

## Socio-Economic Profile of Fish Farmers of an Adopted Model Aquaculture Village: Kulubari, West Tripura

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### ABSTRACT

*A careful study of the socioeconomic conditions of small-scale fish farmer is a prerequisite for the suitable design and successful implementation of Governments' developmental programmes. The purpose of this study is to provide such information through survey and description of absolute and relative socioeconomic conditions with emphasis on education, employment, income levels from aquaculture and other farm and nonfarm activities of fish farmers of Tripura, whose numbers have been increasing rapidly in recent past. A model aquaculture village namely Kulubari which is adjacent to Indo-Bangladesh boarder in Boxanagar R D Block, Sonamura sub-division of West Tripura district was purposively selected for the study. The findings of the study showed that the majority of fish farmers are in middle age group, education upto middle level, larger family size, in general categories, with sufficient experience in aquaculture, medium level of social participation, smaller pond area with single ownership and very low level of family income. These socio-economic characteristics of fish farmers must be taken into account for formulation, designing and successful implementation of developmental programmes.*

**Key words:** Small-scale fish farmer; Aquaculture village;

The socio-economic characteristics pertaining to demography, means of production and investment, income and expenditure pattern of people living in a particular location strongly influence their responses to technological changes and participation in development schemes. However lack of authentic information on the socio-economic condition of the target group is one of the serious impediments in the successful implementation of developmental programmes. In fisheries sector, several micro and macro level socio-economic surveys had been conducted by various agencies and research workers in different regions of our country to study one or the other problem of the fishermen community (Desai and Baichval, 1960; Sen, 1973; Shambhu, 1973; Prakasham, 1974; De Silva, 1977; Lawson, 1977; Panikkar, 1980; Sathiadhas and Venkatraman, 1981; Rao and Kumar, 1984; Rao, 1986; Sathiadhas and Panikkar, 1988). However, systematic attempts to carry out similar studies of fish farmers, particularly of Tripura have not been made so far.

Tripura is situated in the north-eastern region of the country, has rich fish diversity and fishery resources in the form of rivers and revulets (4728.96 ha), reservoir

(3,039 ha), ponds and tanks (8,646 ha), mini barrages (4644 ha), lake and swamps (100 ha), paddy field (25,780 ha). However potentialities of these resources have not fully tapped to fulfill the gap in domestic demand for fish and its supply. The composite fish culture in North Eastern region is increasingly becoming popular among fish farmers but the recommended culture packages of practice are not followed *in toto* in most of the cases. Keeping in view of all these reasons, the present study was an attempt to examine the socio-economic dimensions of fish farming community of an aquaculture model village of Tripura.

### METHODOLOGY

This study was conducted in West Tripura district of Tripura. A model aquaculture village namely Kulubari which is adjacent to Indo-Bangladesh boarder in Boxanagar R D Block, Sonamura sub-division of West Tripura district was purposively selected for the study. State Fisheries Department, Govt. of Tripura has adopted this village as a model aquaculture village in 2008-09. This is one of the eight model aquaculture villages selected in the state for for implementing a

Comprehensive programme to increase level of fish production. Out of the total 118 fish farming families in the village, 40 fish farmers were selected using simple random sampling method. A structured interview schedule was developed including all relevant queries needed to accomplish the objectives of the study. The collected primary data were tabulated and descriptive statistics for different socioeconomic variables were calculated using statistical tool.

## RESULTS AND DISCUSSION

In fisheries sector, socio-economic status of fisher folk/Fish farmers plays a key role in productive activities. Socio-economic parameters such as family size, age structure, education, social participation, income, and experience in aquaculture, size and nature of ownership of pond influence their response to adopt new technologies and their participation in development schemes sponsored by various agencies. Studies on these variables attempted not only to explain the overall socio-economic conditions of the fish farmers, but also identified the factors inhibiting the realisation of the full potential of traditional fishery and the appropriate area for government intervention (Sathiadhas and Panikkar, 1988). The interactions of personnel, psychological and situational factors always influence strategies and adoption of the scientific fish farming by fish farmers. Hence, preparing socioeconomic profile of the respondents is important to establish and explain the possible relationships among different socio-economic variables. Characteristics representing the personal and socio-economic attributes like family size and caste, social participation, educational status, experience in aquaculture and income are presented in Table 1.

