

PERFORMANCE OF PRIMARY LEVEL FISHERMEN DEVELOPMENT & WELFARE COOPERATIVE SOCIETIES IN KERALA- AN EVALUATION

Dr. V. Ambilikumar

Professor & Head, Department of Business Administration and Management, Kerala University of Fisheries and Ocean Studies, Kerala.

Abstract

The study on 'Performance of Primary Level Fishermen Development & Welfare Cooperative Societies in Kerala- an Evaluation' was undertaken keeping in view the difficulties faced by the FDWCS in Kerala. The study was conducted on the basis of the data collected from two coastal districts (Thiruvananthapuram and Kollam) located in the southern part of Kerala. From these districts, 12 cooperative societies each were selected for the study. From the societies selected, 10 members each were selected as sample. Thus, a total of 24 Primary Level Fishermen Development & Welfare Cooperative Societies and 240 members were brought under the study.

The study was carried out with the objectives of assessing the extent to which the members of fisheries cooperatives participate in the activities of such societies, identifying the reasons for participation or non participation and knowing the benefits offered by the FDWCS to their members. The study observed that the fishermen join the societies with many expectations as a member. They expect the benefits under different schemes of the Central as well as the State government. It was found that for men it is easy to obtain membership in FDWCS when compared to women. Availing subsidies, loan facilities, savings schemes, sale fish catch at reasonable prices, etc. are the benefits expected by the members of FDWCS. But all these expectations are not satisfied under the existing conditions. The societies have limitations like shortage of funds, inactive members and board of directors, etc. Mainly because of insufficient funds, the societies, generally, are not in a position to engage full time staff for rendering services to their members.

Keywords: Fishery cooperatives, Matsyafed, Kerala Fisheries, FDWCS.

Introduction

Accounting for about 5.4% of the global fish production, India today is the second largest fish producing nation in the world. India is also a major producer of fish through aquaculture and ranks second in the world after China. The provisional figure for total fish production in India during 2014-15 was 10.06 Million Tonnes (MT) with a contribution of 6.57 MT from inland sector and 3.49 MT from marine sector. Fish production in India has shown a steady increase since 1991. From 3.84 MT in 1991, it increased to 10.06 MT during 2014-15.Inland fisheries presently has a share of about 65% in total fish production of the country. The sector contributes about 1% to the overall GDP and around 5.5% of the GDP from Agriculture and allied activities. During 2014-15, export of marine products from India was 1051243 tonnes valued at Rs. 33,441.61 crore (Govt. of Kerala, Economic Review,2016).

Fisheries are complex and interdependent ecological and social systems that require integrated management approaches. The actions of one person or group of users affect the availability of the resource for others. Managing such common pool resources requires conscious efforts by a broad range of stakeholders to organize and frame rules enabling equitable and sustainable use of the resources for everyone's benefit. In the fisheries sector, though in the developed countries and some of the developing countries, several new groups and professional associations of fishing communities have emerged in recent two-three decades; in India, this role of organizational support and social integration among fishing communities is played, by and large, by conventional fishermen groups, fishermen cooperative societies and federations.

Kerala, popularly known as 'God's Own Country', is a beautiful green ribbon shaped strip of land lying on the west coast of peninsular India. Having a total land area of is 38863 sq.km, the State is blessed with a coast line of 590 kms. It is also gifted with 284724 ha. of inland water bodies consisting of rivers, reservoirs, private ponds and brackish water resources. Among the maritime states in India, Kerala occupies the third position in marine fish production, accounting for about 13.5 % of the total landings (Govt. of India, 2015). Out of the EEZ of 2.2 million km² for India, 36,000 km² is adjacent to the Kerala coast. The potential of the state in terms of marine fisheries is believed to be about 7.5 lakh tonnes. The total population of fisher folk residing in the state of Kerala is estimated to be 10.18 lakh, which includes 7.83 lakh in the marine sector and 2.35 in the inland sector. Out of this, the number of active fishermen is 2.39 lakh (Govt. of Kerala, Economic Review, 2016). Currently, there are 222 fishing villages in the marine and 113 fishing villages in the inland sector, where fishing and relative activities provide livelihood to a vast majority of the population. The fishermen of the State contribute about 8.8 percent of the GSDP from the primary sector which is of significance to the state economy.

