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The Current Status of Fishery Sector in Assam: An Analysis

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Abstract

Assam has great prospect to self-sufficient for fish production because the state has availability of natural water bodies such as rivers, beels, ponds & tanks and low laying areas. In the state majority of the people in the scheduled caste are involved in the sector. Their socio-economic condition is dependable on the fishing activities. Although the fisheries provide livelihood to the poor fishermen of SC community sometimes the fishermen have also been faced by various problems. Despite the availability of water resources in the state the state has not been self-sufficient for fish production. So, this paper wants to examine the current status of fishery sector in the state.

Key Words: fishery, scheduled caste, socio-economic and fishermen

1. Introduction:

Thefishery sector plays avital role in the socio-economic development of the significant population in the rural area of Assam. Assam is predominantly fishing consuming state with about 95 percent people consume fish, which acts as substitute for vitamin and calorie deficiency of people in the society. The per capita consumption of fish in the state is 6.70 kg per year against a desirable rate of 11kg. **(Economic Survey, 2010-11). According to the Economic Survey of Assam 2015-16, the fish consumption of the state (per capita per year) is 9 kg.** In an economically backward people like scheduled caste in the state fisheries are providing a source of income. The state has an enormous potential to become a top fish producing and exporting state in the country and also the South East Asian market. The Government of India has opened a window to interlink the fish producers of the country with the South Asian markets as per the objective of Act East Policy **(13-Aug-2018, Press Trust of India)**. In the recent years, the government took some positive steps for developing the rural economy of the state by improving the allied agriculture sector. As an allied sector the fishery sector must vigorously engage the rural people for deriving maximum benefits. On the other hand, the state has the capacity to become biggest producer and exporter of fish in the country. The present status of fishery sector in the state is examined in the study.

2.Objective of the Study:

i.To examine the current status of the fishery sector in the state of Assam.

ii.To study on the production status of fish in the study area.

3.Methodology:

- Method of the Study: The study is a descriptive innature.
- Universe of the Study: The study covers the natural fisheries in the state of Assam. The natural fisheries are basically government registered. These registered fisheries have been playing an important role in the state economy because most of the people of the state get directly and indirectly employment opportunity from this sector.
- Source of Data: In the study the secondary source of datahas been taken. The information has been collected from various government reports, records, government acts, dissertation, research articles, journals, books, news papers and internet.

4.Review of literature:

Karmakar *et al. (*1999) opines in their study for overall socio-economic status of fishermen, better educational provision for basic amenities of life, easy credit facilities, government supports and incentive for other allied activities.

Baruah et al. (2000) state that for sustainable development of beels fisheries in Assam, a community-based co-management model is quite necessary like those applied in reservoir fisheries in Northern Brazil. They mention about the state fisheries management system of the government.

Pathak, S.C (2000) states on the fisheries resources of the North Eastern Region. Here it is seen that despite the adequate natural fishery resources fish production has not been able to self sufficient. The author highlights the necessity of credit support for the growth of the fishery sector. The author also focuses on the necessity of indigenous fish production in the region which can be meet up the demand of fish in the state.

Bhattacharyya (2002) based on the case studies in two open and closed beels of the Central Brahmaputra Valley Zone of Assam, shows that the tropic structure and fishery potential varied significantly between these two types of beel.

Biswas and Sugunan (2008) observe that the total of 151 species of fish is found from the Brahmaputra River and its tributaries of which 73 are consumed as food fish as well as ornamentals. The food fish are gaining more popularity and it has greater demand among the people of the state. Another rest of ornamental fish is also gaining popularity in the state and it is able to capture the foreign market also.

Bhagwati (2009) in his study on "*Fishery in Assam*" examines about the scope and status of fishery sector in Assam. According to the author the state would be self sufficient in fish production when these water resources would be used with accurate scientific fish farming.

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people of the state. Another rest of ornamental fish is also gaining popularity in the state and it is able to capture the foreign market also.

Baishya (2012) mentions his study that the socio-economic profile of Niz-Saldah village under Sarthebari revenue circle, Barpeta district, Assam, most of the respondent's 52.43 percent of the population of the village being traditional Assamese fishermen. He observes poor toilet condition, poor transport communication, poor medical facilities, large-scale betel-nut chewing habit, traditional method of fishing, improper management of social resources and low standard of living affecting the development of the community.

