

Socioeconomic conditions and cultural profile of the fishers in India- a review

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Abstracts: Socioeconomic conditions of the fishers in India are very low. Fishers generally have pursue less education and live under improper housing conditions. With a very low income from fishing, fishers supported a large member of family which compel the fisher's to burrow credits to fulfil their basic needs. The income of the fishers were very low and remain circulated inside the vicious circle of poverty. India is a country with diversity in culture and this cultural diversity were reflected in their fishing activities too. Training programmes and scientific orientations are avail at heterogeneous manner in most of the places in India. Therefore proper fishery management policies, effective input supply, technical and social support may improve the livelihood of the fishers which will ultimately increase the overall fisheries productivity of India.

Keywords: fisheries, education, income and livelihood.

I. Introduction

Among the 7 continents of the earth, Asia is the world's largest continent with **4.2 billion** people or constituting 60 % of the world's population. Within Asia, India is second most populous country in the world with 1.21 billion people or 17.5 % of the world's population (FAO, 2010). In India 65% of the people are still dependent on agriculture as their livelihood and employment source which includes fisheries as one of its components. Fisheries also serves as the valuable and cheap source of protein of the country. According to 2001 census India's total population is 1,027,015,247 of which 5959144 people are fishermen. In 2002, there were 38 million commercial and subsistence fishermen and fish farmers all over the world. Of this total, 74 percent are engaged in capture fisheries and 26 percent in aquaculture. The world total fishery production of 133 million tonnes equated to an average productivity of 3.5 tonnes per person. By 2006, the number of world fishers increased to 43.5 million and the total fishery production was 143.6 million tonnes with an average productivity of 3.3 tonnes per person (FAO, 2011).

The small scale fisheries sector are mostly the livelihood occupation of the group of population within the extreme poverty that leads to a serious social, economic and political issue. Due to lack of knowledge in the socio-economic conditions of fishers and fishing communities, leads to poor planning and implementation of various fisheries management programs (Devi et al, 2012b and Devi et al, 2014).

In order to achieve the relevant and cost effective solutions to all the complex problems of the fishers of capture and culture sector a multidisciplinary approach is highly required which will help in the implementation of new policies and strategies considering the opportunities and constraints prevailing on fishers and other stakeholders in this sector. While formulating these policies and strategies the varying economic, social, cultural, resource, institutional and political conditions will need to be assessed under the umbrella. The active participation of the social scientists will serve as the most important role in providing the much needed inputs in terms of socio-economic research is highly imperative. Focusing this as primary purpose, this paper will review the state of various socioeconomic and cultural profile of the fishers in India.

II. Social Profile Of The Fishers

The reviews in this category are divided into fourteen categories. These consist of age, education, family type, family size, religion and caste, house and habitation, training programmes attended, extension agent contact, access to basic public service, social participation, communication asset possessed, mass media utilization, scientific orientation and gender in decision making and implementation

2.1 Age

The age of the fishers were reviewed in different studies. Sujathkumar (1988) in his study on adoption behaviour of the traditional fishermen reported that 38.33 percent of the fisherfolk belonged to middle age group, 48.33 percent belonged to old age group and among the trawler owners most of them belonged to middle (43.33%) and old age (35.00%) groups respectively. Perumalet al. (1992) also reported that most of the beneficiaries of the Fish Farmers Development Agency (FFDA) of Tamilnadu were under young age category

(63.00%) followed by middle (26.00%) and old age (11.00%) categories. Immanuel (2004) in her study on linkages among research, extension and clientele systems in marine fisheries in Kerala revealed that 52.67 percent of the fishermen belonged to middle age group followed by old age group (27.33%) and young (20.00%) age group. Charles et al. (2009) in their study on technology development efficiency and socio personal characteristics of researchers in marine fisheries reported that 52.78 percent of the fishermen belonged to middle aged group followed by 40.28 percent in old age group and 6.9 percent in the young age group. Joshua (2009) in her study on socioeconomic condition of fishers in Tsunami affected areas in Nagapatanam and Kollam reported that 46.7 percent of the fishermen belonged to medium age group followed by 42.5 percent and 10.8 percent in young and old aged group, respectively. Shankar (2010) analyzed the knowledge level of fisherfolk about marine fisheries management and resource conservation and had found out that 52 percent of the fisherfolk belonged to old age group followed by middle age group (30.66%) and young age group (17.34%). Devietal(2012a) analysed fishers' socioeconomic and cultural profile around the Loktak lake of Manipur and had reported that (44%) of the fishermen were more than 46 years old belonging to the old age group.

