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Socio-economic investigation of fisherfolk in the downstream of Simen River, Dhemaji, Assam, India

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Abstract
This investigation was carried out in the downstream of Simen River, Dhemaji, Assam from September 2022 to August 2023. A total of 70 respondents from three sampling sites were interviewed, visited their residences and self-prepared questionnaires were compiled to evaluate the fisher's socio-economic status. This investigation revealed that out of 70 respondents, all were literate fishers, 74.3% married, 82.9% males fishermen, 88.6% fishermen belonged to Hindu community, 60.0% temporary fisher folk, 28.6% fisher folk belonged to age group between 26-35 years, 58.6% of fisher folk working as farmer for other earning apart from fishing, 72.9% fisher folk had kaccha ghar, 64.3% fisher folk didn't have good sanitation condition, 50.0% respondents caught up to 5 kg of fishes individually daily and 15.7% of fisher folk were flood affected. The ratio of male to female was 54.3: 45.7 and the average family size was 6.7 members. The full-time fishermen fished for 8 months. The 60.0% professional temporary fishermen generally fished 2-4 months per year. Flood, erosion, use of fertilizer and pesticides, over exploitation of river resources, lack of awareness, shortage of trained manpower etc. were the hazards of the river revealed during the study.

Keywords: Simen River, fisherfolk, socio-economic, flood, family size.

Introduction
Food habits are changing rapidly around the world in the recent decades. Non-vegetarian food habits, especially fish eating, sometimes pose health hazard due to contamination with diverse heavy metals, as is evident from most of the literature available. Whether freshwater, marine or estuarine, fish is a common delicacy around the globe. Presence of toxic heavy metals is an emerging threat on safe consumption of fish [1].

Fishes are an important resource for human especially as food. It is the most valuable single source of high-quality protein [1]. Fish also has substantial social and economic value. The FAO estimates the value of fishes traded internationally to be US $ 51 billion per annum [2]. Over 200 million people are employed directly through fishing and aquaculture FAO [3,4]. As many as 200 billion people derive direct and indirect income from fishes. Traditionally people in the riverine environment prefer to settle down close to the river as it provides certain easy opportunities and facilities for sustenance. The river courses are used as transport routes and also natural fishing grounds. During summer, the river carries logs and other vegetal remains from its forested upper catchment areas and in winter as the water subsides sands and boulders get well exposed. These are extracted by some people to meet local demands. The present investigation has been conducted in the Simen River which originates in the West Siang district of Arunachal Pradesh where it is joined by Nanyel river in the left side and Jate, Juri and Igo rivers along the right side throughout its 30 km downstream length. From its origin, the river crosses about 7 km through Arunachal Pradesh and enters into Assam. The river confluences into the Brahmaputra at Sigayan Ghat, Dhemaji, Assam. It is the lifeline for a huge number of people of Simen Chapori and its adjoining areas in Dhemaji district of Assam. So far, there are many reports on problems, potentiality, dimension & management of fish farming, social issues and importance of fish culture practices of Assam [5-9]. But there is miserable information about socio-economic status of fish folk from riverine areas of Assam except a few recent reports [10-12]. The resources of Simen River plays important role in socio-economic status of fish folk of Simen Chapori and its adjoining area in Dhemaji districts of Assam, India.

But there is no information on socio-economic status of fisherfolk from the downstream of Simen River till today. Under the above background information, the present investigation was undertaken to reveal the socio-economic status of fisherfolk from the downstream of Simen River, Dhemaji, Assam.

Materials and Methods

This investigation was carried out in the downstream of Simen River, Assam from September 2022 to August 2023.

The Study Area

The study was carried out in the downstream area of Simen River located in Dhemaji district of Assam, India. Dhemaji district with a latitude of 27° 05' N and a longitude of 94° 12' E, is an administrative region (second-order administrative division) located in the area / state of Assam in India that is a part of Asia. The district covers an area of 3237sq km and is basically plain area lying at an area of 104 meters above the sea. Sampling was assessed at Sengajanghat, Nowkota and Simen-Chapori.

