

SOCIO-ECONOMIC CONDITION OF THE FISHERMEN COMMUNITY OF PUMLEN LAKE: A CASE STUDY IN TOKPACHING VILLAGE OF THOUBAL DISTRICT, MANIPUR

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Abstract

The paper is an attempt by the authors to highlight the socio-economic condition of the fishermen community of Tokpaching Village of Thoubal District of Manipur who fishes for their livelihood on the Pumlen Lake, the second largest fresh water wetland in the state of Manipur. The fisherman community belongs to low income community. The total of 50 families of the village was surveyed during the study. The findings reveal that total number of population of the village was 469 among them 63.53% (Literate) and 36.46% (Illiterate). Among the literate population 52.38% has primary level education, 30.95% has upper primary school level, 11.31% has high school level and only 3.57% of the fisherman possessed higher degrees. The peoples were employed in different sectors such as agriculture (26.29%), fishing (29.74%), business (17.67%), in-service (14.22%) and any other works (12.06%). 82.94% of the total population of the village lived in the katcha houses and remaining (17.05 %) in pukka houses. Income level was lowest (Rs. 500-1000 per month) among the age group of 10 – 20 and highest (2000- 8000 per month) among the age group of 40-50. The overall fish production of the Lake was 1652 kg per annum. Out of these, miscellaneous fish caught was the maximum i.e. 727 kg per annum (44.12%) while those of cat fishes were minimum i.e. 248 kg per annum (15.02%). Production of carp fish variety was the lowest while production of small fishes was the highest. The findings also reveal that the villagers were engaged in other occupational sector other than fishing due to reduction in fish production in the beels resulted by overexploitation, siltation, human activities etc.

Keywords: Socio-economic condition, fisherman community, Wetland, Livelihood, Tokpaching village, Pumlen Lake, Thoubal District of Manipur.

Study of socio-economic status is an important factor for sustainable management of wetlands and enhancement fish production as well as upliftment of rural economy (R. Bordoloi., *et al.* 2012). Fish is the main food item of the majority of the people in the State, particularly Meiteis who are mainly concentrated in the valley. The State has no marine fisheries. It has vast potential of fisheries resources comprising ponds tanks, natural lakes, marshy areas, swampy areas, rivers, reservoirs, submerged cropped land, low lying paddy fields etc. The largest source of fish is the Loktak Lake. And the second comes the Pumlen Lake (the study area). The total water areas in Manipur State have shrunk from around 100000 ha in 1990 to around 56461.5 ha in 2009-10. About 18000 ha of water areas have been brought under fish culture operation (databank.nedfi.com/content/fishery-Manipur). Fisheries occupy a very important place in the socio-economic development of the state of Manipur. It has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries and is a source of cheap and nutritious food besides being a foreign exchange earner. At the same time, it is an instrument of livelihood for a large section of economically backward population of the state. Fisheries acquired the status of one of the fastest growing sector for increasing food production as well as solving unemployment problems owing to introduction of scientific fish farming and artificial propagation for enhancement of fish production. The state is endowed with fisheries resources of about 56,461.15 ha

water areas in the form of lakes, seasonal and perennial swampy beels, rivers, tanks, ponds, reservoir, low lying paddy field etc. which can be developed on scientific lines of fish culture for production of more fish. According to state government report, so far 18,600 ha of water areas have been brought under fish culture operation by the end of 2010-11.

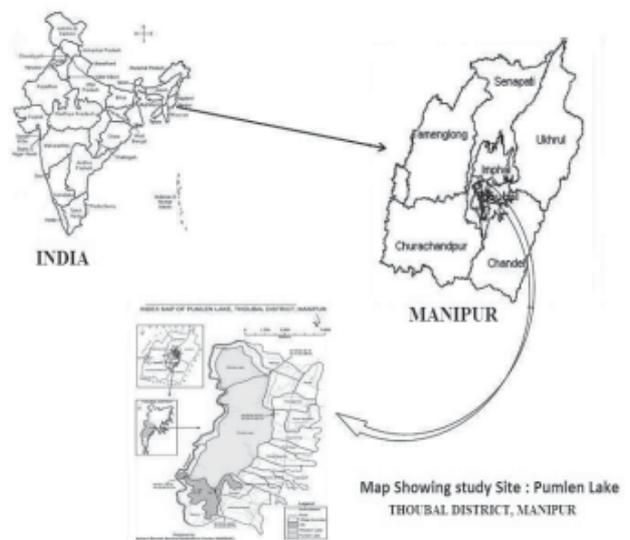


Figure 1: Location of Pumlen Lake (Pat = Lake in Manipuri)



