Socio-Economic Conditions of Fishermen Population: With Special Reference to Chombala Harbour, Kerala

Jasna P. T.[1], SanghamitraPalai[2]

[1]*M. Phil., Scholar, Dept. of Economics, Gandhigram Rural Institute – Deemed University, Dindigul, Tamilnadu, India*
[2]*M. Phil., Scholar, Dept. of Applied Research, Gandhigram Rural Institute - Deemed University, Dindigul, Tamilnadu.*
Jasna3134@gmail.com, sanghamitrapalai123@gmail.com

Abstract

Background/Objectives: the specific objectives of the study are (1) to examine the socio-economic conditions of the fishermen community in the study area. (2) To investigate the problems faced by fishermen. (3) To suggest suitable policy measures to improve the conditions of fishermen society

Methods/Statistical analysis: The study is based on primary data and secondary data. The primary data were collected through a structured schedule and samples are drawn by employing simple random sampling method.

Findings: The Chombala fisheries area is a developed fishing sector. Both mechanized and motorized fishing sectors have people of good socio-economic condition. By analyzing the both the categories, it shows that the mechanized category has better improvement than motorized category.

Improvements/Applications: During the ban period, an alternative employment opportunity may be provided to the fishermen. To create more infrastructural facilities for storing and freezing of fish catch. Exporting of fish directly from Chombala, and uninterrupted fuel distribution at cheaper rate are the need of the hour for Chombalafishing community.

Keywords: Fisheries in Kerala, Marine fisheries profile of Kozhikode, Fishermen Problems and Remedial measures.

1. Introduction

Marine fisheries play an important role in supplying protein rich food to the ever increasing population apart from providing employment to millions of fishermen and earnings considerable foreign exchange for the country. In India, agriculture is the largest sector of economic activity. It provides not only food and raw materials but also employment to a very large proportion of the population. Among the agricultural resources fisheries occupies an important role in the Indian economy especially in the earning foreign exchange. Moreover, fishing is a labour intensive activity and hence would play a significant role in the gainful employment to the weaker-section of the society, and also it is the source of livelihood security for a large section of economically backward especially in coastal population of the country.

Fisheries are the one of the important oldest industries in the world. Atlantic Ocean, Pacific Ocean, Indian Ocean, Southern Ocean and Arctic Ocean are the largest and deepest parts of the Oceans in the world. The total costal line distance of the world is 586153 Kilometers, of which Africa has 37908 Kilometers, Asia 163609 Kilometers, Oceania 52488 Kilometers, North and Central America 183950 Kilometers, South America 30663 Kilometers, Europe 6943 Kilometers and former USSR has 47842 Kilometers. In the world costal line, India accounts for only 0.17 per cent (FAO, 2008) [1]

By analyzing the history of fisheries it shows that the fishing equipments and methods of fishing are improved for all over the world, mechanization came to fishing in the 20th century. The use of mechanical device for fishing boats was the first major technological development in the fisheries sector. The year 1980 is an important period in world marine fishing which witnessed three major technological developments (introduction of synthetic fibers in the manufacturing of nets, introduction of cold storage and freezing at shore, introduction of electronic equipments for fish detection and navigation) which boosted up the global fish production.

Table 1 shows the top five countries contribution in global fish production [2].

Table 1. Top Five Countries Contribution in Global Fish Production

(In tonnes)

Name of the country	Capture	Culture	Total Production	% Share
Total World	88918040	55680738	144598778	-
China	14919596	34779870	49699446	34.37
Peru	6914452	-	6914452	4.78
Indonesia	5099355	1733434	6832789	4.73
Vietnam	2243100	2556200	4799300	3.32

Source: Fisheries profile of India- 2013

Table 1 reveals the contribution of top five countriesin world fish production. China occupies the first place with the share of 34.37 per cent followed by India and Peru with 5.43 and 4.78 per cent respectively.