2.2 Education

Meeran and Jayasheelan(1999) in their studies on sociopersonal and socioeconomic and socio psychological profile of shrimp farmers found that all shrimp farmers who were taken as respondents were literates and had acquired education beyond primary level. Among the respondents 42 percent had undergone collegiate education and remaining respondents had studied up to higher secondary (22%) and middle school level (16%) respectively. Mohinigadhia et al. (1999) investigate on socioeconomic study of fisher community and fisheries status around Kakrapar atomic station reported that 76.5 percent of the total population surveyed were illiterates. The primary level of education was 20.04 percent and the secondary level of education was only 2.53 percent. Only 6.88 percent had education upto college level. In a study on use of indigenous technical knowledge by coastal fisherfolk of Mumbai reported that 46 percent of the fishermen had primary level of education, followed by 20 percent knew to read and write, 18 percent of the fishermen had high school education and 16 percent of them were illiterates (Nirmale et al. 2007). Shankar (2010) had found out that 46.66 percent of the fisherfolk had primary level of education followed by middle level of school education (26%), illiterates (13.33%), higher secondary (2.6 %) and collegiate (2%) level of education. Vichare (2010) in her study on effect of migration on livelihood of coastal fishers in Maharashtra reported that majority of the respondents from native population (nearly 40-50%) acquired secondary education while that from the migrant population (nearly 40%) acquired primary education. Deviet al (2012a) had found out that (34%) of the fishers pursue middle school and (34%) pursue high school.

2.3 Family type

Immanuel (1997) highlight that 70.00 percent of the fisherwomen of Ramanathapuram district of Tamilnadu involved in seaweed collection had nuclear type of family. Sharma (2000) found that 64 percent of the farmers under the adult literacy campaign had nuclear family and 36.00 percent had joint family. Anon (2005) in their study on the socio economic analysis of Nuvvulrevu village in Srikakulam district of Andhra Pradesh had found out that majority (87%) had nuclear family and 13 percent of the respondents had joint family. Nirmale et al.(2007) revealed in his studies on use of indigenous technical knowledge by coastal fisherfolk of Mumbai that 84 percent of the fishermen had nuclear type of family and 16 percent of the fishermen had joint family type. Shankar (2010) found out that nearly 57.33 percent of the fisherfolk had joint family and 42.66 percent of the fisherfolk had nuclear family.

2.4 Family size

Oloruntoba and Fakoya (2003) in their study on socio-economic indicators of adult females in rural communities of Nigeria had found out that 45 percent of the respondent had family size 6-10 followed by 34 percent of the respondent had family size less than 5, 17 percent had 11-15 family size, 3 percent had 16-20 family size and 1 percent had greater than 20 family size. Anon (2005) in their study on the socio economic analysis of Nuvvulrevu village in Srikakulam district of Andhra Pradesh had found out that 38 percent of the fishermen had a family size of less than five and 62 percent had more than five. Nirmale et al. (2007) in their study on use of indigenous technical knowledge of coastal fisherfolk of Mumbai reported that 68 percent of fishermen had large type of family followed by 32 percent with small type of family. Hossain et al. (2009) had found out that most of the fishermen were having large family size (5.6-5.8). Shankar (2010) found out that 30.66 percent of the fishermen had a family size of less than five and 69.34 percent had more than five. Devi et al (2012a) found out that (58.67%) of the fishers had large family size more than five members.

