



Assessing the social impacts of fisheries decline on fishing communities

Dr. Jainish Roy^{1*}; Dr. Ankita Nihlani²; Dr. Ritu Talwar³;
Dr. Savita Gautam⁴

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Abstract

The depletion and degradation of Common Pool Resources (CPR) has been a major concern for development theorists and policymakers in recent decades. In countries like India, where the great majority of rural poor people depend on resources like pastures, forests, groundwater, and others to sustain themselves, this is particularly true (Jodha 1990). However, two of the most crucial elements when it comes to shared resources are governance and selecting the appropriate organizations to manage them. Social scientists, particularly mainstream economists, have been debating this issue extensively. Some people think that the state is the best alternative when market systems don't work, while others think that privatization is the only solution. It should be noted that, up until the 1980s, most academics believed that the people who used these resources couldn't organize themselves to manage them, thus they suggested that the government or private sector should be imposed. These discussions frequently make the assumption that the lines between the public, private, and communal types of resource tenure are clearly established.

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1*- Assistant Professor, Department of Management, Kalinga University, Naya Raipur, Chhattisgarh, India. Email: ku.jainishroy@kalingauniversity.ac.in, ORCID: <https://orcid.org/0009-0003-7116-9137>

2- Assistant Professor, Department of Management, Kalinga University, Raipur, India. Email: ku.ankitanihlani@kalingauniversity.ac.in, ORCID: <https://orcid.org/0009-0002-7447-8544>

3- Assistant Professor, Department of PGDM Marketing, New Delhi Institute of Management, New Delhi, India. Email: ritu@ndimdelhi.org, ORCID: <https://orcid.org/0000-0002-8617-4479>

4- Professor, Department of PGDM Marketing, New Delhi Institute of Management, New Delhi, India. Email: savita.gautam@ndimdelhi.org, ORCID: <https://orcid.org/0000-0002-7427-4579>

*Corresponding author

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Introduction

The majority of fishermen in India, who depend on fishing for their livelihood, are from socioeconomically disadvantaged backgrounds. The weak are protected by cooperatives, and fishermen are one of the most vulnerable groups in India. Contributing factors include poverty, illiteracy, and ignorance of the most recent advancements in fishing technology. The absence of institutional support in terms of finances and infrastructure only serves to reinforce this vicious cycle (Baiju *et al.*, 2022). As a result, middlemen who work as traders, contractors, and moneylenders take advantage of fisherman. India has a wealth of fisheries resources that could be developed to improve the socioeconomic status of fishermen. The absence of institutional assistance, such as infrastructure and financing, prevented the fishermen from significantly improving their socioeconomic standing while having good potential in the fishing industry. Accordingly, natives appear to be the best organization for raising the socioeconomic standing of the nation's fisheries. Fishermen found that cooperatives could enhance their socioeconomic circumstances and protect them from exploitation (Tilley *et al.*, 2021). It is often known that cooperatives are crucial to the socioeconomic advancement of fishermen, one of India's most marginalized groups. In India, the fishery cooperative system was established to give fishermen financial support. In order to channel government support based on the ideas of self-help and management, cooperative organizations for fishermen are subject to a distinct set of regulations. Even though

the Indian fishing cooperative movement began in 1913, the establishment of cooperative organizations advanced slowly in the years leading up to independence (Katre *et al.*, 2024). Significant strides have been achieved in the establishment of fishing cooperative organizations, especially after the implementation of Five-Year Plans in 1950–51. In India, the number of cooperative groups at various levels has increased dramatically.

Review of Literature

In their 2017 study, "A Supply Chain Approach," Hattte *et al.* examined the effectiveness and performance of land fish markets in Maharashtra's Nanded district. They found that, among the five marketing channels, channel 2 accounts for a significant portion of the quantity handled, with a 51 percent share (Kumar *et al.*, 2013). It is evident from the data that the first channel has a marketing efficiency of 2.29, followed by channel 2, or 1.33, as the length of the channels increases. The third channel's marketing efficiency is 1.03, while the fourth and fifth channels' are 0.88 and 0.76, respectively. The market structure and other limitations that fishermen in fish markets in Nanded district, Maharashtra, confront were examined and assessed by Vinay M. *et al.* (2015). They found that the fish markets in Nanded District lacked marketing infrastructure. Enhancements to the distribution and fish marketing systems assist close the gap between supply and demand and contribute to the state's citizens' food and nutritional security. When Shyam S. *et al.* (2013) evaluated the social standing and rural livelihood security of fishermen in India, they found that the majority of

them were between the ages of 36 and 55. Regarding literacy, 32.85% of fisherman had completed primary school, 53.88% had completed secondary school, and 13.10% had completed higher education. Due to the longer distance for hospitals and the lack of specialists in health centers, they experienced issues in healthcare facilities. They also saw a dearth of efficient medications, numerous sanitary issues, inadequate infrastructure, and even a shortage of drinking water. According to a 2015 study by Budhin Gogoi et al. on fishery-based livelihood options and the management of fishery resources in Assam, India, fisheries and aquaculture both increase fish productivity and give rural farmers a living from both capture and culture fisheries. Capture fishing accounts for 36% of the state's total fish production and is essential to its socioeconomic growth and livelihood security. However, the productivity of the catch fisheries has been declining during the past few years. The social-economic circumstances of the fishing community in the Dholi region of Muzaffarpur, Bihar, India, were the subject of a study conducted by Dheeraj Kumar et al. (2018). They discovered that the Dholi village's fishing community is in poor shape. A number of issues were examined by them, including the fact that fisherman range in age from 20 to 60, that 43% of people were illiterate, and that 22.50% of fishermen had never attended school but could only sign. About 10 percent of fisherman had completed the sixth grade, while 24.25% had just completed primary school (Chatterjee and Agarwalla, 2024).

