

People's Perception about Conservation of Fishery Resources Outside the Protected Water Bodies: A Case Study in Lakhimpur Khiri Distt. of U.P.

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ABSTRACT

India is blessed with rich diversity of fishery resources. However, over the years increasing human influence has led to the decline in fish diversity. Potential water areas are considered as a potential tool for conservation of fish diversity as they provide protection for fishes. It is important to know how these benefits are perceived by the local people who are dependent on these fishery resources. Ensuring local support for protected water areas is increasingly viewed as an important element of biodiversity conservation. Therefore, it is necessary to understand the perspective of the local people living around these protected water areas as this perspective would be of immense help to the planners, administrators and managers of the fishery resources. In this paper, findings of a case study of people's perception about conservation of fishery resources outside the protected water bodies conducted in Lakhimpur Khiri district. of UP are discussed. It was found that the fishermen were aware of not only the decline of fishery resources, but also its causes and a few of the remedies. However, they were too occupied with earning a bare minimum livelihood amidst the declining fish catches, to undertake any resource enhancement or conservation measure. However, they were willing to cooperate in such endeavors.

Key words: Conservation; fishery resources; Protected areas; People's perception

Fisheries sector in India has shown tremendous growth in the last five decades particularly in the inland sector. India is blessed with rich inland, as well as, marine fishery resources. India is fortunate to possess 2487 species of fishes, recorded from different ecosystems. This diversity of fish fauna is important for, not only increasing production potential in future, but also for conservation of the ecosystems. Over the years, increasing human influence has led to the decline in the vast and varied fish diversity. The protected water areas are now considered as a potential tool for conservation of fish diversity. In protected areas, fishing efforts are prohibited, providing several benefits in conservation and fisheries management (Alcola, 1988; Ayling and Ayling, 1994; Mapstone et al., 1996; Roberts, 1998; Russ and Alcola, 1996).

Despite potential contribution of the protected water areas towards conservation of fishery resources, it is necessary to understand the perspective of the concerned stakeholders living around these protected water areas, who are dependent upon these biological resources. Ensuring local support for protected water areas is increasingly viewed as an important element of biodiversity conservation. In this perspective, a study was

undertaken to study the perception of local fishing communities towards conservation of fishery resources in the Lakhimpur Khiri Distt. of U.P. with following objectives :

- (i) To document the socio-economic profile of the fishermen involved in fishing outside the protected water bodies of the Katarniaghat Wildlife Sanctuary.
- (ii) To document and analyse the perception of local fishing community towards the status of fishery resources and its conservation in relation to the protected water areas.

METHODOLOGY

The study area falls outside the Katarniaghat Wildlife Sanctuary (KWS). Two fishing sites downstream of the River Ghagra were covered in this study – Sharda Nagar and Jalim Nagar. River Ghagra is formed by the confluence of the River Gerua and River Koirala at the Katarniaghat Wildlife Sanctuary, where these water bodies are protected by the Forest & Wildlife Department. No fishing is allowed inside the protected area. River Sharda is also connected with the River Ghagra near

Sharda Nagar. A total of 141 respondents comprising of local fishermen, seasonal migratory fishermen, local fish traders and local fish/ water body contractor were interviewed with the help of a specially prepared interview scheduled. Based on the pilot visits, 5 key informants were identified. Detail informal interaction was held with these key informants for obtaining insights into the issues of concern. Besides, one awareness-cum-sensitization field programme for the fishermen was also organized by the project team in collaboration with local forest department officials. In this programme, a large number of local fishermen participated and shared their views on different aspects of fish diversity and impact of different factors including the wildlife sanctuary, upon it. This programme was utilized as a focus group. The responses of the fishermen were similar at both the locations. Therefore, the data of the two locations have been combined.

RESULTS AND DISCUSSION

Socio-economic profile of the fishermen: Majority of the respondents were middle aged, illiterate or educated up to primary levels, having kachha house (Table 1). Major occupation of majority of the people of fishing communities was fishing followed by the small trading (i.e., door to door retail selling of fishes or other household goods in nearby villages) or agriculture. The social participation and extension contact of majority of the respondents was low and average monthly income of the majority was less than Rs. 2000.