2.5 Religion, caste and House and habitation

Different studies reveals different religion and caste of the fishers. Pandey and Mishra (2001) in his study on economic feasibility of fish culture in the district Faizabad (U.P), India found out that 100 percent of the fishermen of this district are Hindus. Moreover they also had found out that fishermen of Faizabad district of U.P belongs to Pasi, Kumhar and Rajput caste. Rahman et al. (2002) in their study on the socioeconomic features of a traditional fishing community beside the old Brahmaputra river, Myemensingh, Bangladesh had found out that all of the 31 fishermen interviewed in the Bhatipara village of Bangladesh belonged to the Barman sect of the Hindu Community. From then, the Bhatipara fishing village has kept its absolute religious and ethnic purity intact.

Vichare (2010) had found out that majority of the respondent from the native male fish workers (75 percent in Versova and 100 percent in Satpati) were found to live in owned houses and remaining were live in rented houses. Also majority of the respondent from the native male fish workers (nearly 80 percent - 90 percent) in both the village were found to have small house area whereas most of the migrant fish workers (nearly 60 percent -100 percent) were found to have very small house area (i.e. less than 101sq.ft).

2.6 Training programmes attended

Anon (2005) in their study on the socio economic analysis of Nuvvulrevu village in Srikakulam district of Andhra Pradesh reported that none of the respondents have got any trainings in any of the aspects either in fisheries or related activities. Devi (2011) highlighted that majority (82%) of the fishers were found not attended any training programmes followed by 25 percent attended one training programme and 1.33 percent attended two training programmes.

2.7 Extension agent contact

Nagarajaiah (2002) in his study on knowledge level of composite fish culture farmers reported that 40.00 percent fish farmers had low level of extension agent contact followed by medium level (30.77%) and high level extension agency contact (29.33%). Shankar (2010) revealed that 57.33 percent of the fishermen had medium level extension agency contact followed by high level (28.00%) and low level extension agency contact (14.66%).

2.8 Social participation

Subashchandra (1986) in his study on fish culture practices by fish farmers stated that most of the farmers (84.14%) had medium to low level of social participation. Meeran and Jayasheelan (1999) stated that most (78.00%) of the shrimp farmers of Tanjore and South Arcot district of Tamilnadu were found to have low level of social participation and remaining (22.00%) had high level of social participation. Nagarajaiah (2002) in his study on knowledge level of composite fish culture farmer in Karnataka reported that 53.06 percent belonged to low social participation, 23.84 percent and 23.08 percent belonged to medium level and high level of social participation category respectively. Aruloli (2004) revealed that large group (93%) of the fisherfolk had medium level of social participation. Shankar (2010) revealed that 52 percent of the fishermen had medium level of social participation followed by 40 percent in low level and 8 percent in high level of social participation.

2.9 Access to basic public service

Suryanarayana (2008) in his study on Agflation and the PDS had found out that three per cent of the rural households in India possessed the Antyodaya card and hence, benefited as ultra-poor and another 26.5 percent benefited as BPL ration card holders; 52 percent of the rural households were ordinary card holders while the rest (18.7%) were without any card. Swaminathan (2008) in his study on Public Distribution System and social exclusion had found out that all-India average indicates that 52 percent of agricultural labour households either had no card or an APL card. Vichare (2010) had revealed that all (100%) respondents have access to ration card, voting card and primary health centre (PHT) services.

2.10 Communication asset possessed

Anon (2005) had found out that communication sources like radio, television and tape recorder are available in only 20 percent of the houses. Shankar (2010) in his study observed that majority (66.66%) of the fisherfolk had medium level of possession of communication assets followed by 16.6 percent in the higher category and 16.67 percent in the lower category of communication asset possessed.