Fisheries in Kerala

Kerala is the green ribbon shaped maritime state on the west cost of peninsular India. It is blessed with a coastline of 590 km, a continental shelf area of 40000 sq.km, extensive interconnected brackish water lakes and estuaries. The state has a fish worker population of about 10 lakhs. The density of population in the coastal area is 2168 persons per km², whereas the state average is 859. Marine fishery has a prominent place in the economy of Kerala. It is the only source of livelihood of more than 8 lakh marine fishermen and out of this, more than two lakhs of active fisher folk are engaged in fishing along the coastline, who inhabit in 222 marine villages. The fisheries sector provides occupation to about 3.86 lakh people directly, and much more indirectly, making it a significant employment providing sector of the state.

Table 2 shows the district wise fishermen population details and coastal length of Kerala.

Table 2. District wise details of fishermen population and coastal length[3]

Sl. no	Districts	Coastal Length (km)	Fishermen population	Active fishermen	Fishermen population per km length
1	Thiruvananthapuram	78	167754	50899	2096
2	Kollam	37	92500	18561	2418
3	Alappuzha	82	127776	25900	1307
4	Ernakulam	46	72119	13230	1543
5	Thrissur	54	55657	5803	1314
6	Malappuram	70	89365	31479	1113
7	Kozhikode	71	97987	21769	1336
8	Kannur	82	37627	5786	658
9	Kasargode	70	43115	9983	606
	Total	590	783900	183410	1307

Source: Kerala Fishermen Welfare Fund Board, @Directorate of Economic and Statistics

The socio-economic condition of the fisher folk in the state is pitiable, when compared to the general section of the population. Backwardness is the hallmark of fishermen. The concept of globalization introduced innovation and commercialization of fisheries sector in the economy of Kerala. Globalization made an impressive growth of fisheries sector in India from a subsistence traditional activity to a well developed commercial and diversified enterprise. Fisheries Sector of Kerala contributes about 9 per cent of the GSDP from the agriculture sector and occupies a significant position in the state economy (Economic Review, 2013) [4].

Objectives of the study

1. To examine the socio-economic conditions of the fishermen community in the study area
2. To investigate the problems faced by fishermen
3. To suggest suitable policy measures to improve the conditions of fishermen society.

Methodology of the study

The study is based on the primary and secondary data. The secondary data comprises research papers, articles related to fisheries, books and websites. The primary data collected from 150 fishermen of Chombala Harbour area. Out of the 150 samples, 75 are collected from motorized fishermen population and 75 from mechanised category.

The primary data was collected through a structural questionnaire by applying simple random method. The investigator has personally approached the sample respondents and collected relevant information.

Profile of the Study Area

Kozhikode is a beautiful district (where the study villages are located) situated on the south-west coast of India. Kozhikode district is one of the 14 districts in the state of Kerala, India. The district is bounded on the north by Kannur district, on the east by Wayanad district, on the south by Malappuram district, and on the west by the Arabian Sea. It is situated between North latitudes 11°08' and 11°50' and East longitudes 75°30' and 76°08' [5].

As per 2011 census, the district consists of 1,470,942 male and 1,615,351 female population. Urban population constitutes 32.85 per cent and rural population is 67.15 per cent of the total population in the district. The total child population in the age group 0-6 years is 335,645. Of which 170,429 are male population and 165,216 are female population in the age group of 0-6. Sex ration in the district is 1098 per 1000 males. The child sex ratio in the age group 0-6 years is 968.

a. **Marine Fisheries Profile of Kozhikode**

Kozhikode district is one of the leading coastal districts in marine fish production as well as marine fish consumption in Kerala (Table 3).

