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Abstract:-

Marine fisheries resources, although renewable, are not infinite. It is the need of the hour to judiciously govern these resources, if its contribution to economic, nutritional and social well-being of the country's growing population is to be sustained. Over the years, with the adoption of innovative technologies in fishing operations, marine fish production witnessed tangible growth. However, in the hind sight, the marine ecosystem had been constantly subjected to vicious pressure. To conserve these fishery resources many regulations were introduced in Tamil Nadu. One of the most significant regulations was the introduction of seasonal fishing ban (trawl ban) in 2001 for a period of 45 days. The trawl ban excludes marine fishing by the mechanized boats from April 15 to May 29, placing the economic well being of those fishermen dependent on the same at stake. Though the seasonal fishing ban has positive implications on the fishery resources, it impacts heavily on the fishers who are solely reliant on fishing for their livelihood. This study aims to critically analyze the impact of trawl ban on the livelihood of fishers of Ramanathapuram, by venturing the fishers' perception regarding the same, using Garrett ranking technique. It was seen that, trawl labourers were the most affected segment of the fishermen during the fishing ban. Ranking of different constraints affecting the trawl labourers identified poverty as their major problem. Policy intervention is needed to ameliorate their suffering.

Keywords:

Trawl ban, impact, perception, constraints.

ANALYSIS OF CONSTRAINTS OF FISHERFOLK DURING TRAWL BAN IN RAMANATHAPURAM DISTRICT, TAMIL NADU

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INTRODUCTION

Marine fisheries resources, although renewable, are not infinite. It is the need of the hour to judiciously manage these resources, if its contribution to economic, nutritional and social well-being of the country's growing population is to be sustained. Over the past two decades, Indian marine fisheries have been increasingly subjected to over-exploitation by destructive fishing practices and ecosystem degradation; owing to the improvisation of fishing technology adopted. The severe consequences thus faced by most of the marine fisheries worldwide are resource unsustainability, massive economic loss, huge loss in biodiversity, habitat destruction and food insecurity. A number of international initiatives such as FAO Code of Conduct of Responsible Fisheries (CCRF), the 1995 UN Fish Stocks Agreement, the Convention on Biological Diversity (CBD), the Millennium Ecosystem Assessment and the more recently the International Plan of Action on Illegal, Unreported and Unregulated Fishing (IUU) have sought to improve the governance of marine fisheries towards sustainable levels (Kurup, 2009).

Marine fisheries of Tamil Nadu are also beset with highly grave issues affecting sustainability and livelihood security. The trawl revolution led to huge impacts both in terms of resource degradation and in creating irreconcilable differences between the trawl owners and small scale fishermen. By and large, mechanized boat owners tap maximum resource rents in comparison to other fishermen. This has largely led to human conflicts between the mechanized and non-mechanized sectors leading to the enactment of Marine Fisheries Regulation Act. Ironically, each state took inordinate amount of time to legislate the act, with Tamil Nadu being the third to incorporate Tamil Nadu Marine Fisheries Regulation Act, TNMFRA in January 1983 (Vivekanandan, V. and Kasim, H.M., 2011). TNMFRA could be earmarked as the first initiative towards achieving resource sustainability in Tamil Nadu. Following TNMFRA, the next remarkable resource conservation measure was the introduction of Trawl ban in 2001 for a period of 45 days. The trawl ban excludes marine fishing by the mechanized boats from April 15 to May 29 every year, placing the economic well being of those fishermen who are dependent on marine fishing at stake.

The total loss in employment (man days) and labour income (Rs. lakhs) during fishing ban period was estimated at 1087100 and 4131 respectively (Aswathy, 2011). It was suggested that proper employment opportunities should be created in repairs and maintenance of fishing equipments and in fish processing centres during the ban period to assure livelihood security of workers in mechanized boats. Many researches had been carried out to prove the relevance of trawl ban towards better marine fish production. Ammini (1999) has reported that there had been exceptional growth in the marine fish production of Kerala during the decade 1980-90. Comparison of the average landings during 1981-'87 and 1988-'97 indicated an increase of 69 per cent in overall landings in that state thereby proving the significance of trawl ban.

