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Research Note

Assessment of Socio-economic status of Fishers across Different Sectors in Tamil Nadu

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In India, fisheries and aquaculture sectors are considered a significant ancillary of agriculture, providing employment, food and nutritional security particularly to the rural poor. Notwithstanding the fisheries sector's contribution to national and regional economy and the fact that about 14 million people are employed in the sector, the socio economic standard of the fisher community has not reached to the level expected and a majority of them continue to be poor (Sathidhas et. al., 2014; Bijayalakshmi et al., 2014). The fisheries sector is also undergoing severe crisis of resource depletion owing to over exploitation which would be a serious threat on the livelihood of the fisher folk, thereby limiting their capacity to improve their standard of living. Though the income level of small scale fishers could often be comparable with small scale farmers or agricultural labour, they often lower in terms of educational, health and nutritional status and participation in political decision-making. It is also important to change from a one-dimensional- income based assessment of poverty to multi-dimensional and dynamic assessment process (FAO, 2001).

In the present study, primary data on the socio economic and health profile of the 548 sample respondents, from different sectors *vis-a-vis* marine capture, mariculture, inland water bodies, freshwater aquaculture and brackish water aquaculture sectors were collected from ten districts of Tamil Nadu. The literacy, health and income parameters collected include access to education, literacy level, details on vaccination, birth rate, infant mortality and maternal mortality, frequency of disease occurrence and disease management, income profile, expenditure pattern etc. The sector wise allocation of sample households is given in Table 1.

Fifty eight percent of the respondent fishermen, across different sectors, represent the middle age group of 36-55 followed by youngsters (30%) and the rest (11%) belong to the old age group. It is clear that the fishing business still remains popular among the middle age and younger group in Tamil Nadu across different sectors.

Males outnumbered females in all the fisheries sectors, which is in conformity with the sex ratio of Tamil Nadu state (996 females for 1000 males, Census 2011). The average male –female ratio was highest (1.23) in brackish water aquaculture fisheries, followed by fresh water aquaculture (1.20), mariculture (1.10), inland fisheries (1.09) and marine capture sector (1.06). The practice of small family norm is followed by majority of the respondent households in Tamil Nadu with 75% of the fisher households having a family size of 2-4 members and 21% have a family size of 5 to 6 members. Households with more than 6 members were found to be negligible. The average family size ranged from 3.66 in mariculture to 4.25 in marine capture sector. The dependency (adult child) ratio was found to be 3.02 for the total sample and it ranged from 2.52 in mariculture and 4.10 in brackish water aquaculture. The male-female ratio of the adult group and children was found to be almost similar with 1.12:1 and 1.10:1 respectively. Males outnumbered females both in adult group and children across the sectors except for children of inland fisheries, with the ratio of 0.98:1.

The average literacy rate of the fisher households in Tamil Nadu was found to be 86.49% which is slightly higher than that of the Tamil Nadu states' literacy rate (80.33%, Census 2011) and it ranged

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Table 1. Sample distribution across sectors

Sl No	Sector	Tamil Nadu	
		Districts	Sample size
1	Marine capture	Chennai (35), Kanyakumari (36), Nagapattanam (34), Turticorin (35)	140
2	Mariculture	Ramanathapuram	100
3	Inland water bodies	Pollachi, Krishnagiri, Thiruvllor (50)	101
4	Fresh water aquaculture	Chengalpett (36), Thanjavoor (36), Thirunelvely (30)	102
5	Brackishwater aquaculture	Nagapattinum	105
6	Total		548

from 69.14% in brackish water aquaculture to 98.30% in fresh water aquaculture. Among the literates, 26.30% had education upto primary level, 60.55% had education upto secondary level and 13.15% had education up to college level. Large number of literate and educated people are observed among the respondent households across different sectors due to better access to educational institutions which could also impact livelihoods and lead to diversifying of income generating activities. (FAO, 2006; Gopal et al., 2014).

The health status of the fisher households in Tamil Nadu was assessed using the child birth weights, incidence of mortality among mother/child during birth, administration of vaccination and access to health care facilities. The average age of administration of vaccination and incidence of discontinuation among infants /children with age less than 15 years in fisheries sectors of Tamil Nadu was worked out. It was observed that vaccination for small pox, BCG, MMR and polio were being regularly taken by all the households covered under the study. Birth weight of children is a strong indicator of maternal and new born health and nutrition. The average birth weight of male infants was 2.78 kg and average weight of female infants was 2.69 kg.

The access to health care is also an important parameter which determines the health of fisherfolk.. The average distance to hospital was found to be 8.15 km ranging from 5.08 km in marine capture sector to 12.7 km in brackish water aquaculture. The major problem perceived by respondents included difficulty in accessing the hospital due to distance, non availability of specialist and paramedics in health centres, lack of infrastructure and adequate medicines, problems on cleanliness/ sanitation, drinking water problem and work related stress.