Table 3. Marine Fisheries Profile of Kozhikode district [6]

| Sl. No	Parameter	Numbers
1	Total coastline (km)	71
2	Number of landing centers	19
3	Number of fishing villages	35
4	Number of fisher families	14157
5	Total fisher folk population (lakhs)	0.95
6	Number of fish markets	147
i)	Number of wholesale market	3
ii)	Number of retail markets	144
7	Number of export units	5
8	Number of crafts	3156
i)	Number of Mechanised fishing crafts	1065 (33.75%)
ii)	Number of Motorized boats	1831 (58.02%)
iii)	Number of Non-motorized boats	260 (8.24%)
9	Marine fish production (2014) in lakh tonnes	1.02

Source: Marine Fisheries Census (2010) CMFRI; PANFISH Book, Kozhikode & Alappuzha Districts, Department of Fisheries, Kerala; NMFDC, CMFRI; Kerala Fisheries Statistics 2014, Directorate of Fisheries, Kerala.

Total number of fishing craft is 3156, of which 33.75 per cent is mechanised crafts, 58.02 per cent are motorized crafts and 8.24 are non mechanised crafts. The structural changes in fishing crafts show the declining the usage of traditional or non-motorized crafts in the Kozhikode district. The marine fish production of the district in the year 2014 was 1.02 lakh tonnes.

2. Results and discussions

The socio-economic characteristics, levels of employment, income and consumption and their pattern of various seasons are discussed for the motorized and the mechanised classes separately. The analysis is based on the primary data collected though interview schedule by contacting the respondents directly in the study area.

Figure 1. Educational status of the respondent
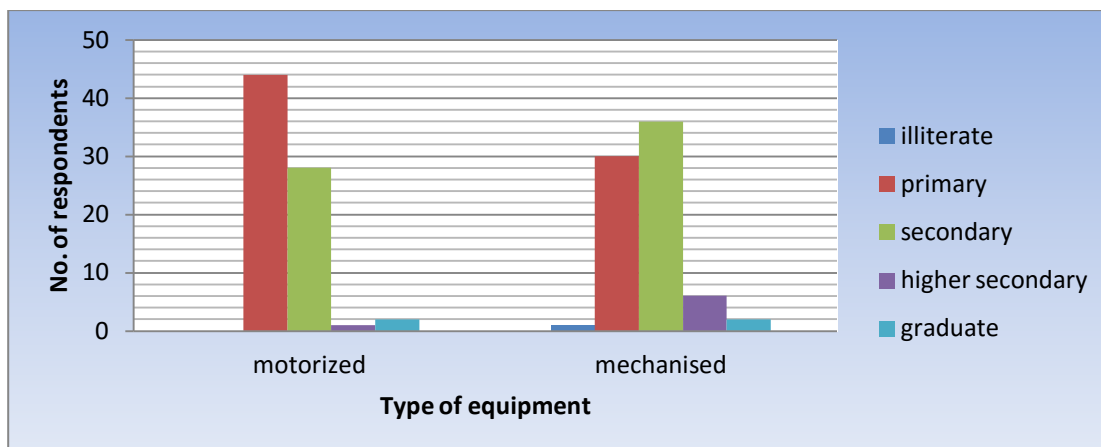
Source: Computed from Primary Data

Figure 1 shows that in the motorized category, the highest percentage of respondents studied till the Primary level (29.3 per cent) followed by Secondary level (18.7 per cent) and Graduate Level (1.3 per cent). It was also noteworthy that were no illiteracy.

In the mechanised category, the highest percentage of respondents studied till Secondary Level (24 per cent) followed by Primary Level (20 per cent), Higher secondary Level (4 per cent), and Graduate (1.3 per cent). It is noteworthy that (0.1) per cent respondent was Illiterate compared to motorized sector.

Overall, 49.3 per cent studied till Primary Level followed by Secondary Level (42.7 per cent), and Higher Secondary Level (4.7 per cent), and Graduate (2.7 per cent). Illiterates made up of .07 per cent of the total.

Table 4. Religious wise distribution of respondents

Sl. no	Religion	Motorized	Mechanised	Total
		No. of respondents	No. of respondents	
1	Hindu	14 (9.3)	37 (24.7)	51 (34)
2	Muslim	61 (40.7)	38 (25.3)	99 (66)
Total		75 (50)	75 (50)	150 (100)

Source: Computed from Primary Data

Table 4 picturises the religion-wise distribution of the respondents. It is observed from motorized category, the highest percentage of the respondents are Muslim followed by Hindu (9.3 per cent). In the case of mechanised category highest percentage of respondents belongs to Muslim religion (25.3 per cent) followed by Hindu (24.7 per cent).