STATEMENT OF THE PROBLEM

There are several fisheries management regulations in place. The trawl ban is one of these significant measures. Though the seasonal fishing ban has positive implications on the fishery resources, it impacts heavily on the fishers' solely reliant on fishing. Nevertheless, it had created problems in employment, poverty and income distribution of fishermen during the ban period (Shyam S. Salim, 2007). As a result, the trawl ban has significant impact on the socio-economic conditions of the fisherfolk. Hence, the researcher has attempted to identify the various constraints in day to day fishing trips with special emphasis to trawl ban period. Moreover earlier studies had been carried out largely in the states of Maharashtra and Kerela with broad scope in Tamil Nadu and these researches authenticate that the fishermen are marginalized without precisely discovering the real cause of their indebtedness. This study ventures to bridge the aforesaid gap and provides an inclusive portrait of the same.

OBJECTIVES

The paper intends to reflect the opinion of trawl labourers and owners on trawl ban. The specific objectives are as follows.

1.To identify the chief constraints in fishing and during the trawl ban period.
2.To analyse the reasons for the indebtedness of the sample respondents.
3.To suggest suitable measures to overcome and ameliorate the problems of fishermen.

METHODOLOGY

The present study has employed both primary and secondary data. The primary data was collected from survey area in Ramanathapuram district of Palk Bay region. Palk Bay is the most important region of all the four zones (Coromandel, Palk Bay, Gulf of Mannar and West coast) of Tamil Nadu in terms of marine fish production and number of crafts operated. Hence the study was confined to five villages of Ramanathapuram district representing major chunk of the zone. The sampling criteria used for the study was based on the higher concentration of crafts. The sample size comprised 110 respondents from

mechanized sector. It was ensured that sample frame had equal proportion of labourers (55) and owners (55) through simple random sampling method. The respondents were interviewed with the pre-tested survey schedule. Primary data corresponding to the fishers' perception on constraints in fishing, constraints during the trawl ban period and reasons for their indebtedness were collected and the same were analyzed using Garrett Ranking technique. The order of the merit given by the respondents was changed into ranks using the following formula:

$$\text{Percent position} = \frac{100 \times (\text{Rij} - 0.50)}{\text{Nj}}$$

where Rij = Rank given for the ith item by j individual, Nj= Number of items ranked by jth individual. The percent position of each rank was converted into scores by referring tables given by Garrett and Woodsworth (1969).

DATA AND DISCUSSIONS

The contribution of Ramanathapuram district to the total fish production of Tamil Nadu is noteworthy. Overall percentage share of Ramanathapuram district to the total fish production of Tamil Nadu was arrived to be 23.07 on an average (1991-2011).

OPINION ANALYSIS OF TRAWL LABOURERS

Table 1. Trawl labourers' opinion on constraints in fishing

S.No.	Constraints	Mean % score	Garrett score	Rank
1	Declining fish catch	19.35	67	1
2	High operational expenses	32.14	59	2
3	Lack of life security	34.23	58	3
4	Lack of fixed assets for loan	36.31	57	4
5	Lack of infrastructure facilities	48.81	51	5
6	Inefficient co-op society	47.62	51	5
7	Lack of basic facilities	47.62	51	5
8	Over capacity of boats	50.00	50	6
9	Fishing organization related problems	50.00	50	6
10	Exploitation by Middlemen	71.13	39	7
11	Labour availability	75.30	37	8
12	Conflicts-intra & inter sectoral	87.50	27	9

Source: Primary data

Of the 12 constraints (Table 1), declining fish catch with the Garrett score of 67 was found to be the grave issue as the catch determines the crew share of earnings. Hence appropriate measures should be framed to curb this constraint by sustainably conserving the fishery resources. High operational expenses (Garrett score = 59) and Lack of security (Garrett score = 58) were ranked as the next serious problems in fishing. According to the boat labourers, Intra and Inter sectoral conflicts (Garrett score = 27) was the least significant issue.

