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A STUDY ON CULTURAL & INDIGENOUS FISHERY BUSINESS IN BATARDRAVA REGION OF NOGAON DISTRICT OF ASSAM, INDIA

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A B S T R A C T

The fishery sector plays an important role in sphere of culture specific business of people of Assam. The fishing industry includes any industry or activity concerned with taking, culturing processing, preserving storing, transporting marketing or selling fish products. Fishes are important element of Assamese life and culture. Those play a pivotal role in the socio-economic development and employment generation in Assam. This study aims to discuss socio-economic profile of indigenous fish cultivators, the different type of livelihood associated with it and the challenges faced by them. The study was conducted in Rowmari, Katahguri, Balijan, TunukaBori, Tuktuki and Silpukhuri villages which are in Batadrava block under Nagaon district.Primary data are collected from 60 respondents through well-structured schedule.The major findings were low literacy rates, Less technical exposure and non- participation of women folks. Further challenges and suggestions are discussed.

1. INTRODUCTION

The fishing industry includes any industry or activity concerned with taking, culturing processing, preserving, storing, transporting marketing or selling fish products (Islam & Habib, 2013). According to Food and Agriculture Organisation of United Nations fishery is typically defined in terms of the people involved, species or type of fish, area of water or Seabed, method of fishing, class of boats, purpose of the activities or a combination of the foregoing feature (Farsund et al., 2015). Directly or indirectly the livelihood of over 500 million people in developing countries depends on fisheries and aquaculture (Rabo et al., 2014; Tewabe, 2015; Giri et al., 2022).

These are their principal industry sectors:

- **The Commercial Sector** -Comprises enterprises and individuals associated with wild culture or aquaculture resources on the various transformations of those resources into products for sale (Little et al., 2016). It is also referred to as the Seafood Industry although non-food items such as pearls are included among its products.
- **The Traditional Sector:** Comprises enterprises and individuals associated with fisheries resources from which indigenous people derive products in accordance with their tradition (Posey & Dutfield, 1996).
- **The Recreational Sector:** Comprises enterprises and Individuals associated for the purpose of recreation sport with fisheries resources from which products are derived that are not for Sale (Sutinen & Johnston, 2003).

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- Fish and fishing business is an important sector of many nation of the world from the stand point of income and employment generation (Belhabib et al., 2015). Fishing plays an important role in supporting livelihood worldwide and also from an important source of diet for over 1 billion people. It is estimated that 12 million people are directly engaged in fishing. Fisheries sector play an important role in the Indian economy by contributing to the national income, employment and environment fisheries related activities to provide important sources of livelihood for 7 million people in India. Fish production from lakes and ponds can be increased through scientific farming which will improve the socio-economic condition of rural population by providing employment opportunities in India. Assam has total 1.35 Lakh Ha of inland water bodies and 106207.29 km of River & Canal area.

  It is a fact that fishes are important element of Assamese life and culture. Fishing is a very old trading in Assam as the society itself. Orginally fishing or fish - cultivation was not considered as a profession, but today it is richest freshwater resources of state. Those play a pivotal role in the socio-economic development and employment generation in Assam. The fishery sector and its allied activities have high level potentiality to generate employment. Thousands of people are engaged in different activities of fishery and its allied activities in Assam for their daily meals. Assam recorded population of more than 25 lakhs fishermen in year 2020-21. Scientific development of fish cultivation paved the employment revenue in Assam. Although plenty of resources are available in state still aquaculture production is not contributing significantly to income generation. There are manifold interaction between concurrent production activities to support rural village community and supply to urban areas with the needed quality and variety of food. Such interaction extends to the institutional sphere as fisheries and agriculture. Improved interaction between the two sectors is therefore an important means of fish production and food security.

Objectives of study:

1. To study the socio-economic profile of indigenous fish cultivators.
2. To explore different types of livelihood associated with fish farming.
3. To study the challenges faced by the cultivators in fish farming.

2. LITERATURE REVIEW

Panikkar et al. (1998) has studied structural change in the traditional fishery of Kerala and its social economic implication. They pointed out that before motorization phase rural landing centres were primary markets for traditional sector. Increased ring seine operation with its huge landing attracted many traders. As a result bargaining capacity of the traditional sector accelerated. The share of fishermen in Consumer rupee has been increased. The study also pointed out that the fishing gears used by the fishermen are destructive posing the problem of conservation of fish resources.

Immanuel and Srinath (2000) studied potential of techno-economic role of women in fisheries. The study revealed that women contribute a lot in fisheries sector in Coastal areas. Women play an important role in fisheries and in some parts of the world they are goods navigators too. Modernization has diminished the role of fisherwomen but yet they play an important role in the fishing activity. The author suggest that women should be helped to participate in production activities without disturbing their domestic responsibilities.