The changing Governments of Kerala have placed emphasis on various schemes implemented to ensure social security and livelihood support to fishermen community. Apart from the Fisheries Department, the Matsyafed and Kerala Fishermen Welfare Fund Board (KFWFB) also implement such schemes. Plan support is also available for many such schemes. Some of



these schemes are Centrally Sponsored ones. Schemes include those for Housing, Insurance, Pension, Medical treatment, Social security, Education, etc. apart from those which enable fishermen to earn livelihood on a continuous basis. The State has been able to provide greater assistance to the fishermen community and also expand the social security net over the years.

Marine fisheries have a prominent role in Kerala. The density of population is very high all along the coastal area (2168 persons per sq.km), whereas the State average is 859 (Govt. of Kerala, Dept of Fisheries). A very rich marine wealth with a large variety of fish and a highly skilled population of fishermen has made Kerala a leading producer and consumer of fish and fishery products.

Fishery Cooperatives in Kerala

Co-operation has the merit of combining freedom and opportunity to the individuals with the benefit of large scale management and organization. Co-operation is an advanced form of organization for bringing about the desired socio – economic changes in the context of the existing situations of the country. It was with this lofty goal that fishermen co-operatives were organized in Kerala. Fisheries cooperative societies play an important role for the benefit of the fishermen community as a whole particularly through saving them from exploitation and by helping to improve their socio-economic conditions.

Fishery Co-operative movement in India started as early as in 1913 and Maharashtra was the first state where the first fishery Co-operative society was organized (Mishra, 2008). The first cooperative society for fishermen in the region (Kerala) was registered in1917. At that time, fishermen's cooperatives were registered on the basis of communities with separate societies for the Arayan and Valan (Hindu) and Christian fishermen.

Earlier, fishing industry was in the hands of middlemen, money lenders and tenders, who exploited the real workers engaged in fishing. The exploitation of poor fishermen, the inadequacies that prevailed in the institutional credit systems and limitations of the various institutions in this sector compelled the Government to initiate the setting up of a co-operative organizational structure to meet the credit and marketing requirements of the traditional fisheries sector.

The Government of Kerala is, perhaps, the first state in India to have recognized the need for organizing fishermen cooperatives for improving the living conditions of fisher folk and to enact a legislation, the Kerala Fishermen Welfare Societies Act 1980 that provided for the constitution of Fishermen Welfare Societies and initiation of welfare and development programmes exclusively for fishermen (Giriappa, 1994). Consequently, 222 Fishermen Welfare Societies were organized rather hurriedly all along the coast covering the entire population of active fishermen. These societies so organized, however, remained more or less inactive until Matsyafed was set up-in 1984 and took up the task of reorganizing them into Fishermen Welfare and Development Co-operative Societies.

An Apex Federation was originally envisaged as a three tier one with the village level societies at the primary level, five district level societies at the middle level and an Apex level Federation. The objective was to strengthen the primary level societies so that they could take up all developmental and welfare activities for the total development of the fishermen community. These welfare societies were entirely dependent on the State Government's financial support. In order to facilitate channelizing of funds from other financial agencies such as the National Co-operative Development Corporation (NCDC) the State Government decided to revamp the structure of the organisation and make it a full -fledged co-operative Federation. This led to the formation of 811 Fishermen Development& Welfare Co-operative Societies in 1988, covering the 222 fishing villages and extending throughout the coastline of Kerala (Matsyafed,2011). Since the area of coverage of each of these primary societies were felt to be very large and therefore unmanageable, in 1992, the State Government directed the Registrar to register 211 more Fishermen Welfare Co-operative Societies, making the total number of primary level Co-operative societies 1022 (Matsyafed,2011). Though the original set up proposed for the Federation was a three tier one, it was felt that a two tier structure would be more conducive for the functioning of the organization and hence the bye-law of the Matsyafed was amended in 1993 to make the structure of the organisation a two – tier one.