2.11 Mass media utilization

Nagarajaiah (2002) reported that 42.31 percent of fish farmers belonged to medium level mass media participation, 33.85 percent were found in low level and 23.84 percent were in high level. Pandian et al. (2002) reported that 57.5 percent of the respondents were participated in mass media programme belonged to high

education category. Immanuel and Kanagasabapathy (2005) in their study on linkages between fishermen and researchers in marine fisheries in Eranakulam district of Kerala reported that 34.00 percent of fishermen read leaflets followed by 33.33 percent of them hear radio programmes, 14.66 percent of them see television and 24 percent of fishermen visit exhibitions.

2.12 Scientific orientation

Immanuel (2004) in her study on linkage pattern of clientele system reported that 71.33 percent had medium level of scientific orientation, 21.34 percent had high level and 7.33 percent had low level of scientific orientation. Kubrevi and Khare (2006) had found out that majority (90%) of small farmers had low level of scientific orientation and 10 percent had medium level of scientific orientation and none of the respondent was found in the category of high level of scientific orientation. Shankar (2010) had found out that scientific orientation was at medium level for 56.66 percent followed by low for 23.33 percent and high for 20.00 percent.

2.13 Gender in decision making and implementation

Venkatesh et al. (2000) in their study on a longitudinal field investigation of gender differences in individual technology adoption decision-making processes had found out that when compared to women's decisions, the decisions of men were more strongly influenced by their attitude towards using new technologies. Anitha (2002) in her study on role of women in monetary decision making had found out that women are considered in most of the affairs with the increasing evidence of women participation in decision making. She also had found out that decision making has direct relation with the work they are doing. Devi (2011) in her study of fishers' livelihood and fisheries management in Loktak lake region of Manipur revealed that women were participating in many of the decision making activities on par with men. Men took part in decision making activities like fishing and social functions and women mostly took decisions in fish selling and house management. It is clear that decision making has a direct relation with the work they are doing.

III. Cultural Profile Of The Fishers

Majority (46.67%) of the fishers had maintained the age limit for marriage at more than 25 years and only 1.33 percent at less than 18 years (Devi 2011). Rahman et al. (2002) in their study on socioeconomic features of a traditional fishing community beside the old Brahmaputra river, Myemensingh, Bangladesh had found out that the average marriageable age for females is 10-14 years and for males is 20-24 years. Dutta and Bhattachariya (2008) in his study of an indigenous community fishing practice of Tirap district, Arunachal Pradesh had found out that fishing was facilitated in the pool zones of hill stream by making the stream water muddy and fishes gasping for air in muddy waters is then caught using cast nets operated from indigenous bamboo raft (4.6-6.1m long and 1.1-1.4m wide). Jeyaram et al. (2009) in his study of traditional fermented foods of Manipur had found out that traditional processing of fish such as salting, drying and smoking are the principle methods of preservation in this region. Some of these are traditionally fermented and preserved for year long period as reserve food.

IV. Economics And Livelihood Profile Of The Fishers

Economics and livelihood profile of the fishers consist of occupational pattern and characteristics, average yearly expenditure, physical asset and craft and gear ownership, credit orientation and livelihood which are reviewed as follows.

4.1 Occupational pattern and characteristics

Shivalingaiah et al. (1996) in their study on socioeconomic characteristics of rural youth and their participation in farm activities had found out that cent percent of small farm youth had low to medium annual income while 92 percent of big farm rural youth had medium to big annual income. Kubrevi and Khare (2006) had found out that majority of the farmers 81.25 percent of respondents were engaged in agriculture along with service & business followed by agriculture (8.75%), agriculture + labour (6.25%) and agriculture + caste occupations (3.75%). Vichare (2010) had found out that only 17 percent respondents from mechanized boat owners in Versova were found to be the owner cum worker fishers and in Satpati this number was found to be quite high (57%). Further she had found out that majority of the mechanised boat owners (70 percent in Versova and 60 percent in Satpati) claimed that they do not have any secondary occupation though in reality some of them found to have the same. Moreover, working hours in both the village of Versova and Satpati were found to be less than 6 hours per day, working days were 9-12 months per year. Nirmaleet al. (2007) in their study on use of indigenous technical knowledge by coastal fisherfolk of Mumbai reported that 40 percent of the fishermen had medium level of experience followed by 34 percent and 26 percent had high level and medium level of experience respectively. Charles et al. (2009) had reported that 37.5 percent of the fishermen belonged to the

medium level of experience followed by 33.33 percent in the low level of experience and 29.17 percent in high level of experience respectively.