It could be concluded that majority (66 per cent) of the respondents belong to the Muslim religion in the study area.

*Table 5. Housing Conditions of the Sample Respondents*

Sl. no	Housing Condition	Motorized	Mechanised	Total
		No. of respondents	No. of Respondents	
1	Pucca	40 (26.7)	51 (34)	91 (60.7)
2	Semi Pucca	35 (23.3)	24 (16)	59 (39.3)
Total		75 (50)	75 (50)	150 (100)

Source: Computed from Primary Data

From Table 5, it could be seen that highest percentage of respondents in the motorized category lived in Pucca houses (26.7 per cent) followed by semi Pucca (23.3 per cent). In the mechanised category about 34 per cent of the respondents lived in Pucca houses followed by semi Pucca (16 per cent).

Taking both the categories together, 60.7 per cent of the total respondents lived in Pucca houses, followed by Semi-Pucca (39.3 per cent).

Figure 2. Monthly income of the sample respondents
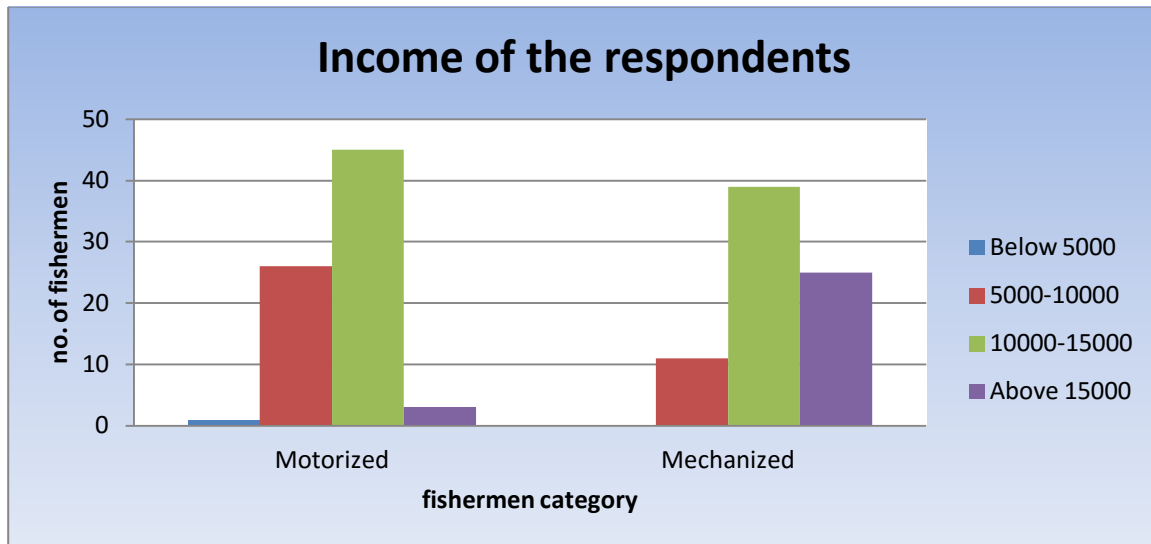
Source: Computed from Primary Data

Figure 2 shows the monthly income of the respondents in the study area. The motorized category shows the highest percentage of the respondents (28.7 per cent) who earned their monthly income between Rs.10000 and 15000, followed by 12.7 percent of them who have earned their monthly income in the range of Rs.5000 to Rs.10000. It is only 8.7 per cent of them who have earned their monthly income of more than Rs.15000. It is thus obviously that majority of respondents in the motorized sector (28.7 per cent) have earned their monthly income between Rs.10000 to Rs.15000.