Current Position of Fisheries Cooperatives

Presently, there is one National Federation, 23 State level federations, 1 regional federation, 129 District level federations and 18144 Primary fishery societies functioning in India. The membership in all these societies together is 29,06,552 (http://www.fishcopfed.in/DataBank accessed on 17.2.2017). Fishery Co-operatives in Kerala have a long history. It is a fact that the Fisheries Co-operatives in Kerala are the earliest treasure houses of various resource data on early fisheries. From early fifties onwards, organized efforts for developing and promoting marine fisheries in Kerala were taken upon a large scale through fisheries co-operatives. These co-operatives are independent entities. More than a thousand fisheries co-operatives have been working in the Marine sector of Kerala for so many years.



*IJMSRR E- ISSN - 2349-6746 ISSN -*2349-6738

There are two apex organizations at the State level in the Fisheries Co-operative Sector. They are Matsyafed and the South Indian Federation of Fishermen Societies (SIFFS). They are engaged in organizing and assisting fishermen co-operatives in the state. The Matsyafed has a clear mandate of co-operativisation of traditional fishermen and spear heading of development programme for them.

Review of Literature

In India, most of the fishermen belong to socially and economically backward communities. Co-operatives are the shield of the weak and in India fishermen are among the weakest sections of the community. Despite having good potential in the fisheries sector, the fishermen could not substantially use the resources for uplifting their socio-economic status due to lack of institutional support for infrastructure and finance. Hence, fishermen's cooperatives were found to be the most appropriate organization to improve their socio-economic status. Efforts made in this direction have yielded good results in some areas, but the overall picture of fishery co-operatives is not encouraging.

In India, fishery cooperative societies have been studied by very few researchers (Singh &Dhar Choudhary, 1997; Bhatta, 1997; Nair & Singh, 1997; Rahim & Singh, 1997; Moorti& Chauhan, 1997). However, in majority of the cases these organizations by their very nature and reason for existence have focused on increasing the maximum output from the fishery resources and, thereby, increasing the livelihood, income and wellbeing of their members. Chandrasekhar (2014) highlighted that the existing cooperative law does not support the development of fisheries cooperatives. He remarked that countries like Japan and South Korea have special enactments which guarantee allotment of fishing waters to fisheries cooperatives and ensure membership of genuine and active fishermen. The law defines the roles within fisheries cooperatives.

Barring a few recent studies (Jyotishi and Parthasarathy 2007, Tyagi et.al 2008) these fisher folk organizations in India have been viewed and studied in a limited perspective of production-oriented and/or political organizations limited to and interested in only furthering their commercial interests. In most of these studies, fishermen's cooperatives were found successful and were able to retain the loyalty of their members. However, the possibility of these organizations in creating awareness about various schemes among their members and their utilisation for minimising the intensity of exploitation have not been explored.

Statement of the Problem

Although, Kerala boast the highest quality of life in the country as measured by human development indicators, it is a fact that the State's fishing community has largely been left out of the general development experience. Traditional fisher folk who had no other employment option continued to lag behind the rest of the State in all areas of development. This marginalization poses a challenge to the notion of Kerala being a "model of development".

To change this unacceptable face and to bring them to the mainstream of the society, the changing governments have been taking initiatives through launching various developmental programmes. Promoting aquaculture in a sustainable as well as eco-friendly way, developing infrastructures like fishery harbours, landing centres, markets, common facility centres, net factories, implementation of welfare schemes for the fisher folk, etc. are the few.

During the last many decades, fisheries cooperatives, have invited the attention of administrators, political leaders and the public in connection with the protection of fisherfolk from exploitations. But, even now, one of the most disappointing aspects of development programmes for fishermen relates to cooperatives. The amount earmarked by the Govt. of India for the development of the Fisheries Sector is routed through the National Cooperative Development Corporation (NCDC) who in turn transfers the amount to the MATSYAFED. The MATSYAFED distributes the funds to the fishermen through the Primary Level Fishermen Development & Welfare Cooperative Societies affiliated to them.

The Matsyafed implements many developmental and welfare programmes for the benefit of the fisher folk in Kerala. However, a recent study by KUFOS (Ambilikumar, 2015) found that there is difference of opinion among the fisher folk about the benefits received through the primary cooperative societies. Therefore, it was felt that thorough investigations are required to know whether the Primary Level Fishermen Development & Welfare Cooperative Societies (FDWCS) and the MATSYAFED are discharging their duties in the right direction or not. It was under this background a study was conducted in Kerala.