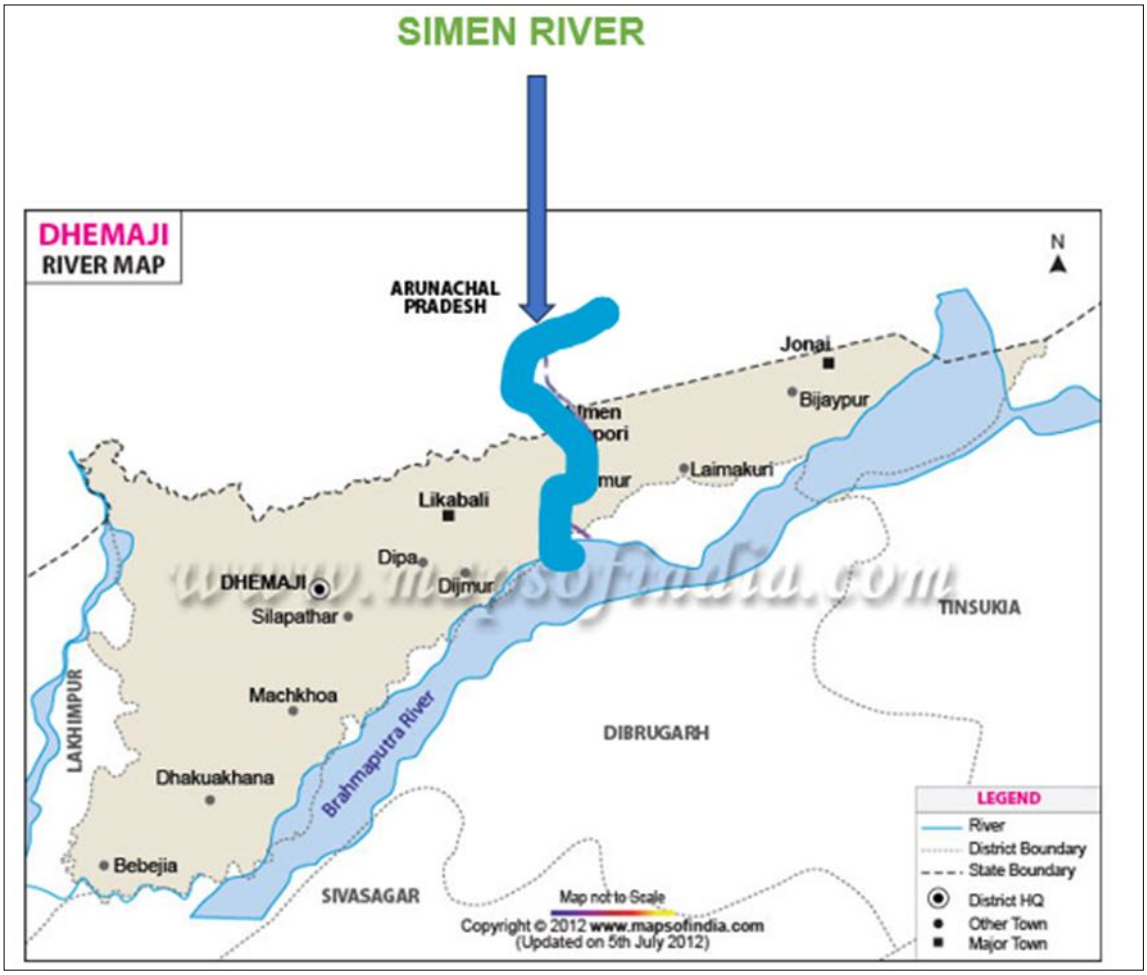

Fig 1: Physical status of sampling sites of Simen River.