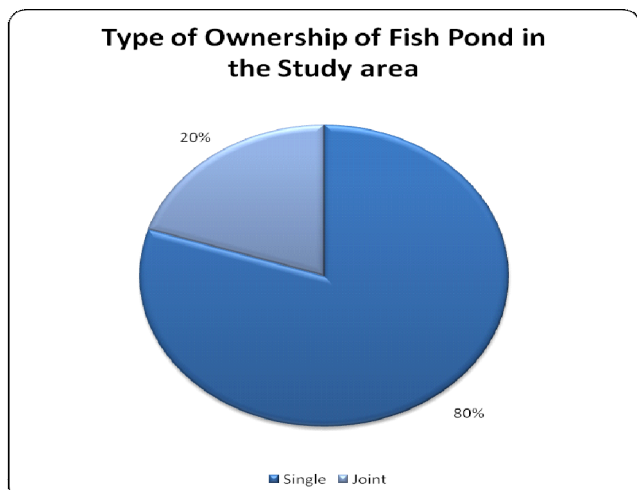
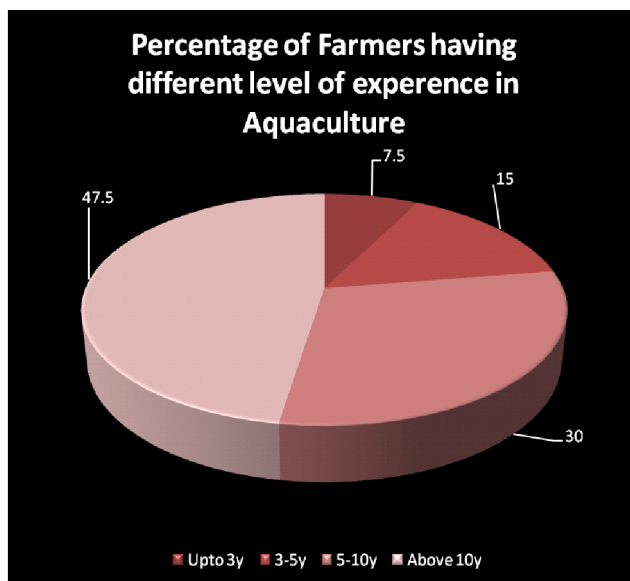
**Age:** Age is an issue, which cannot be approached with cultural preconceptions about what the roles and need of specific age groups might be. A better understanding of the role of age in determining levels of economic and social participation may be of great importance when it comes to targeting interventions. Table 1 reveals that 57.50 per cent fish farmers belong to middle age group followed by young age group (32.50 per cent) and only 10 percent fish farmers belongs to old age group. This indicates more involvement of young and middle age group of peoples in fish production in the study area. It could, therefore, be inferred that fish farming practices in the model aquaculture village succeeded in attracting the interest of the younger generation.

**Table 1. Profile of fish farmers of the Model Aquaculture Village (N=40)**

Attributes		No.	%
Age	a. Young	13	32.50
	b. Middle	23	57.50
	c. Old	4	10.00
Education	a. Read only	1	2.50
	b. Primary school	9	22.50
	c. Middle school	12	30.00
	d. High school	9	22.50
	e. Pre-university/Graduate	6	15.00
Caste	a. SC	2	5.00
	b. OBC	5	12.50
	c. General	33	82.50
Experience in Aquaculture	a. Up to 3 years	3	7.50
	b. 3-5 years	6	15.00
	c. 5-10 years	12	30.00
	d. Above 10 years	19	47.50
Social participation	a. No membership	24	60.00
	b. Member of one organization	11	27.50
	c. Member of more than one organisation	3	7.50
	d. Office holder/wider public leader	2	5.00
Family size	a. Up to 3 members	2	5.00
	b. 3-5 members	10	25.00
	c. Above 5 members	28	70.00
Area of pond	a. Above 1 ha	12	30.00
	b. 0.8 to 0.5 ha	6	15.00
	c. 0.2 to 0.5 ha	22	55.00
Nature of ownership	a. Single	32	80.00
	b. Joint	8	20.00
Income from land and other sources	a. Rs. 1000-2000	3	7.50
	b. Rs. 2000-3000	5	12.50
	c. Above Rs. 3000	31	77.50