The major income sources of the respondents were analyzed among the respondents across different sectors. It was found that in all the sectors, fishery occupation had the maximum share of income. Fisheries sector alone constitute 75.21% of the monthly income of respondents in Tamil Nadu with an average income of Rs.5878.87 ranging from 60.15% in brackish water aquaculture to 93.23% in marine capture sector. This is followed by income from labour (11.11%), other sources (6.57%), business (4.03%) and from agriculture (3.07%). The highest monthly income was among the respondents of brackish water aquaculture sector with ₹ 8327.7 and the lowest was observed among Inland sector with ₹ 1593.6. The monthly income through labour, the second highest contributor of livelihood was highest in brackish water aquaculture (₹ 2177.72) followed by mariculture (₹ 950), inland sector (₹ 254.18) and marine capture sector (₹ 92.85). Monthly income from agriculture is significant to the fishers of brackish water aquaculture sector (₹ 610.32) and mariculture sector (₹ 350). Monthly income from business sector is also significant to the fishers of brackish water aquaculture (₹ 827), marine capture and mariculture sectors (₹ 78.57).

More than half of the respondent fishers (286) across different sectors of Tamil Nadu were engaged in non fisheries activities. Among the different non-fisheries activities being undertaken by the fishers, highest representation of respondents was found in labour sector (143) followed by other unspecified sectors (59), agriculture (48) and business (36). The results portrays the fact that though half of the respondent population were engaged in non-fisheries activities for their additional income, their contribution in monthly income was not much high.

Economic security of respondent fishers was measured in terms of savings and indebtedness. The study revealed that 66% of fishers had no/negligible savings and the saving habit of fishers is very low among inland sector and marine capture sector. About 26.82% of total respondent fishers possessed saving of less than ₹ 50000/-, in which highest number of respondents were from brackish water aquaculture (63) and fresh water aquaculture (40). Only 5.84% had savings of ₹ 50000 to 100000 and the number respondents having savings more than a lakh is found to be negligible. It was found that number of respondents with saving is very high among brackish water aquaculture sector (74) followed by fresh water aquaculture (51) and mariculture sector (25).

It was found that the average amount of indebtedness per household was ₹ 37693.27. The average indebtedness was highest for brackish water aquaculture sector (₹ 71066.66) and lowest for Inland water bodies (14927). The repayment was highest for inland water bodies (25.12%) and lowest for marine capture sector (8.99%). The indebtedness increased with the cost of production as the brackish water aquaculture sector availed loans for the inputs and other management measures whereas the fishing in the inland water bodies required minimal loan component for their operations. The major lending sources included banks (38%), SHGs (30%) and private money lenders (21%). The interest rates varied across the different financial institutions with banks, co-operatives and SHGs offering the minimum rate of interest (8-18%). The loans by mortgaging gold were obtained at 18-36% and the private money lender offered the loans at 36 -60% with easier access and timeliness in disbursal.

The results reveal the importance of both institutional and non-institutional mechanisms which is insufficient for availing loans. The major purpose of loan was for purchase of vehicle, craft/gear and other fishing accessories, land purchase, house construction, marriage, medical treatment and social security and education. A sector wise analysis indicates that major use of credit was on fishery related activities in mariculture, freshwater and brackish water aquaculture sector and majority of respondents from marine capture and inland sector utilized their loan for non-fisheries activities which includes business ventures and purchase of land.

The study found that the measures for improving literacy and health facilities created a positive impact on the livelihoods of the fisher community. The education and health standards are comparable with any other sector in the state providing ample opportunities for the upliftment of the fishers in the future. Over the years, due to the seasonality of the fishing operations and higher gestation period in culture sector, the fishers often diversified their income sources which include business, agriculture, labour, services and others. However due to increasing expenditure on account of maintaining the living standard, they are still engulfed in the vicious circle of poverty due to increased debt and lack of savings. Hence, appropriate measures need to be initiated to develop alternative avocations to improve income and standard of living.

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References

Bijayalakshmi, D., Nongmaithem, Ajitkumar and Ngangbam (2014) Socioeconomic conditions and cultural profile of the fishers in India. A review. IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS) e-ISSN: 2319-2380, p-ISSN: 2319-2372. 7(9): 42-48

Census (2011) http://www.censusindia.gov.in/2011-prov-results/census2011_PPT_paper1.html

FAO (2001) Poverty in Coastal Fishing Communities: A brief for FAOs Advisory Committee on Fisheries Research (ACFR). FAO Fisheries Report No. 639 FIPL/R639

FAO (2006) Promoting literacy to improve livelihoods in fishing communities: Policies linking education to fisheries management. New Directions in Fisheries: A Series of Policy Briefs on Development Issues, No. 05. Rome: 12 p

Gopal, N., Jeyanthi, P., Arathy, A., Shyam, S. Salim., Pradeep Katilia, Krishnan.M, Nagesh, Kumar, Barik.N., Ganesh Kumar. B, Narayanakumar, R. and Sathiadas, R. (2014) Fishers in post-harvest fisheries sector in India: An assessment of socio-economic status. Fish. Technol. 51(3): 213-219

Sathidhas. R., Shyam S. Salim and Narayanakumar, R. (2014) Livelihood Status of Fishers in India. Central Marine Fisheries Research Institute, Cochin. 345p