Fishing Community and Information Flow

A society's ability to exchange knowledge and information is essential to its long-term socioeconomic growth (Techera, 2021). This also applies to fishermen and fishing communities. Fish marketing and other fishing-related activities have historically involved a significant number of women. They make significant contributions to household and national food security and are involved in both commercial and artisanal fishing. Research and technology development, integrated aquaculture, marketing, and exporting are areas where women in fisheries could have more opportunities (Pradhan, Nair and Nayak, 2024). By sharing expertise and exchanging information, these opportunities must be further enhanced.

Fisheries cooperatives are businesses that help communities of fishermen by offering facilities for production, processing, storage, and marketing. As a result, the fisheries cooperative system is thought to be among the best instruments for resolving the issues facing fishermen (Bavinck *et al.*, 2005). Fisheries cooperatives offer a great deal of potential to organize the fishing industry and protect fishermen's interests. Increasing fish productivity and improving the lot of impoverished fishermen in fishing communities are only two of the many goals of fisheries cooperatives. The government has also put in place a number of social programs to help fishermen's economic development. Thus, the improvement of the fishing communities depends on the fisheries cooperatives operating effectively.

Results

The physical look of the facilities and items offered to members, such as the tools they use and the visually appealing materials related to services, is referred to in this dimension. The most important component of service delivery is thought to be tangible goods. The members are

typically affected in cognitive, emotional, psychological, and physiological ways by the tangible aspect of service. The service quality dimension of tangibles is measured by four elements, with a maximum score of 28. Table 1 displays the respondents' mean score for the tangible service quality dimension.

Table 1: Evaluation of fisheries of governance.

Parameters	Perception		Expectation		Service quality gap score
	Mean score	Mean score (%)	Mean score	Mean score (%)	
Fisher cooperative societies should have up to date equipment	2.14	30.57	6.5	93.97	-4.43
Fisher cooperative societies physical facility should be visually appealing	4.9	40.26	7.8	84.76	-4.17
employees of the fisher is corporate society well dressed and appear neat	2.3	48.93	8.3	74.89	-1.26
The appearance of the physical facility should be in keeping with the type of service provided	4.5	29.75	8.9	82.35	-3.68
Over all (N=400)	0.951	33.96	23.06	2,86	-13.55

According to Table 1, the average score for overall perception was 9.51 and the average score for overall expectation was 23.06. The difference in the score is -13.55. It suggests that, in terms of tangibles, expectations are higher than the observed level of service quality. For every metric, the respondents' gap score is negative. The criteria "Fisheries Cooperatives Societies should have up-to-date equipment" and "Fisheries Cooperatives Societies physical facilities should be visually appealing" yielded the highest service quality gap score. Additionally, the physical facilities' aesthetics should be consistent with the services they offer. The parameter 'Employees of the Fisheries Cooperatives Societies should be well clothed and appear neat' has a low gap score.

According to the total gap score, members have a negative opinion of the tangibles.

Thus, the study suggests that overall member satisfaction with fishing cooperative societies' performance is quite low in the studied area. Additionally, the study shows that almost three-fourths of respondents had a negative opinion of the overall service quality of the fishing cooperative societies, while approximately 15% and 9% of respondents had a moderate and good opinion, respectively. It suggests that the research area's fishing cooperative groups provide subpar services generally. The study also shows that member satisfaction with fishing cooperative organizations' performance is significantly correlated with service

quality. The findings suggest that member satisfaction with fisheries cooperative societies can be raised by closely monitoring service quality.

Conclusion

The foundation of the Indian fisheries sector is made up of fishermen and fish farmers. Fishermen are from a weaker segment of society and are typically less advanced in terms of their social, political, educational, and economic standing. They have made their home in the watery region and rely on fishing resources as their traditional source of income. Due to their limited financial resources and lack of technological knowledge, local fishermen pooled their resources with the assistance of the government and other social organizations to establish a cooperative-style joint concern. In conclusion, fishing cooperatives ought to guarantee the fishermen's maximum involvement in their social and economic advancement. In a growing nation like India, it ought to be seen as a potent business model. It could be a powerful instrument for reducing poverty among mass fishermen. The government should make sure that the relevant authorities are carrying out their duties in order to prioritize the development of this industry. Poverty in the nation's fishing areas makes it necessary to relax regulations governing fisheries cooperatives and offer assistance to fishermen through welfare programs. To ensure sustained growth in the fisheries cooperative sector, which is so important to the economy and impoverished people, coordination between the Indian government and state governments is required.

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