Goswami *et al.* (2012) mention 422 fish species from North-East India and total of 311 fish from Assam that include 131 food fish and 180 ornamental fish. Due to the effect of climate change to the biodiversity of fish in Assam, these workers observe that such changes could trigger a sequence of events threatening the biodiversity of fish.

5.Analysis of the Study:

5.1. Fisheries Potentialities:

Assam has availability of natural water bodies. Most of the water bodies in the state are conserved for fishery resources. These fisheries resources are run by the fishery department of Government of Assam. The fisheries comprise river fisheries, beel fisheries, reservoirs, ponds and tanks and forest fisheries and derelict water bodies or swamps. These natural fisheries of the state have greater potentialities for fish production. According to the report of Directorate of Fisheries Government of Assam 2016-17, the fishery resources are distributed (in hectare) as given in the following table No.1

Table No-1: Fishery Resources in the State of Assam(hectare)

Sl.No	Fishery resources	Area (hectare)
1	River fisheries	205,000
2	Beel fisheries	100,815
3	Reservoirs	1713
4	Ponds and tanks	41,949
5	Forest fisheries and derelict water bodies or swamps	5,017

Source: Directorate of Fisheries Govt. of Assam report 2016-17

The Brahmaputra River in Assam has several tributaries in the North and South bank which have been considered as a vital part in the fishery of the state. A major portion of the people in the fishing communities of the state have been living in the bank of these tributaries or rivers. The mighty river Brahmaputra, Barak and its tributaries are blessing for the fishermen community in the state. These are call river fisheries. These are mentioned in the following table No-2

Table No-2: Numbers of Tributaries in the Brahmaputra River		
Sl.No	North Bank	South Bank
1	Sankosh	Jinjram
2	Gadadhar	Krishnai
3	Saral Bhanga	Dudhnai
4	Champamati	Singra
5	Aie	Kulsi
6	Manas	Digaru
7	Beki	Kolong
8	Pahumara	Dhansiri
9	Pagaldia	Kakadanga
10	Puthimari	Bhogdoi
11	Baralia	Jhanjai
12	Bornoi	Dikhow
13	Nonadi	Disang
14	Jia Dhansiri	Dibru
15	Panchnoi	Lohit
16	Belsiri	
17	Gabharu	
18	Buri Ganga	
19	Jia Bhorelli	
20	Dibang	
21	Dihang	
22	Dikrang	
23	Jia Dhal	
24	Ranganoi	
25	Subansiri	
26	Borgong	
27	Burai	

Source: Directorate of Fisheries, Govt.of Assam

These natural water bodies of the state have better utility for the development of state economy and environment. These natural rivers and beels have been used for fishing purpose where a significant proportion of the people are able to get employment opportunity.The fishery department of the state government has 607numbers of registered river and beel fisheries. The district-wise government registered river and beel fisheries are:

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Table No-3: District wise number of registered Beel Fisheries and River Fisheries in Assam

SL.No	District	Registered Beel Fisheries	Registered River fisheries	Total
1	Dhuburi	75	13	88
2	Kokrajhar	02	03	05
3	Bongaigaon	06	0	06
4	Goalpara	17	03	20
5	Barpeta	23	15	38
6	Nalbari	18	0	18
7	Kamrup(R+M)	20	05	25
8	Darrang	16	02	18
9	Sonitpur	20	05	25
10	Lakhimpur	11	08	19
11	Dhemaji	08	08	16
12	Morigaon	35	05	40
13	Nagaon	40	12	52
14	Golaghat	15	01	16
15	Jorhat	17	08	25
16	Sivasagar	23	09	32
17	Dibrugarh	08	09	17
18	Tinsukia	05	10	15
19	Karbi-Anglong	0	0	0
20	DimaHasao	0	0	0
21	Karimganj	27	09	36
22	Hailakandi	06	09	15
23	Cachar	38	43	81
24	Chirang	0	0	0
25	Baksa	0	0	0
26	Udalguri	0	0	0
27	Charaideo	----	---	---
28	West karbianglong	----	----	----
29	South Salmora,Mancachar	----	----	----
30	Biswanath Chariali	----	----	-----
31	Hojai	----	----	----
	Total	**430**	**177**	**607**

Source: Directorate of Fisheries, Govt. of Assam 2016-17

According to the report of Directorate of Fisheries 2016-17, the district wise registered river and beel fisheries are mentioned in the above table, the present districts of the state has increased to 33. Besides the unregistered natural fisheries are 767 nos. However, due to availability of these fisheries resource, the state fishery sector has great potential in inland fish production.