Materials and Methods

Assessing the extent to which the members of fisheries cooperatives participate in the activities of such societies, identifying the reasons for participation or non participation, knowing the benefits offered by the FDWCS to their members were among the objectives of the study. The study has covered only the selected FDWCS functioning in Thiruvananthapuram and Kollam districts of Kerala. Only those societies that are affiliated to the MATSYAFED were covered under the study. The study was



*IJMSRR E- ISSN - 2349-6746 ISSN -*2349-6738

carried out among the FDWCS selected under the sampling frame. The members selected from such societies also were brought under the purview of the study. The societies were selected on a random basis from the list published by the MATSYAFED. Twelve cooperative societies each were selected from each district identified for the study. Ten members each from the societies selected also were covered under the study. Thus, a total of 24 Primary Level Fishermen Development & Welfare Cooperative Societies and 240 members were brought under the study. Both primary and secondary data were used for the study. Primary data were collected from the officials of the societies and members with the help of interview schedules which were developed for this purpose. The collected data were analysed under descriptive method with the help of percentages and comparison.

Major Findings Relating to Objectives

The major findings in relation to the objectives mentioned above are;

Membership in the FDWCS

Among the members, male domination is observed in both the districts covered under the study. It is found that 65 % of the respondents covered from Thiruvananthapuram district are males, where as it is 77.5 % in the case of Kollam district.

As mentioned in the sample frame, all the respondents covered by the present study are members of FDWCS. Being a member of the society, each fisherman or woman expects different types of benefits. However, such benefits will depend upon the type of activities undertaken by each FDWCS. The benefits generally expected by the members and the extent to which such expectations are met by the societies are shown in table 1.

		Thiruvananthapuram		Kollam	
S. No	Benefits	No. of Members supporting	%	No. of Members supporting	%
1	Lower rate of interest on loan	31	22.60	42	35.0
2	Reasonable price for catch	20	16.67	28	23.3
3	Availability of subsidy	64	53.33	73	60.83
4	Arranges ready market for catch	41	34.17	38	31.67
5	Immediate payment	43	35.83	32	26.67
6	others	15	12.5	9	7.5

Table 1: Details of Benef	its offered by the FDWC	'S as observed b	v the Respondents
Tuble I. Details of Dener	its offered by the LD WC	b ub obber ieu b	y the hesponaches

Source: primary data

As it is evident from table 1, majority of the respondents continue to be the members of FDWCS for the purpose of availing subsidies offered by the governments. In the case of Thiruvananthapuram district, 53.3% of the respondents expressed this opinion, whereas in Kollam district it is 60.83%. As shown in table 1, immediate payment, ready market for catch, lower rate of interest on loan and reasonable price for catch are the benefits enjoyed by the respondents of Thiruvananthapuram district. Availability of subsidy, loans at lower rate of interest and ready market for the catch are the important benefits enjoyed by the respondents of Kollam district.

Table 1 also brings out the fact that, the FDWCS in both Thiruvananthapuram and Kollam districts serve the members at a satisfactory level, as far as distribution of subsidy under different schemes is concerned. But in other activities, the performance is poor. As far as the fisher folk are concerned, making available the reasonable price for their catch is very crucial. The FDWCS in both the districts covered under the present study could not achieve a remarkable performance in this aspect. In the case of Thiruvananthapuram district, only 16.67% of the respondents have the opinion that the FDWCS ensures reasonable prices for their catch. This percentage is 23.3 in the case of Kollam district. Similarly, the performance of the societies in arranging ready market for the catch is also not commendable. Only 34.17% of the respondents from Thiruvananthapuram district have felt this benefit; whereas, it is only 31.67% among the respondents from Kollam district. Similarly, the societies also could not provide loans to their members at lower rates of interest. Only 22.6% of the respondents from Kollam district expressed that loans are available at lower rates of interest.