Pumlen Lake locally known as Pumlen Pat (Pat – a Lake in Manipur) is the second largest freshwater wetland located in the southern part of the Manipur valley. The Lake is situated in Thoubal District of Manipur at a distance of about 50 km from Imphal, the capital of the state towards the Southern Lowlands of the central valley i.e. on the left side of the Imphal river at the geographical ordinates between 93°50'E to 94°0'E and 24°20'N to 24°35'N and at elevation of 767 meters above mean sea level (A.S.L.). Fishing is a very important part of the economic activities in the surrounding area and is a vital source of protein for the local diet. It is a shallow weed-infested lake with two-third of its water surface covered with heterogeneous vegetation locally known as *Phoom* or *Phumdi*. A drastic change in the ecosystem of Pumlen Lake from its earlier state is said to have occurred since the commissioning of Loktak Hydel Project which uses the Lake Pumlen as a secondary reservoir (Figure 1). Despite high potential for production of fish in the state, the region is deficient in fish production and hence fish is imported from other states like Andhra Pradesh and West Bengal. There is vast scope of increasing fishery production by efficient and rational management of the existing water resources. Earlier major bulk of the fish catch was contributed by the indigenous carps. However, during the past three decades the catch is dominated by the Indian major carps and other exotic carps. The major cause of ecological problems in Manipur is due to improper planning and lack of integrated approach. Concerted efforts should be made to increase fish production and ensure nutritional security of people of Manipur (Ajit Kumar Ng, 2007). There are several constraints to development of fishery sector in the state. Some of the major constraints are Inflow of organic chlorine pesticides and chemical fertilizers used in the agriculture practice in and around the lakes, rivers, ponds, beels, etc. has resulted in the decline of natural stocks of several species of fish; No observable efforts are being made by the government agencies to reclaim the water bodies or to attempt fresh stocking of seed in rivers and other water bodies; Over exploitation and indiscriminate fishing are also the causes for poor fish production; Fast growth of aquatic weeds like water hyacinth and other weeds in most of the water bodies and heavy siltation year after year have destroyed the ecology and affected fish production to a great extent; and Poisoning and poaching, a common problem faced by the farmers (Ajit Kumar Ng, 2007 *op. cit.*). Socio-economic status of wetland dependent people was studied by few workers in Manipur such as Singh, R. *et al.* (1999), Singh, R.K. *et al.* (1999), Singh, Th. Nabakumar (2010), Trisal, C.L. *et al.* (2002) and Laishram, J. *et al.* (2013). Before introduction of an aquaculture technology in the rural area, survey of the

beels dependent people should be given first preference for sustainable development of wetland as well as Lake dependent community. Bijaya Lakshmi Nongmaithem Devi *et al.* (2012) made a detail study on the fishers' socio-economic and cultural profile around the Loktak Lake of Manipur, India. With this aim, socio- economic status of the Lake dependent people was studied in Tokpaching Village of Pumlen Lake, Thoubal district, Manipur. Notwithstanding the above detailed pioneering studies on the fisher folk of North East India in general and Assam in particular have been done by Kar (1990, 2003, 2007, 2013); and Dey and Kar (1989).

Significance of the study: Fish is the most important item and easily digestible protein food of the Manipuri. It is the only source of animal protein acceptable to all the people of the state. To make self sufficiency in stable fish production in the state, the fishery department implements various plan schemes/programmes including Centrally Sponsored Schemes for improvement of fisheries infrastructural facilities, development of inland fisheries and aquaculture for augmenting production of fish from the natural resources as well as from private fish farms. According to Fisheries Department, Government of Manipur (Annual Administrative Report, 2010-2011), the present level of annual fish production of the state is to the tune of 19,200 tonnes as against the total requirement of about 27,500 tonnes (based on the National Nutritional Standard of 11 kgs. per capita consumption) of fish for about 25,000 lakh projected population of the state showing a shortfall of about 8,300 tonnes. At present, the shortage is partly met by importing fish from other states like Assam, West Bengal, Andhra Pradesh etc. On the basis of the National Level of production, Manipur has got a production potential of about 38,000 tonnes of fish per annum if harnessed the un-tapped fisheries resources through judicious exploitation and application of modern scientific fish culture techniques. In order to increase fish production in the state, proper and judicious utilization of all the aquatic resources deserves proper attention. This will help in enhancing fish production and to uplift the socio-economic conditions of the poor fishermen by generating self employment opportunities and fight malnutrition problem in the State at large. In this context, the present study is pertinent and significant.