Method of Data Collection

A total of 70 respondents from three sampling sites were interviewed to investigate the socio-economic status of fishers from the downstream of Simen River. The fisherfolk's residences were visited and individuals were also interviewed to obtain information on the fisher's socio-economic status. Self-prepared questionnaires were compiled and evaluated for the fisher's socio-economic status. The fishers were categorized as permanent or full-time, temporary or part-time and occasional fishers. The empirical socio-economic study aiming at serving specific purposes needs a variety of data ranging from perceptual, demographic to socio-economic. The data for the study were collected from both the primary and secondary sources. In order to collect data from the field two different survey schedules were designed-i) village level survey schedule and ii) household level survey schedule. The former was mainly used to collect relevant data in consultation with the village heads (*Gaonburah*) and Block Development Officers of the concerned village. The later was used to collect required data from the households selected for the study.

Results

The results of the present communication are given below-Table-1 shows the educational status of fisher folk from Simen River and revealed that literacy rate among the fishers is 100%. Out of 70 fisher folk 24.2% were lower primary passed and 58.6% fisherfolk were under metric category and 17.2% fisher folk belonged to matriculation and above category.

Table 1: Educational categories of fisher folk from Simen River

Categories	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Illiterate	00	00	00	00	00.0
LP Passed	08	05	04	17	24.2
Under metric	17	14	10	41	58.6
Matriculation and above	06	04	02	12	17.2

Table 2 shows the marital categories of fisher folk from Simen River and revealed that the percentage of married fishermen in the downstream of Simen River is 74.3% and unmarried is 25.7%.

Table 2: Marital status of fisher folk from Simen River

Marital categories	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Married	15	16	21	52	74.3
Unmarried	06	07	05	18	25.7

The study on sex categories of fishermen (Table 3) shows that most of the fisher folk belongs to male category (82.9%) and only 17.1% fishermen belongs to female categories. 06 female fisher folks were recorded from site-3 of this river out of 12 female fishers.

Table 3: Sex categories of fisher folk from Simen River.

Sex categories	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Male	18	16	24	58	82.9
Female	02	04	06	12	17.1

Table 4: Religious categories of fisher folk from Simen River

Religious categories	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Hindu	17	26	19	62	88.6
Muslim	00	02	04	06	08.6
Christian	00	02	00	02	02.8

Table-4 shows the religious categories of fisher folk and reveals that fisher folk belongs to Hindu community (88.6%) is dominating religious group. 08.6% fisherfolk belongs to Muslim community. Christian (02.8%) community was also constituted the fisher folk from the downstream of Simen River.

Table 5: Types of fisher folk from Simen River

Types fisher folk	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Full-time regular Fisher folk	02	04	05	11	15.7
Temporary Fisher folk	14	20	08	42	60.0
Occasional Fisher folk	04	08	05	17	24.3

The study on the types of fisherfolk (Table-5) shows that there are three categories of fisherfolk and are classified as full-time regular fisher folk, temporary fisher folk and occasional fisher folk. 15.7% of fisherfolk are full time regular fishermen who engage in fishing throughout the year for commercial purpose. Missing, Kaibotya, Kachari, Sonowal and other community constitute the full-time regular type of fisherfolk. Hazong, Chutia, Konch etc. community constitute the temporary fisherfolk (47.5%) who engage in fishing for daily consumption. The fishermen who go for fishing in monsoon and winter season are categorized as occasional fisher folk (46.5%) for marketing and own consumption.

Table-6 shows the age groups of fisher folk in the downstream of Simen River and investigation reveals that age group below 18 yrs represents 17.1% fisherfolk, 25.7% fisher folk belonged to age group between 19-25 years, 28.6% fisher folk belonged to age group between 26-35 years, 22.9% fisher folk belonged to age group between 36-50 years and 05.7% belonged to age group between 50 years and above.

Table 6: Age groups of fisher folk from Simen River

Age groups	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Below 18 yrs	02	06	04	12	17.1
19-25 yrs	06	08	04	18	25.7
26-35 yrs	05	09	06	20	28.6
36-50 yrs	04	07	05	16	22.9
50 and above	01	02	01	04	05.7

Table 7: Other income sources of fisher folk from Simen River

Other income sources	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Farmer	14	12	15	41	58.6
Labour	08	11	10	29	41.4

This investigation reveals that almost all the fisherfolk consider their other income sources in the form of farmer and labour. Out of the 70 respondents 41 also work as farmer apart from fishing and mainly involve in paddy cultivation in summer and *Rabi* crop cultivation in winter session. It is also found that 29 fisherfolk out of 70 respondents involve as labour in sand, stone and wood collection work in the downstream of this river.