Subsidy availed through FDWCS

Subsidy allowed by the Central Government for the acquisition of fixed assets is a great attraction for the fisher folk. It is under the subsidy scheme the traditional fishermen are able to own fishing implements and even to construct their houses. The 18 Integrated Fisheries Development Projects with an outlay of about Rs 445.92 crore with financial support of NCDC has provided fishing/ marketing inputs to about 85,000 active fishermen in the State. Today, group ownership has become a practice in traditional fishing sector and the actual fishermen have become the owners of the fishing inputs (Economic Review, 2015).

Data relating to the number of members who availed subsidy for different purposes are given in table 2.

		Thiruvananthapu	ıram	Kollam		
S. No		No. of Members who availed subsidy	%	No. of Members who availed subsidy	%	
1	Purchase of Vallom/ Boat	51	42.5	48	40	
2	Purchase of net	36	30	41	34.17	
3	House construction	18	15	12	10	
4	Education	0	0	0	0	
5	Others	4	3.3	6	5	

Source: primary data

Table 2 reveals that majority of the respondents availed subsidy for the acquisition of fishing boats and fishing nets. As far as the fisher folk are concerned, fishing boats and fishing nets are highly necessary for earning their bread. It is under the centrally sponsored scheme, the NCDC releases subsidy for this purpose. The amount is released through the Matsyafed and the concerned FDWCS. It is noted that no respondent has availed subsidy connected with education loan.

As it is evident from table 2, 42.5 % of the respondents from Thiruvananthapuram district and 40 % from Kollam district have availed subsidy for the purchase of Vallom/ boats. As far as the purchase of fishing nets are concerned, the respective percentages are 30and 34.17. It is noted that the percentage of respondents who availed subsidy for house construction is only 15 % in Thiruvananthapuram district and 10 % in Kollam district. This indicates that loan disbursement for house construction is less in the coastal areas of these districts.

Data relating to the subsidy availed by the respondents leads to the conclusion that 90% of the members of FDWCS enjoy financial benefits in connection with the acquisition of fixed assets. The district-wise data shows that 90.8% of the members of FDWCS in Thiruvananthapuram district and 89.7% of the members of FDWCS in Kollam district have availed subsidy for the purchase or construction of fixed assets.

Savings schemes and Other Loans Schemes

Data pertaining to the savings schemes operated by the FDWCS indicate that 41.67% of the societies in Thiruvananthapuram district and 50% of the societies in Kollam district operate schemes for encouraging the saving habits among the members. The other side of it is that, on an average, 54.17% of the societies do not operate any saving scheme for their members. It points out the fact that the FDWCS do not have a generally acceptable level of performance.

Similarly, nearly 46% of the FDWCS do not have micro finance scheme effectively. Microfinance is a type of banking service that is provided to unemployed or low-income individuals, or groups who otherwise have no other access to financial services. Ultimately, the goal of microfinance is to give low-income people an opportunity to become self-sufficient by providing a way to save money, borrow money and get insurance. Micro finance scheme and the resultant benefits are usually expected by the members of FDWCS. The data collected from the sample societies brings into light the fact that most of the societies are not in a position to offer micro finance facilities to their members. In Thiruvananthapuram district, only 58.3 % of the societies covered under the sample are operating micro finance scheme. In the case of Kollam district, it is only 50%.



Thus, the analysis of data relating to savings schemes and microfinance schemes in operation leads to the conclusion that at least half of the FDWCS are not functioning effectively.

Awareness about the schemes implemented by the FDWCS

In order to enjoy the benefits of different schemes implemented by the FDWCS, the members should be aware about such schemes. Data relating to the level of awareness indicate that 40.5% of the respondents are not at all aware about the schemes implemented by their societies. They are ignorant about the benefits offered by the MATSYAFED and also the department of fisheries, Govt. of Kerala. In the case of respondents from Kollam district, 45% (54 Nos.) of them are ignorant about the schemes offered by their societies (Table 3).

	Categor y	Thiruvananthapuram			Kollam				
S. No		No. of Members who are aware	%	No. of Member s who are not aware	%	No. of Members who are aware	%	No. of Members who are not aware	%
1	Males	56	71.7 9	22	28.2 0	49	52.6 9	44	47.3 1
2	Females	28	66.6 7	14	33.3 3	17	63.0 0	10	37.0 0
	Total	84	70.0	36	30	66	55	54	45.0

Table 3: Awareness about the schemes implemented by the FDWCS

Source: primary data

As shown in table 3, males are more aware about the schemes of FDWCS when compared to female members. It is to be noted that 47.31% of the male members and 37% of the female members of the selected societies in Kollam district are not aware about the different schemes implemented by their societies.