In the case of mechanised sector, the highest percentage of the respondents (28.7 per cent) earned their monthly income of above 15000. As against 19.3 per cent of them who have earned their monthly income in the range between Rs.10000 to Rs.15000. only 2 per cent of them who have earned their monthly income in the ranges between Rs.5000 to Rs.10000.

Taking both the categories together, 48 per cent of the total respondents earned their monthly income in the range between Rs.10000 to Rs.15000, followed by the income group above 15000 (37.3 per cent) and income group between Rs.5000 to Rs.10000 (14.7).

Common problems faced by the fishermen in the study area and its remedial measures

There are many problems as far as fishing is concerned in Chombala Harbour. For the sake of simplicity the problems faced by the fishermen were classified into different groups and ranked them. The following are the groups under which problems were classified.

1. Problems in realization of reasonable fish catch

2. Problems in Marketing of fish

3. Other problems

I.   Problems in realization of reasonable fish catch

Table 6. Problems in fishing faced by the Respondents

Sl. no	Problems	Motorized		Mechanised	
		Average score	Rank	Average score	Rank
1	Limited availability and high price of engine oil	70.57	1	71.16	I
2	Repair and loss of Fishing Craft and Gear	58.87	II	52.29	III
3	Mud problem	52.07	III	59.91	II
4	Bad weather	31.55	V	37.37	IV
5	Motor sound scares away fishes	37.95	IV	30.27	V

Source: Computed from Primary Data

From Table 6, it could be inferred that in the Motorized category, the respondents was limited availability of Kerosene and its high price. Kerosene was given at subsidized rate of Rs. 25 but the quantum was very less ranging from 130 to 200 liters per month based on the Horse power of the outboard motors. But the actual need was nearly 200 to 300 liters per week. In order to meet the short fall, Kerosene was bought in the market at very high prices. This might be the major reason why the above problem was ranked as the first and the foremost. The next major problem was the repair and loss of fishing crafts and gears. This is a major problem faced by fishermen and they often point out to the inadequate facilities for repair and maintenance of fishing craft and gears. The other problems ranked by the respondents in the order were the Mud problem faced by the fishermen, motor sound scares away fishes and Bad weather.

As for the Motorized category the major problem was limited availability and high price of engine oil viz. diesel. Mud problem formed only the next followed by the repair and loss of fishing craft and gears, motor sound scares away fishes and bad weather as could visualized from Table 6.

II.   Problems in Marketing

The problems faced by the respondents in marketing have significant bearing on the profit realized them. Therefore the same where analyzed and the results are presented in the Table 7.

Table 7. Problems faced by the Respondents in Marketing

Sl. no	Problems	Motorized		Mechanised	
		Average score	Rank	Average score	Rank
1	Exploitation by Middlemen	58.93	II	65.65	I
2	Lower price for the Catch	65.97	I	59.71	III
3	Delay in Payment	40.68	III	42.72	IV
4	Limited availability of freezing facility	34.44	IV	31.92	II

Source: Computed from Primary Data

From the table 7, it is clear that the respondents in the motorized category considered lower price for the catch as important problems in marketing followed by others because the seasonal changes affect the price of fish. Suppose if the fish catch is more, automatically they fetch a low price only and vice versa. The other problems are exploitation by middlemen delay in payment and limited availability of freezing facility.

In the case of Mechanised category, exploitation by middlemen as important problems in marketing followed by others, because the middlemen are fixing the low price at the fishing spot itself. The other important problem is limited availability of freezing facility. Storage facility is good only for big fishermen and owners of boats, due to which many small fishermen have to sell the catch at very low prices. Other important problems are lower price for the catch and delay in payment.

III.   Other problems faced by the Fishermen

There are many problems faced by fishermen society. The important problems are explained in tables 6 and 7. The other important problem is the unavailability of safe drinking water. Majority of households depend on public tap, because the houseson sea shore face the problem of salt water intrusion. In addition, water for household requirement is not available throughout the year. The other problems are the limited availability of resting facility of fishermen and bad smells from fishing Harbour.