**Educational status :** Education is an important socioeconomic factor, which has bearing with understanding and adopting the fish farming technologies by fish farmers. With regard to the educational level of the respondents, it was observed that majority of respondents ( 92.50 per cent) whose involved in fish production were literate and only 7 per cent of fish farmers were illiterate. Out of total literate fish farmers, 30 per cent farmers were possessing middle level of education (Fig-1). In the model village, good percentage (37.5%) of farmer were educated high school and above, thereby indicating medium level of education of Fish farming community. It implies that farmers involved in fish culture practices and were beneficiary of the programme were well educated. It was interesting to note that graduates are also taking part in fish farming practices.

**Family size and caste:** An analysis of the data reveals that the majority of the respondents (70 %) of the model village had larger family size i.e. more than five members. 25 per cent of the respondents had medium size of family consisting of three to five members. Only 5% of the respondents had small size of family (up to three members). This shows that the majority of fish farmers have to maintain the livelihood of more than five members with available resources and opportunities. The religion pattern of the respondents shows that the majority (85per cent) of them are *religious minority* (Muslim). Majority of the respondents of the model village (82.50 per cent) belongs to general caste category followed by 20 per cent scheduled tribes (ST), 17 per cent other backward communities (OBC) and 15 per cent of scheduled castes (SC). The size of the family has a direct influence on the expenditure and income patterns of the family. As the fish production is a labour intensive activity hence family size influences the fish production.



fact that the experiences of farmers in aquaculture have positive influence on fish production. *In the study area* 47.50 per cent of the respondents having experience in composite fish culture i.e., above 10 years, while 30 per cent of the respondents had experience of 5-10 years (fig-2). Remaining 22.50 percent respondents had low level of experience (<3years) in composite fish culture. Hence while formulating aquaculture programme for such target group of farmers their level experience must be taken into account.

**Social participation:** The social participation is essentially important for sociocultural development and discussion on many issues including fish production and marketing. The majority of the fish farmers selected in

the model village (78%) have medium level of social participation (Table1). However, only small segment (10%) of fish farming community had higher level of social participation. Farmers participated in social institutions like club, school, library, co-operatives and village welfare organizations.

**Area of pond:** The pond area and water depth are the important determinant of fish productivity as it provides living space for fishes. In the study area 55 % farmers were owned pond size 0.2 to 0.5ha, whereas 15 percent and 30% farmers having medium (0.5-0.8ha) and large (>1ha) size of pond respectively. This is clear indicative of smaller size of pond available with farmers of Tripura. Further this result also indicates skewed distribution of resources in terms of pond area across the fish farming community.

**Nature of ownership of pond:** The many management decisions related to fish farming are influenced by type of ownership involved. In the study area it was found that 80% farmers were doing aquaculture on their own pond with single ownership where as in 20% cases farmers were taking fish production in jointly owned ponds (Fig-3).

**Total family income:** In general, employment and income are the twin decisive factors determining the standard of living of people in the community or region. Equitable distribution of income across the society further enhances the social harmony among different sections of population. Analysis of income levels of the fish farmer in model village has brought out some interesting features. The classification of fish farmer families based on income level is given in Table 1. The

majority of the respondents, *i.e.*, 77.50 per cent had monthly income level above Rs 3,000, whereas 12.50 per cent had income level Rs 2,000-3,000. Only 7.50 per cent fish farmers had monthly income of Rs 1,000-2000. This low level of income reflects in their poor economic condition, which was not sufficient to maintain their normal livelihood. They cannot afford much for fish culture activities. Total family expenditure pattern in most of the fish farmers were in the low-income group and found it difficult to meet even their consumption requirements from their earnings.

## CONCLUSION

The development of aquaculture may be beneficial

provided socioeconomic aspects receive due attention in planning the promotion of aquaculture. The above discussed results give an idea about socio-economic status of fish farmers of the study area. The majority of fish farmers are in middle age group, education up to middle level, larger family size, in general categories, with sufficient experience in aquaculture, medium level of social participation, smaller pond area with single ownership and very low level of family income. These socio-economic characteristics of fish farmers must be taken into account for formulation, designing and successful implementation of developmental programmes.

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