It indicates that there is a need to organise awareness programmes among the fisher folk in the districts.

Participation in Beach Level Auction

The main focus of the MATSYAFED is to equip the producer fishermen to achieve control over the first sale of catch. The system of beach level fish auctions developed across the State through the primary co-operatives has enabled the producer fishermen to exercise right over first sale of fish. Beach level auction is carried out under the supervision of a sale officer appointed for this purpose. The fishermen are ensured cash-down payment at the beach itself through the primary co-operatives. A tie-up has also been made with seafood exporting companies for procurement of high value and bulk quantity of fish through the primary societies so that the producers get a reasonable price for their catch at the beach itself. This has ensured that prices do not plummet during bulk landings. The producer fishermen are also assured timely assistance for replacement of their fishing inputs and working capital requirements. Also Matsyafed provides working capital assistance to the primary co-operatives for strengthening the beach level auction and supporting the member fishermen during off-season.

Even though the beach level auction protects the fishermen from exploitation by the middlemen and contractors, it is found that a large number of fishermen are not enjoying the benefits of it. As shown in table 4, on an average, only 44.5% of the respondents reported that they sell their catches through the societies.

Table 4: No. of Respondents who sold fish through Fl	DWCS
--	------

S. No	District			
	District	No.	%	
1	Thiruvananthapuram	41	34.17	
2	Kollam	66	55	

Source: primary data



*IJMSRR E- ISSN - 2349-6746 ISSN -*2349-6738

Table 4 clearly shows that out of 120 respondents selected from Thiruvananthapuram district, only 41 (ie., 34,17%) have participated in beach level auctions, where as in Kollam district the participation level was 55%. However, the annual report of the Matsyafed claims that 'the Federation/primaries intervention in beach level fish auction has reduced the influence of middlemen and offered 67% (in comparison to 30% in 1980s) of the consumer price to the fishermen. It claims that 40,231 fishermen of 240 cooperatives participated in the beach level fish auction under MATSYAFED and during 2014-15, 66677 MT of fish was auctioned.

The data relating to the participation in beach level auction reveals that there is a wide gap between the established objectives of the FDWCS and the real level of participation by the fishermen. During the time of data collection, few fishermen, particularly from Thiruvananthapuram district, reported that no officer from the Matsyafed reaches the landing centres for arranging auction.

The related data and the statements of the fishermen lead to the conclusion that the interference of the Matsyafed in arranging beach level auction is not much as it claims. However, the remarks of the fisher folk regarding the sale of fish through the FDWCS bring out a slightly different picture as shown in table 5.

		Thiruvanantha	puram	Kollam	
S. No	Opinion	No. of Members supporting	%	No. of Members supporting	%
1	Most helpful	6	14.63	14	21.21
2	Quick market	12	29.27	16	24.24
3	Saves from exploitation of middlemen	17	41.46	28	42.43
4	Others	6	14.64	8	12.12
	Total	41	100	66	100

Table 5: Opinion of respondents on sale of fish catch through FDWCS

Source: primary data

Table 5 shows that out of the fisher men who sell their catch through the FDWCS, nearly 42% opined that such a facility helps to save them from the exploitation of middlemen. It is observed that in both the districts covered under the study, approximately 42% of the fisher men have this opinion. Quick market is another facility they enjoy from the interference of the societies in the sale of fish.

These figures lead to the conclusion that the working of FDWCS helps the members to protect their common interest like savings from the exploitation of middlemen and ensuring a ready market for their catches. Besides these benefits, the fisher men also receive a share of the sale price as commission. In the beach level auction a percentage of the sale price is deducted towards commission which is distribute later as follows;

Matsyafed- 1 %, Society- 1%, Sale Officer (Auctioneer) - 1% and Workers (Fisher men)- 2%. The share of the workers is usually disbursed at the end of the year. This is an incentive for the member fisher men.