Table 2. Trawl labourers' opinion on constraints during fishing ban period

S.No.	Constraints	Mean % score	Garrett score	Rank
1	Poverty	22.96	65	1
2	Lack of Govt support	32.65	59	2
3	Unemployment	38.27	56	3
4	Low wages	48.98	51	4
5	Lack of credit	61.22	44	5
6	Lack of trawl owner's support	72.45	38	6
7	Seasonal employment	73.47	37	7

Source: Primary data

The constraints during the fishing ban period (Table 2) were also documented based on the garrett score. Poverty (Garrett score = 65) was observed to be the major problem during the ban period (Table 2). Lack of Government support (Garrett score = 59) and unemployment (Garrett score = 56) were the subsequent subjects of concern. This finding concurs with Shyam S. Salim (2007) who reported unemployment as the most important problem encountered by the trawl labourers during the ban period. This was the case with Versova fishing village in Maharashtra. It was also found that the trawl labourers were also not satisfied with the ban relief amount provided by the Government of Tamil Nadu (i.e. Rs. 2000 per family) and that it should be enhanced to Rs. 9000 (@ Rs. 200 * 45 days) in order to support their livelihood. It is noteworthy to mention that the ban relief assistance given by the Government of Tamil Nadu is usually disbursed after the ban period which defeats the very purpose of providing the relief. The respondents voiced out that the ban relief amount need to be expended at the right time as their socio economic position is literally worse during the ban.

Table 3. Trawl labourers' opinion on reasons for indebtedness

S.No.	Constraints	Mean % score	Garrett score	Rank
1	Loan repayment	26.02	63	1
2	Social obligations	31.63	59	2
3	Household expenses	43.88	53	3
4	Education and Health	53.06	49	4
5	House construction	54.59	48	5
6	Festivals	60.71	45	6
7	Others (Marriage expenses)	80.10	33	7

Source: Primary data

It was also attempted to study the reasons for the trawl labourers' indebtedness. From Table 3, it was evident that the major cause of debt was loan repayment (Garrett score = 63) followed by social obligations (Garrett score = 59). Similar study has been carried out by VipinKumar, V.P., Rajani Jayakumar and Aswathy, N (2013) as an introspection of purposes of credit being utilized in the marine fisheries sector. These fishermen are hugely indebted to the commissioning agents who charge exorbitant interest rates. Due to the readiness of loan availability without any collateral, fishermen incline towards these agents for instantaneous support. They require a desperate credit support from the Government to untwine themselves from this constraint.

OPINION ANALYSIS OF TRAWL OWNERS

Table 4. Trawl owners' opinion on constraints in fishing

S.No.	Constraints	Mean % score	Garrett score	Rank
1	Declining fish catch	16.67	69	1
2	High operational expenses	22.40	65	2
3	Lack of fixed assets for loan	29.43	61	3
4	Lack of infrastructure facilities	37.50	56	4
5	Over capacity of boats	43.49	53	5
6	Lack of basic facilities	51.30	49	6
7	Lack of life security	53.90	48	7
8	Inefficient co-op society	60.16	45	8
9	Exploitation by Middlemen	65.63	42	9
10	Fishing organisation related problems	69.53	40	10
11	Conflicts-intra & inter sectoral	75.26	37	11
12	Labour availability	74.74	37	11

Source: Primary data

From Table 4, it was evident that the trawl owners' opinion varied slightly from that of boat labourers. The major constraint in fishing was ranked similar to that of boat labourers i.e. declining fish catch (Garrett score = 69). It was followed by high operational expenses (Garrett score = 65) and lack of fixed assets for loan (Garrett score = 61). From their view point, lack of adequate infrastructure (Garrett score = 56) and soaring number of boats (Garrett score = 53) were the next important constraints.