Debnath et al. (2020) has concluded that Assam has sufficient fisheries but the production do no match the demand of the public. To satisfy the demand, non-conventional technology based methods and practices should be adopted. Maximum beels should be based on principle of community participation.

Gogoi (2016) has examined the status and growth rate of fishery sector in Assam. It concludes that this is a significant sector which generates employment and income in Assam. Study suggests support from government agencies and NGOs to yield optimum returns from the sector.

Nandi et al. (2022) studied status of fisheries in assam and suggested measures to augment it. It reveals that production of fish has increased over years. Though there is requirement of documentation, database system, awareness programs and technical support.

3. RESEARCH METHODOLOGY

The research method employed for this study is empirical in nature. Primary data are collected from 60 respondents through well-structured schedule. For conducting the study area sampling is being used. The study was conducted in Rowmari, Katahguri, Balijan, TunukaBori, Tuktuki and Silpukhuri villages which are in Batadrava constituency under Nagaon district. In addition to primary data, some sources of secondary data has been studied through Handbook on Fisheries Statistics, District Fishery Office Nagaon, Journals and other related research articles have also been studied for this research. Data is shown through clustered columns, charts and tables and interpreted thereof.

4. DISCUSSION AND ANALYSIS

Data on inland fishery resources of Assam of year 2020-21 is presented on the figure 1 and data on number of fisherman population of Assam engaged in Inland Fisheries Activities for Year 2020-21 is presented on the figure 2.

Table 1 presents Data showing Socio-Economic Status of Respondents, Table 2 Data showing experience of

people engaged in fish farming, Table 3 Data showing distribution of fisheries on the basis of ownership, Table 4 Data showing the distribution of fisheries according to size, Table 5 Data showing types of persons involved in fish farming and its related activities according to type of livelihoods, Table 6 Data showing the distribution of annual income from fish farming and its related activities and Table 7 Data showing the response regarding government.

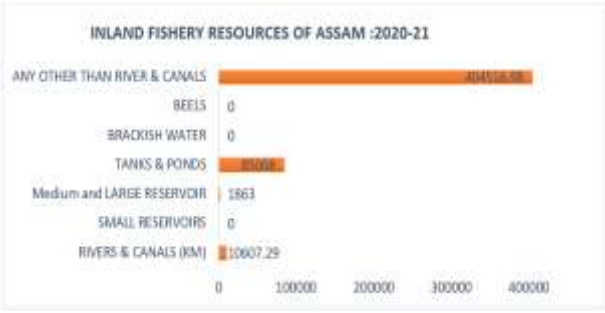

Figure 1. Data on Inland Fishery Resources Of Assam of year 2020-21
***(Source:** Handbook on Fisheries Statistics)*

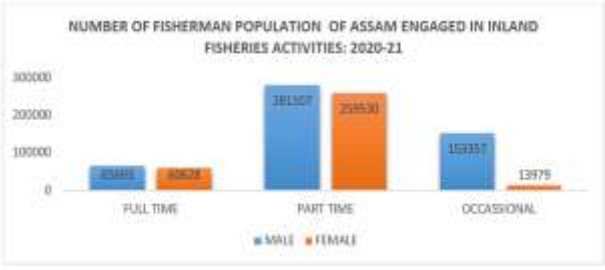

Figure 2. Data on number of fisherman population of Assam engaged in Inland Fisheries Activities for Year 2020-21
***(Source:** Handbook on Fisheries Statistics)*

Table 1. Data showing Socio-Economic Status of Respondents

Elements	Categories	Count	Percentage
Age	Less than 30 years	18	30
	30-50 years	30	50
	Above 50 years	12	20
Gender	Male	57	95
	Female	3	5
	Other	0	0
Education Qualification	Below10th	24	40
	10^{th}	18	30
	12^{th}	12	20
	Graduate and above	6	10
Annual Income	Below 4 lakhs	15	25
	4-8Lakhs	27	45
	Above 8 Lakhs	18	30

*(**Source**: Field Study)*

Table 2. Data showing experience of people engaged in fish farming

Experience	Response	Percentage
Low	21	35
Medium	30	50
High	9	15
Total	60	100

*(**Source**- Field Study)*

Interpretation - It is shown that maximum of fishers (50%) have medium term experience, 35% has short term experience and rest 15% has long term experience in this field of business.

Table 3. Data showing distribution of fisheries on the basis of ownership

Nature of Fishery	Responses	Percentage
Owned Fishery	42	70
Leased with owned fishery	48	30
Total	60	100

*(**Source:** Field Study)*

Interpretation - It can be said that 7% of fisheries are owned and rest 30% are on rental basis.

Table 4. Data showing the distribution of fisheries according to size

Size of fisheries	Responses	Percentage
0-5Bighas	24	40
5-10 Bighas	12	20
10 Bighas and Above	6	10
Mixed	18	30
Total	60	100

(Source- Field Study)

Interpretation - It is shown that about 40% of fishers have 0-5 bighas of fisheries. 20% of fishers have 5-10 bighas of fisheries. 10% of fishers have more than 10 bighas of fisheries. And rest 30% have mixed sized fisheries.