Conclusion

The above analysis brings into light the existing problems faced by the FDWCS generally. It was found that the fishermen join the societies with many expectations as a member. They expect the benefits under different schemes of the Central as well as the State government. The study found that for men it is easy to obtain membership in FDWCS when compared to women.

Availing subsidies, loan facilities, savings schemes, sale fish catch at reasonable prices, etc. are the benefits expected by the members of FDWCS. But all these expectations are not satisfied under the existing conditions. The societies have limitations like shortage of funds, inactive members and board of directors, etc. Mainly because of insufficient funds, the societies, generally, are not in a position to engage full time staff for rendering services to their members.



References

- Ambilikumar, V., Raju, M.S and Sebastian, Mathew (2015), Seasonal Variation in Fish Landing and its Impact on the Livelihood of the Fisher Folk of South-West Coast of India (Kerala), Report submitted to KUFOS, Panangad, pp.50-52.
- Bhatta, R. (1997), The cooperative as an institution for management of marine fishery resources: A case study from Karnataka. in: Singh, K. and V. Ballabh (Ed.), Cooperative Management of Natural Resources, New Delhi: SAGE, p.105.
- 3. Chandrashekar, B.S.(2014), Fishery Co-operative Societies in India: Problems and Prospects, *Cooperation*, Volume-3, Issue-7, July-2014, pp.92-93.
- 4. Giriappa. S, (1994), Role of Fisheries in Rural Development, Daya Publishing House, Delhi, P. 87.
- 5. Government of Kerala (1990), Kerala Fisheries: Facts and Figures, Department of Fisheries, Trivandrum, pp.218-221.
- 6. Government of India (2015), Basic Animal Husbandry & Fisheries Statistics 2015, Ministry of Agriculture & Farmers Welfare Department of Animal Husbandry, Dairying and Fisheries, Krishi Bhawan, New Delhi, p.130.
- 7. Govt. of Kerala (2013), Kerala Marine Fisheries Statistics-2013, Department of Fisheries, Thiruvananthapuram, p.11.
- 8. Govt. of Kerala, (2016), Economic Review 2016, State Planning Board, Thiruvananthapuram, pp.64-70.
- 9. (http://www.fishcopfed.in/Data Bank accessed on 17.2.2017) National Federation of Fishers Cooperatives Ltd., Govt. of India).
- 10. Jyotishi, A. and R. Parthasarathy (2007), Reservoir Fisheries Management: Experiences of Tawa in Madhya Pradesh, Economic and Political Weekly.XLII (5), pp.409-415.
- 11. Matsyafed (2011), Teerathinte Vijayasilpi, Thiruvananthapuram, p.11.
- 12. Mishra.B.K.(2008), FISHCOOPS, FISHCOPFED, New Delhi, Oct-Dec.2008, P 6.
- 13. Moorti, T.V. and S.K. Chauhan (1997), Cooperative management of reservoir fisheries: The Pong dam reservoir in Himachal Pradesh. In: Singh, K. and V. Ballabh (Eds.), Cooperative management of natural resources, Sage, New Delhi, pp. 112-123.
- 14. Nair, R.M. and K. Singh (1997), The marine fishermen's cooperative society in Kerala: An exploratory study. In: Singh, K. and V. Ballabh (Eds.), Cooperative management of natural resources, New Delhi: Sage, p.45.
- 15. Rahim, K.M.B. and K. Singh (1997), The marine fishermen's cooperative societies in West Bengal. In: Singh, K. and V. Ballabh (Eds.), Cooperative management of natural resources, Sage. New Delhi, p.87.
- 16. Singh, K. and S. DharChoudhary (1997), The Caption Bhery Fishermen's Cooperative Scoiety in West Bengal. In: Singh, K. and V. Ballabh (Eds.), Cooperative management of natural resources, Sage.New Delhi, pp.46-56.
- 17. Tyagi,et.al,(2008), Himachal Pradesh mein matsyajeevisahkarisamitiyon ke madhyam se tikaaumatsyikikavikas (in Hindi). In: Uttar Parvatiya Rajyom Ki MatsyaVividhata: SanrakshanevamPrabandhan. Published by NBFGR, Lucknow. pp. 236-244.