5.2. Production of Fish in the State:

The fisheries of the state are recognized as an important economic activity in the socio-economic context.It plays a major role in fish production. The state's fisheries have also made a consistent growth during the 11th plan period registering an average growth of 6.4 percent. During the 12th plan period growth anticipated in the fishery sector is 7.14 percent in 2012-13 as compared to 6.78 percent estimated in 2011-12. Fish production in the state has reached a level of 243 thousand tones during 2011-12 which is 28 percent more over the year of 2007-2008. ***(Economic Survey 2012-2013)***

The sector contributes more than 2% of Gross State Domestic Product to the state economy and it provides livelihood to a significant population of the state ***(Budhin Gogoi et.al. 2015).*** According to the annual report of the Department of Animal Husbandry, Dairying and Fisheries 2016-17, fish production has increased to 2.94 lakh tones in 2016-17 from 1.90 lakh tones in 2007-08. The state of Assam is predominantly a fish consuming state with 90 percent of its population eating fish***. (Teligraph,Dec 26,2017).***

The comparison of fish production between the country and state is also shown in the figure no-1.

The following table no-5 shows that the fish production of the state and the country where the fish production (in lakh tones) is gradually increasing from 2005-2006 to 2016-2017.

Table No 4: Fish Production of India and Assam (Production Lakh tones)

Year	**India**	**Assam**
2005-2006	65.72	1.87
2006-2007	68.69	1.81
2007-2008	71.27	1.90
2008-2009	76.16	2.06
2009-2010	79.98	2.18
2010-2011	82.31	2.32
2011-2012	86.66	2.43
2012-2013	90.40	2.54
2013-2014	95.79	2.66
2014-2015	100.69	2.82
2015-2016	107.90	2.94
2016-2017	114.10	3.06