Operational definitions of the key terms: *Socio-economic condition* – it is the total combined measure of the economic and sociological status of an individual's or family's economic and social position in relation to others, based on income, education, and occupation etc. *The fishermen community*

of *Pumlen Lake* – the fishing communities residing near the periphery of the Pumlen Lake especially the villagers of the Tokpaching Village of Thoubal District of Manipur. *Thoubal District* – it is one of the nine districts of the state of Manipur. *Pumlen Lake* – a Lake situated in Thoubal District of Manipur at a distance of about 55 km from Imphal, the capital of the state towards the Southern Lowlands of the central valley. *Manipur* – it is a state in northeastern India, with the city of Imphal as its capital. It is bordered by Nagaland to the north, Mizoram to the south, and Assam to the west; Burma lies to its east. The state has an area of 22,327 square kilometers.

Objective of the Study: The objective of the study is to survey and highlight the socio-economic status of fisherman community of the Tokpaching village, situated near Pumlen Lake (wetland) of Thoubal District of Manipur.

Research Design: The study is qualitative in nature and case study under normative survey method is employed. Primary data of the present study has been collected from the field using a self constructed interview schedule and a format (questionnaire) of National Bureau of Fish Genetic Resources (with some modification). Secondary data has been collected from books, journals, websites etc. The study was conducted during 2012 to 2013. The total of 50 families of the village was surveyed during the study. Data were collected by visiting the target village and from personal

interview. The fish catch data were collected from fisherman, man holder etc. The pertinent data, thus, collected was subjected to descriptive statistical analysis such as the calculation of the percentages, Pie chart, bar diagrams etc.

Data Analysis, Findings and Discussion: The livelihood and production of fish in the present study were summarized in the Table 1 & 2. Total number of population of the village was 469, among these 57.99% were male and 42% were female. The results of the survey indicated that the literacy rate among the fishermen in the village was poor. It has been found that the population of the village was 469; 63.53% (Literate) and 36.46% (Illiterate). Among the literate population, 52.38% have upto primary, 30.95% up to upper primary school, 11.31% up to high school and only 3.57% of the fisherman was found to be higher degree. The peoples were in different services such as agriculture (26.29%), fishing (29.74%), business (17.67%), In-service (14.22%) and any other works (12.06%). Again, 82.94% people were lived in the katcha house and remaining (17.05%) in pukka house while, per month income was found to be lowest (Rs. 500-1000) in the age of 10-20 and highest (2000- 8000) in the age of 40-50 group. The overall fish production of the Lake was 1652 kg/yr. Out of these productions, miscellaneous was found to be maximum (727 kg/yr) with 44.12% while Indian major carp was minimum (248 kg/yr) with 15.02%.

Table 1: Socio-economic condition of Tokpaching village in Pumlen Lake, Manipur (2012-2013)

SL. No.	Parameters	Sample size	Percentage (%)
1.	Population of Tokpaching	469	57.99 (Male) 42.00 (Female)
2.	Type of house %		
	a) Katcha	389	82.94
	b) Pukka	80	17.05
3.	Educational status		
	(a) Illiterate	171	36.46
	(b) Literate	298	63.53
	(i) Primary School	88	52.38
	(ii) Upper Primary	52	30.95
	(iii) High School	19	11.31
	(iv) Higher degree	9	3.57
4.	Main occupation of the family		
	(a) Fishing	69	29.74
	(b) Agriculture	61	26.29
	(c) Business	41	17.67
	(d) In-service	33	14.22
	(e) Any works	28	12.06
5.	Monthly income of the family with age wise distribution	Minimum (Rupees)	Maximum (Rs.)
	(a) 0-10 years	0.00	0.00
	(b) 10-20 years	100.00	1000.00
	(c) 20-30 years	500.00	3000.00
	(d) 30-40 years	2000.00	7200.00
	(e) 40-50 years	2000.00	8000.00
	(f) 50-60 years	2000.00	7500.00
	(g) 60-70 years	2000.00	7000.00