Table 8: Housing status of fisher folk from Simen River

Housing status	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Kacchaghar	17	14	20	51	72.9
Pakkaghar	05	08	06	19	27.1

Studies on Housing status (Table 1.8) of fisher folk from Simen River shows that 72.9% fisher folk had kaccha ghar and 27.1% fisher folk had pakka ghar.

Table 9 reveals that sanitation condition of fisher folk from Simen River. Out of 70 fisher folk 64.3% fisher folk had pakka toilet and the rest 35.7% fisher folk didn't have good sanitation condition.

Table 9: Sanitation condition of fisher folk from Simen River

Types of Toilets	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Kaccha Toilet	15	12	18	45	64.3
Pakka Toilet	08	07	10	25	35.7

Table 10: Daily catches of fishes by fisher folk from Simen River

Amount of fishes	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
1-5 kg	11	13	11	35	50.0
6-10 kg	07	08	06	21	30.0
11-15 kg	02	03	03	08	11.4
16 kg and above	01	02	03	06	08.6

Survey on daily catches (Table 10) of fishes by fisher folk from Simen River shows that 50.0% respondents caught upto 5 kg of fishes individually daily. 30.0% fisher folk caught upto 10 kg individually daily, 11.4% respondents caught upto 15 kg individually and rest of 08.6% caught fishes above 16 kg.

Socio-economic studies of fisher folk from Simen River reveals that 15.7% of fisher folk were flood affected and 84.3% did not affect by flood (Table-11). During this study, it

was come to notice that some families of the fisher folk from Simen River were living on the embankments permanently and some families were living temporally on the embankment during the flood time.

Table 11: Flood affected fisher folk from Simen River.

	No. of Fisher folk			Total Fisher folk	%
Sites	S1	S2	S3		
Flood affected	02	04	05	11	15.7
Not flood affected	19	21	30	59	84.3

Table 12: Total population of Fisher folk from Simen River.

No. of fisher folk	Total Population	Population		Family size	Visiting School	
		Males	Females		Boys	Girls
70	468	254	214	6.7	93	87

The total population of 70 fisher folk households had 468 people of which 254 were males and 214 were females. The ratio of male to female was 54.3: 45.7 and the average family size was 6.7 members. The main fisher group in the downstream of Simen River belongs to Missing community, some to Kaibotya community and some to other communities like Sonowal, Kachari, Hazong, Konch, Kalita, Chutia and Miyan. There were 180 school age children (Boys-93 & Girls-87) out of the total population of 486 fisher folk.

Discussion

The study reveals that the literacy rate of fishermen of Simen River is hundred percent and almost three fourth of the fishermen were married. 88.6% of fishermen belong to Hindu religion which includes Sonowal Kachari, Missing, Hazong, Konch, Chutia, Kalita etc. Three types of fishermen were found in the downstream of the river *viz*. full-time fishers, temporary fishermen and occasional fishermen. It was also come to notice that most of the fishermen belongs to age group 26-35 yrs. This study reflects that fishermen were not satisfied with their fishing activity as only 15.7% of the fishers were fully engaged on fishing, so other fishermen also work as labour to generate their earning for livelihood. The sanitary system of fishermen was so miserable and it was come to notice during the study that 66.3% of the total fishermen did not have good sanitary condition at their home. This socio-economic study reveals that fishermen of this area were less affected by flood as compared to the fishermen of Subansiri River [13]. Family size and ratio of male to female of the fishermen are not satisfactory. Family size of the fishermen was 6.7 which is above the average size and is not bearable to fishermen earning. So, most of the families of the fishermen is affected by poverty. The education, social life, health & hygiene of the fishermen are in miserable condition because of some hazards of the river such as flood, erosion, use of fertilizer and pesticides, over exploitation of river resources, lack of awareness, shortage of trained manpower etc. revealed during the study. It is recommended to develop strategies and policies by concerned authority for the enhancement of their livelihood.

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