Source: Directorate of fisheries Govt.of Assam2016-17

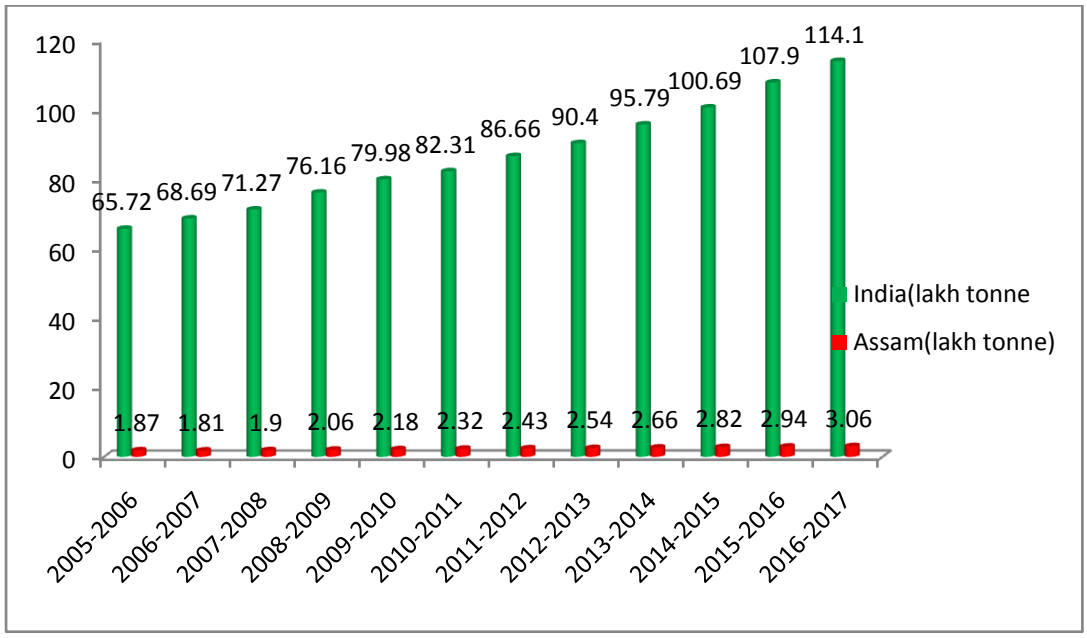

Fig.1. Fish production of India and Assam

The Brahmaputra and Barak rivers are the main source of natural fish production in the state. Traditionally the rural people in the scheduled caste community of the both valleys are involved in fishing profession. Fish is naturally produced in the natural fisheries where no investment is required for the process of natural fish production. Fish usually need free flow movement of water for breeding. Assam is a flood prone state, which is a blessing in disguise for the fishery sector. During the flood, the water level of all water bodies rises, leading to new lease of life for the fish by giving a new stimulus to fertility and increasing the fish production.In the state the 217 species of fish are identified in the beel and river fisheries which have great market value. ***(Bist.V.K.2013)***

In the state river and beel fisheries, various kinds of indigenous fish are found. These are very popular and most demandable. The indigenous fish in the state has particular significance. These are known as:

Table No-5: Different kinds of Indigenous fish in the State			
Sl.No	**Assamese Name**	**English Name**	**Scientific Name**
1	Chital	Humped feather back	Notopterus chitala
2	Ilish	Indian shad	Hilsa ilisha
3	Karoti	Ganges river gizzard shad	Gonialosa manmina
4	Karoti	Indian river shed	Gudusia chapra
5	Salo/Chalo	Gangetic hair fin anchovy	Setipinna phasa
6	Kandhuli	Feather back	Notopterus notopterus
7	Laupatia	Indian hatchet fish	Chela laubuca
8	Selkona	Chela	Chela atpar
9	Laupati	Silver hatchet chela	Chela cachius
10	Selkona	Larger razorbelley minnow	Salmostomar bacalia
11	Selkona	Gora chela	Oxygaster gora
12	Korang	Barred baril	Barilius barila
13	Darikona	Flying barb	Esomus ddanricus
14	Eleng	Bengla barb	Rasbora elanga
15	Moa	Indian carplet	Amblypharyngodon mola
16	Bariala	Aspodiparia	Aspodiparia morar
17	Pithia	Golden Mahseer	Tor putitora
18	Sol	Striped snakehead,	Channa striata
19	Sal	Great snakehead,	Channa marulius
20	Goroi	Spotted snakehead,	Channa punctata
21	Kaoi	Climbing perch	Anabas testudineus
22	Singi	Stinging catfish	Heteropneustes fossilis
23	Gathu	Bengal loach	Botia dario
24	Botia	Guntea Loach	Lepidocephalus guntea
25	Pavo	Pabdah catfish,	Ompok pabda
26	Mirika	Mrigal/Mrigel	Cirrhinus cirrhosus
27	Paniputa	Tank goby	Glossogobius giuris
28	Row	Rohu	Labeo rohita
29	Bami	Indian mottled eel	Anguilla bengalensis bengalensis
30	Singora	Striped Dwarf Catfish	Mystus vittatus
31	Gorua	Goonch	Bagarius bagarius
32	Tura	Lesser Spiny eel	Macrognathus aculeatus
33	Chanda	Elongate glass-perchlet	Chanda nama
34	Borali	Boal	Wallago attu
35	Puthi	Ticto barb	Puntius ticto
36	Kuhi	Kuria labeo	Labeo gonius
37	Neria	Garua Bachcha,	Clupisoma garua
38	Bahu	Catla	Catla catla
39	Magur	Walking catfish,	Clarias batrachus
40	Gangatup	Puffer Fishes	Tetraodon cutcutia
41	Ari	Giant river catfish	Sperata seenghala
42	Bocha	Batchwa vacha,	Eutropiichthys vacha
43	Cuchia	Cuchia,	Monopterus cuchia

Source:https://www.thethirdpole.net/en/2018/05/25/inassam-a-wetland-too-popular-for-its-own-good/

The state of Assam stands 12th in the overall fish production and 6th in inland fisheries production in the country. On the other hand, it is found that the fish seed production is also increasing in the state. Although, the state is self sufficient in fish seed production and the state government is first in the country to introduce the Assam Fish Seed Act, 2005 but the overall production however is not commensurate with the increasing demand for fish and fishery products. The state experiences more supply gap in fish production. Therefore, the state has been importing fish from other fish producing states such as Andhra Pradesh, Uttar Pradesh, Bihar and West Bengal etc. In this regard Kalita, (2006) mentionedbecause of production shortfall in fish, on an average Rs.100 cores draining out from the state per year for importing fish.