Table 2: Fish production (kg/month) in Pumlen Lake during 2012-2013

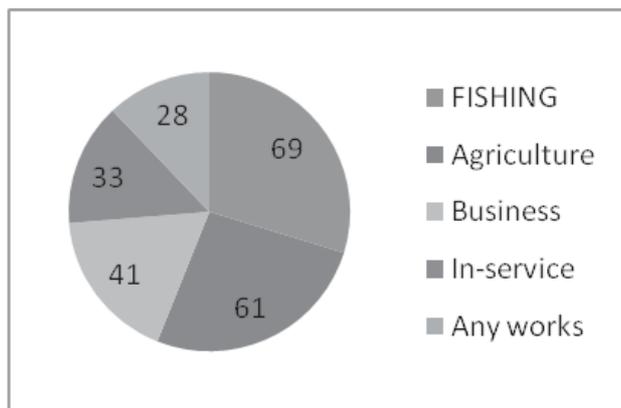
Production Of Fish	JAN.	FEB.	MAR.	APL.	MAY	JNE.	JULY	AUG.	SEP.	OCT.	NOV.	DCR.	TOTAL kg/year %
Carp	6	4	6	11	21	31	31	31	51	51	51	42	336 (20.33%)
Cat fish	6	7	5	6	7	5	21	11	34	41	56	49	248 (15.02%)
Murrels	8	11	6	7	32	35	25	26	50	61	41	39	341 (20.62%)
Misc.	30	51	51	52	55	50	53	100	105	70	60	50	727 (44.12%)
Total	50	73	68	76	115	121	130	168	240	223	208	180	1652 kg/year

*Misc=Miscellaneous includes small indigenous fish

FIGURE 1: Fish Production Per Month



FIGURE 2: Over All Main Occupation Of The Family



Laishram, Jogeshet *al* (2013) mentioned that wetlands are one of the most productive and resource rich area which provides basic needs of households and contributes to food security, income and welfare. Sheikh and Goswami (2013) describe that in these days of global economic changes, the fishers are found not having the basic necessities to elevate their living conditions. Instead they are facing a lot in their struggle for existence. Furthermore, they are still in the primitive stage with limited or no scientific and technical guidance to use the wetland more economically and sustainably. The economic status of the people was fairly poor as they were not fully engaged in particular work specially in the business of fish, because of declining fish production in the Lake due to anthropogenic pressure, floods and siltation. Most of the peoples were not aware of modern aquaculture technique. They used traditional fishing methods.

Therefore, urgent needs of awareness programme regarding modern scientific fish farming technique among the villagers. The overall fish production of the Lake was about 1652 kg/yr. Out of these productions, miscellaneous had the maximum while Cat fishes recorded the minimum. Again, miscellaneous was followed by Murrels, Carps and Catfish. Minimum production for carps was recorded in February while maximum in October and November; for cat fish, minimum was observed in March and maximum in November; for miscellaneous the minimum production was found in January and maximum in August to October. The production of various fish species was highest during monsoon and post-monsoon and lowest during winter season. The fishermen used traditional fishing methods as most of them were not aware of modern aquacultural techniques.

In the light of the above discussion, there is an urgent need to work on the development and provide good facilities and financial aids to the villagers for the betterment of their socio-economic condition; Bring about a proper management of the Lake Ecosystem for the development of fishery in a sustainable manner; Organise awareness programmes in connection with the modern fish farming techniques and training of fishermen; Save ecology and environment of the lake through reduction of felling of trees in the catchment area of the lake and use of pesticides in capture fishery; To conclude, the major hindrance in the fishermen's socio-economic condition is the change in water regime and its resultant effects on fishing techniques etc which demand an urgent remedial measure. In fact, the major cause of the lake ecological problem is due to improper planning and lack of integrated approach. Concerted efforts should, therefore, be made to increase fish production, ensure betterment of socio-economic status of fishermen community and nutritional security of people of the state.

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