Table 5. Data showing types of persons involved in fish farming and its related activities according to type of livelihoods

Types	Responses	Percentage
Lessor of the fisheries	12	20
Fish farmers including lessor	24	40
Mas Bepari	15	25
Fish Hatcheries Owners	6	10
Fish Production Technicians	3	5
Total	60	100

*(**Source:** Field Study)*
Interpretation -20% of the respondents are lessor of fisheries, 40% are Fish farmers including lessor, 25% are Mas Bepari, 10% are Fish Hatcheries Owners and rest 5% are Fish Production Technicians.

Table 6. Data showing the distribution of annual income from fish farming and its related activities

Income (in Lakhs)	Responses	Percentage
Below 3 Lakhs	09	15
3-5 Lakhs	18	30
5-7 Lakhs	24	40
7-9 Lakhs	6	10
9 Lakhs and above	3	5
Total	60	100

*(**Source:** Field Study)*

Interpretation - About 15% of engaged people have income of below 3 lakhs, 30% have income of 3-5 lakhs, 40% about 5-7 Lakhs of income, 10% about 7-9 Lakhs of income and rest 5% have income of 9 Lakhs and above.

Table 7. Data showing the response regarding government grants received by fish farmers

Options	Response	Percentage
Yes	15	25
No	45	75
Total	60	100

*(**Source:** Field Study)*

Interpretation - 25% respondents have agreed on receipt of government grants rest 75% has not received any grants from government.

5. CHALLENGES

The fishery industry in this area has immense potential of natural resources and human resources but it lacks financial resources and technical support. Indigenous people and freshers are joining this field of business as it is linked to their culture and diet habits but they face problem of finance. Engaged persons do not get loans or refinance facility from financial institutions. This lead to no expansion, less marketing activities, fewer initiatives, no or less technical support. There is a lot of difficulty in transporting fish from one place to another because when the fish are kept in stagnant water, their chances of dying increase due to lack of oxygen. At that time some people have to stir the water continuously without stopping so that the fish get sufficient amount of oxygen from the water. There is a lot of economic loss due to the death of fish. Women population of the Batardrava area are reluctant to engage in this sector since it is lengthy process and demands travel from one place to another with heavy parcels.

6. FINDINGS

We can list the following findings:
1. Most of the fish farmers in the study area are illiterate and financially weak.
2. The fish farmers are using traditional techniques for fish cultivation as a result of which their production level is low.
3. There are different types of persons earning their livelihood from fish farming such as lessor and lessee of the fishery. Hatcheries owner, masbepari fish production, technician shops dealing in fish medicine and fish tools etc.
4. Though various schemes are available for fisheries yet the beneficiaries is very small.
5. The fisheries sector is providing employment opportunities to different people and running their families from the income coming from this sectors.
6. Floods, droughts, lack of good quality fish seeds and fish fingerlings, Lack of storage facility are the major problems for the fish farmers.
7. Most of the fish farmers are untrained.
8. The participation of female in this sector is almost null.

7. SUGGESTIONS

Batadrava constituency under Nagaon district of Assam has potential for fisheries development. If proper steps are taken by the government then fishery sector in this area will be developed and also will be a good source of income for the people engaged in fisheries and its related activities. It will also improve the socio – economic condition and standard of living of these people. Some suggestions for the development of small scale fisheries in the study area are given below:

- Adoption of scientific methods and techniques for fish farming.
- To increase the literacy rates in the study area.
- To encourage women in the study area to participate in fisheries activities.
- Organizing training and developemental programs for fish farmers.
- Availability of financial assistance with ease.
- High quality of fish seeds and fish fingerlings should be made available.
- Timely supply of information to fish farmers regarding prices and demand of fish.
- Storage capacity should be made etc.

8. CONCLUSION

In assam, the small scale fish farming has a great potentiality to become one of the important sources of livelihood for the rural people, but the problem is with

the lack of adoption of scientific techniques of fish cultivation, less knowledge on the part of fish farmers to avail financial assistance, lack of transportation, marketing storage facilities etc. As a whole the fishery resource in our state has not been fully explored because of these problems. Fish farming is an important source of livelihood tor the people of batadrava area under nagaon district of assam. This area under nagaon district has huge potential of the development of small scale fish farming.most of the people in the study area are illiterate and financially weak. So the government should take initiate for the development of fishery in this area. Almost all the people involved in fish farming in this area are men. So, the government should initiate to encourage women to take part in fish farming.small scale fish farming and its related activities are providing good source of income to the different categories of people in this area such as lessor and lessee of the fisheries, masbepari, fish production technician, shops dealing in fish medicine.

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