Dry fish is also one of the most favorite fish item for the people of North East Region. It is made from different species of indigenous fish in the river and beel fisheries. The people of North East, basically the tribal people, consume dry fish as the favorable fish item. The lease party of the fisheries makes dry fish item from some small and big species of fish during the time of available fish production. During that time the price of fish goes down. So the fishermen of the fisheries take this way for meeting up the deficit of the price of fish. The price of dry fish remains quite high throughout the year.

Thedry fish marketing also plays an important role in the state economy. The dry fish producer sells their dry fish to some traders and markets. In the study area the dry fish producer sells the fish in the local market and outside market from the district. In the local market some of the dry fish traders take the dry fish from the dry fish producer or maker in different time and some dry fish producers also sell the fish directly to the different market. Even the dry fish traders provide financial support to the dry fish maker in the time of making dry fish. In the study it is found that most of the dry fish traders sell the fish at the Jagiroad dry fish market because this is the big dry fish market in the country and many customers come from different states and neighboring countries also.

The ornamental fish is also the part of the indigenous fish which found in the state natural fisheries. About 85% of native species of ornamental fish are found in North eastern region (*Ornamental fish farming in India-vikaspedia assessed date 26th August 2019).* The state of Assam has 217 species of fish which 150 numbers have ornamental value. In the international market too, 50 numbers of species have ornamental value. In Assam also various types of ornamental fish are found in the main river Brahmaputra, Barak and their tributaries (rivers) and beels. These kinds of fish were not gaining popularity earlier but in present context they have great demand in the North Eastern Region and the country. The ornamental fish are:

Table No-6: Species of Ornamental Fish in the State			
Sl.No	Name of the ornamental fish	English Name	Scientific Name
1	Tura	Lesser Spiny eel	Macrognathus aculeatus
2	Chanda	Elongate glass-perch let	Chanda Nama
3	Gathu	Bengal loach	Botia Dario
4	Botia	Guntea Loach	Lepidocephalus guntea
5	Paniputa	Tank goby	Glossogobius giuris
6	Bami	Indian mottled eel	Anguilla bengalensis bengalensis
7	Singora	Striped Dwarf Catfish	Mystus vittatus
8	Magur	Walking catfish	Clarias batrachus
9	Singi	Stinging catfish	Heteropneustes fossilis
10	Sol	Striped snakehead	Channa striata
11	Sal	Great snakehead	Channa marulius
12	Goroi	Spotted snakehead,	Channa punctata
13	Moa	Indian carplet	Amblypharyngodon mola
14	Cheng	Barca snake head	
16	Kholihona	Indian Paradise	

Source: Primary Survey

6. Conclusion:

Thus, during this analysis of the chapter, it is found that the present fishery sector has immense scope and opportunities for giving employment and providing livelihood to the significant population of the rural area in the state. Due to availability of beel, river, low lying areas and ponds in the state, the government has ample scope and potentialities for producing fish in higher level. It is expected that from the higher level of fish production in the natural fisheries, the state government can extend some fish market, constitute some fishery related ancillary unit and industries where people of the state are able to get opportunity to do some activities. The State Government has initiated some schemes and programmes for developing the fishery sector. The schemes are like "*Ghore Ghore Pukhuri Ghore Ghore Mas",Individual Fishery Construction Schemes*, under RKVY fishery construction scheme, under NABARD scheme, Union Government hundred percent schemes for developing the fishery sector. These schemes should be properly implemented by the government on the actual fishermen in the fisheries co-operative societies, self help groups, non government organization and the fish farmers. In the study it is observed that the fishermen of the natural fisheries are unable to avail the various schemes and benefits than the farming sector. Even the government of the state does not provide sufficient financial support to the fishermen of the government registered river and beel fisheries during the banned period of fishing. Besides, the fishermen of the state have been adopting the traditional fishing technique since long year. Therefore, it can be revealed from the study that if the government is able to remove these lacunas of the fishery sector, then the sector will be established as commercial and profitable business in the state.

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