Table 5. Trawl owners' opinion on constraints during fishing ban period

S.No.	Constraints	Mean % score	Garrett score	Rank
1	Lack of Govt support	16.96	69	1
2	Poverty	31.25	60	2
3	Lack of credit	49.11	50	3
4	Seasonal employment	50.00	50	3
5	Low wages	55.80	48	4
6	Unemployment	56.70	47	5
7	Lack of trawl owner's support	90.18	24	6

Source: Primary data

Table 5 presents the opinion of trawl owners on the problems faced during the fishing ban period. The owners ranked lack of Government support to be the major constraint (Garrett score-69), followed by poverty (Garrett score = 60). As the fishermen do not have the inclination towards saving, they face a cut-throat situation during the ban period. Moreover, the respondents suggested that the Government increase the relief amount for the ban period @ Rs. 200/- per day and/ or Rs. 9,000/- for 45 days. These results agree with the findings of earlier studies carried out by CMFRI (2010). The other constraints being lack of credit and seasonal employment with the same score (Garrett score = 50).

Table 6. Trawl owners' opinion on reasons for indebtedness

S.No.	Constraints	Mean % score	Garrett score	Rank
1	Purchase of boat	10.31	75	1
2	Purchase of fishing equipments	28.75	61	2
3	Boat repair & maintenance	32.5	59	3
4	Loan repayment	34.06	58	4
5	House construction	56.25	47	5
6	Social obligations	56.88	47	5
7	Household expenses	62.81	44	6
8	Education and Health	65.00	42	7
9	Festivals	66.88	41	8
10	Others (Marriage expenses)	86.56	28	9

Source: Primary data

Table 6 depicts the trawl owners' opinion towards reasons for indebtedness. It was found that the key reason for the owners to borrow money was to purchase boat (Garrett score-75). The other reasons were purchase of fishing equipments (Garrett score = 61) and boat repairs and maintenance (Garrett score = 59). The owners were observed to spend more on fishing as fisheries is a highly dynamic industry. It was also observed that the interest percentages for these loans were too exorbitant, as they borrow it from money lenders. Earlier studies done by VipinKumar, V.P., Rajani Jayakumar and Aswathy, N (2013) reported that 48.3% of loans were used for the purchase of craft/gear and other fishing related equipments in the marine fisheries sector across the maritime states of the country.

SUGGESTIONS

1. The Government should continue to revamp the declining marine resources through sea ranching and artificial reefs.
2. The Government should arbitrate with the fishermen to augment the ban relief amount from Rs. 2000 to Rs. 9000 (@Rs 200 *45 days).
3. It is also recommended that the relief amount should be disbursed at the beginning of the trawl ban period.
4. Fisheries Co-operatives needs to be strengthened to facilitate the fishermen with loans at reasonable interest rates in order to untwine themselves from the vicious circle of money lenders.
5. Institutional arrangements through NGO's, Research institutes and Fishermen Co-operatives could be facilitated to provide alternative employment on boat repair, boat building, fish processing, etc. for these fishers during the ban period.

CONCLUSION

From the study, it was inferred that declining fish catch and high operational expenses were the major constraints in the mechanized sector – for both labourers and owners. Similarly, during the ban period, poverty was ranked as the most important issue. The ban relief paid by the Government of Tamil Nadu was not sufficient. Hence it is recommended that Government intervenes and augments the ban relief amount to a substantiate level. And that the amount is usually disbursed in June, which does not serve the purpose. Hence it should be given during the ban period to aid in its fullest utilization by the fisherfolk, particularly by the boat workers who suffer the worst during the ban period. Apparently, loan repayment has been the major reason for debt among the boat labourers. Similarly, in case of boat owners, the key reason for indebtness was the purchase of boat followed by loan repayment. This depicts a lucid picture of the coastal indebtedness in marine fisheries sector of Tamil Nadu.

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