4.2 Average yearly expenditure

Sathiadhas et al. (1994) in their study on traditional fishermen in low income trap — a case study in Thanjavur coast of Tamil Nadu had found out that the annual average household expenditure of a fishermen family works out to Rs. 8,685 at Mallipattinam and Rs. 6,508 at Keechankuppam. Further they had stated that the expenditure on food items alone works out to 58 percent and 85 percent of the family budget of Mallipattinam and Keechankuppam villages respectively. Mammo (1997) in his study on income, indebtedness and savings among fisherfolk of Orissa has reported that in Udayapur 68 percent and Gopalpur 3 percent of expenditure is spent for food by the fishermen families. Oloruntoba and Fakoya (2003) in their study on socio-economic indicators of adult females in rural communities of Nigeria had found out that majority of the adult female population (75%) spent their income for food and the remaining were spent on ceremonies, medi-care, clothing and purchase of cooking fuel.

4.3 Physical asset and craft and gear ownership

Sathiadhas et al. (1991) in their study on economics of traditional gill net fishing using wind energy along Tamil Nadu coast had found out that about 40 percent of fishermen households in Tamil Nadu had ownership of fishing craft and 50 percent had ownership of fishing gear. Kubrevi and Khare (2006) had found out that 90.83 percent small farmers possessed low level of material possession, while 9.17 percent had medium level of material possession. The data also indicated that none of the respondents had high material possession.

4.4 Credit orientation

Mammo (1997) explored that in Udayapur fishermen took money from moneylenders at the annual interest rate of 40 to 50 percent. Rahman et al (2002) had found out that the fisherfolk had no access to schedule banks for loan due to absence or insufficient collateral security. Oloruntoba and Fakoya (2003) in their study on socio-economic indicators of adult females in rural communities of Nigeria had found out that due to inadequacy of formal financial institutions as a source of credit and their increasing need for capital, low-income women have turned to informal sources like friends, relatives and neighbours.

4.5 Livelihood

Carney (1998) contemplated a livelihood comprises the capabilities, activities and assets (including both material and social resources) that contribute to a means of living. Salagrama (2006) identified the fisheries sector incorporates a diverse range of livelihood activities, from production and processing to marketing and ancillary functions, but many of the people engaged in this activity remained unrecognized as fish workers. This is a serious situation, as majority of these people are extremely poor and extremely vulnerable. No information exist on their numbers, geographical spread, socio-economic status and function resulting in poor policy responses to their needs and a failure to predict possible impact on these groups from policies targeting other people within and outside the sector.

V. Conclusion

From various studies and research on the issues of socioeconomic conditions and cultural profile of the fishers in different parts of India it can be concluded that in general socioeconomic research in India is somewhat developed but there exist a broad range of studies on socioeconomic conditions within the region covering from highly qualitative to descriptive. At the past attention may be given to social, economic and institutional issues in fisheries however more effort is required at present on the research agenda of directions and structures of socioeconomics. Moreover considering these various review it can also conclude that for the overall development of the socioeconomic and cultural development of the fishers scientist and policy makers should be more focus on the backward and forward linkages development. A proper extension linkage mechanism should be developed between the extension personnel's of the State Fisheries department and the fishers for effective transfer of technologies and should ensure that a maximum number of fishers should participate while organising any training programmes at the village level. Problems solving should better adopt multidisciplinary and intersectoral studies with a collaborative effort between biological and social scientists can be realized in the area of fisheries. It is a high time to apply 21st century science where social scientists must integrate together with other non-social scientists. i.e used of transdisciplinary science rather than sectoral science such that this effort could provide more lasting solutions to problems confronted by the fisheries sector.

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