Remedial measures

After listing out the problems, the fishermen respondents were asked to suggest remedial measures for the development of marine fisheries in Chombala Harbour. The remedial measures were grouped under the following heads in to four categories:

1. Enhancement of Fish catch
2. Improving Marketing efficiency
3. Improving infrastructural facilities and
4. Increasing employment and income

Suggestions for Enhancement of Fish catch

Suggestions as given by the motorized sector respondents for enhancement of fish catch are: to allot more funds as fuel subsidy. The other important suggestion given by this category is to offer free-of-costrepair and maintenance of fishing crafts and gears. The fishermen spending more amounts for the maintenance and repair of fishing crafts and gears. Another suggestion is to provide proper freezing facility.

The first priority of mechanised sector respondents is to remove restrictions on fishing in the monsoon. The mechanised boats are not allowed to fish in the sea during major part of the monsoon (June 15 to July 30). As a result, they were unable to find any source of income or employment during that period. The other suggestions were proper freezing facility and free repair and maintenance of fishing crafts and gears.

Suggestions for improving Marketing efficiency

With a view to improve marketing facility, the suggestions given by both Motorized and Mechanised fishermen were unanimous in their choice of abolishing market middlemen as the first priority in improving marketing efficiency. This showed that the middlemen were exploiting the fishermen by buying the fish at low prices and selling them at high prices to the consumers. The other suggestion given by the respondents were prompt payment of money and proper freezing facility.

Suggestions for improving infrastructural facilities

With the view to improve infrastructural facilities, the suggestions were given by the respondents are to provide proper resting facility of fishermen and to provide proper safe drinking water facility. The drinking water availability of Chombala Harbour area is very limited. Other suggestions to remove mud problems in harbour area

Suggestions for improving employment and income

Increasing employment and income forms the basic priority for economic development. The important suggestions given by the respondents are pay more wages for fishermen and also provide loan for buying fishing equipments and also starting new business. Other suggestions given by the respondents are to improve educational status and also reservation in Government services.

Suggestions

- During the ban period an alternative employment opportunity may be provided to the fishermen. Allied industries with fishing are to be established in the study area so that it will provide an alternative employment opportunity to the fishermen during the ban period.
- To create more infrastructural facilities for storing and freezing and if possible to export directly fish from Chombala.
- The unavailability of fuel is the main problem that Chombala is facing now. Fuel at subsidized rate will mitigate the problem.
- If the mud problem is reduced, more fishing boat can operate.

- It also suggests that both government of India and Kerala may provided adequate loan and credit facilities with subsidized interest rate to the fishermen so that they can purchase boat and other related equipment.

3. Conclusion

Fisheries sector occupies very important place in the socio-economic development of the country. It provides employment opportunity of millions of the people directly and indirectly. The present study found that in the Chombala fisheries area is a developed fishing sector. Fishing folks belong to both mechanized and motorized sectors have good socio-economic condition. The mechanized category shows better improvement than motorized category.

4. References

1. Economic status of Fishing community in marine fishing sector in Tamilnadu. http://shodhganga.inflibnet.ac.in/bitstream/10603/56560/7/07_chapter%201.pdf. Date accessed: 09/04/2012.
2. Fisheries Profile of India- 2013. http://www.dahd.nic.in/India%20profile%20updated.5.3.2013. Date accessed: 15/05/2016.
3. Kerala Fishermen Welfare Fund Board. http://www.fisheries.kerala.gov.in/index.php?option=com_content&view=article&id=76&Itemid=44. Date Accessed: 23/04/2016.
4. Ancy V P, K V Raju. Structural Changes in the Fisheries Sector of Kerala: An Overview.IOSR Journal of Economics and Finance. 2014; 5(6), 14-18.
5. Brief Industrial Profile of Kozhikode District. http://msmedithrissur.gov.in. Date accessed: 23/04/2016.
6. Marine Fisheries Census India (2010). http://eprints.cmfri.org.in/8998. Date accessed: 23/04/2016.