGOs, researchers, planners, and policy makers' local people etc. is required in this regard.

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