Perception of fish diversity and its conservation: Status of fishery resources: *Perception* of fishermen and local fish traders was sought about the status of fish germplasm resources over last 15 years in the Ghagra and Sharda rivers. Reasons perceived by the respondents for declining of fish biodiversity in these water bodies were also documented along with the measures suggested by the people for conservation of fish germplasm resources in the concerned water bodies.

An overwhelming majority of the respondents felt that the availability of the fishes in these rivers have decreased drastically during last 15-20 years (Table 2). They also reported that diversity of fishes caught and their average sizes have also decreased. Some of the important commercial fish species like Catla and Rohu are rarely caught now. The fishermen said that they are facing difficulties in earning and sustaining a livelihood from fishing. In fact, interactions with the key informants brought out that several families from traditional fishing community have left fishing in search of an adequate livelihood in other sectors like daily wage labourer and migration to cities for employment. The number of visiting seasonal migratory fishermen has also declined over the years due to declining fish catches. This is not a different situation from several other natural freshwater fishing habitats.

Table 1 Socio-economic profile of the fishermen

S. Profile No.	Local fishermen (N=50)	Seasonal fishermen (N=60)	Local fish traders (N=28)
1 Age			
Young (18-35)	12 (24)	15 (25)	8 (28.5)
Middle (36-55)	28 (56)	36 (60)	20 (71.5)
Old (Above 56)	10 (20)	9 (15)	0 (0)
2 Education			
Illiterate	19 (38)	21 (35)	8 (28.5)
Primary	24 (48)	33 (55)	12 (43)
Middle	7 (14)	6 (10)	6 (21.5)
Metric	0 (0)	0 (0)	2 (7)
Above Metric	0 (0)	0 (0)	0 (0)
3 Type of House			
Kachha	42 (84)	45 (75)	19 (68)
Pukka	0 (0)	02 (3)	02 (7)
Mixed	8 (16)	13 (22)	07 (25)
4 Major Occupation			
Fishing	41 (82)	37 (62)	0 (0)
Agriculture	02 (4)	18 (30)	0 (0)
Labour	07 (14)	5 (8)	6 (21.5)
Small trading	0 (0)	0 (0)	22 (78.5)
Others	0 (0)	0 (0)	0 (0)
5 Social Participation			
Low	42 (84)	51 (85)	20 (71.5)
Medium	08 (16)	9 (15)	8 (28.5)
High	0 (0)	0 (0)	0 (0)
6 Extension Contact			
Low	45 (90)	52 (87)	19 (68)
Medium	5 (10)	8 (13)	9 (32)
High	0 (0)	0 (0)	0 (0)
7 Average Monthly Income (Rs.)			
> 2000	23 (46)	36 (60)	17 (61)
2000 - 3000	12 (24)	20 (33)	09 (32)
< 3000	05 (10)	04 (7)	02 (7)

Figures in parenthesis indicate percentage

Table 2 People's perception about status of fish germ plasm resources over last 15 years in the water bodies linked with the protected water areas

Perception	Local fishermen (N=50)	Seasonal fishermen (N=60)	Local fish traders (N=28)
About availability / catch			
Increased	0 (0)	0 (0)	0 (0)
Decreased	46 (92)	48 (80)	21 (75)
No change	02 (4)	04 (7)	01 (4)
Can't say	02 (4)	08 (13)	06 (21)
About diversity and size of the fishes caught			
Increased	03 (6)	0 (0)	0 (0)
Decreased	39 (78)	46 (77)	26 (93)
No change	05 (10)	02 (3)	0 (0)
Can't say	03 (6)	12 (20)	02 (7)

Figures in parenthesis indicate percentage

Reasons for decline in fishery resources: Major causes of this decline in fishery resources perceived by the people are presented in Table 3. An overwhelming majority of the respondents expressed that situation of the rivers which results in lack of water in the rivers and loss of habitats for fishes and the lack of fishery enhancement measures by the government departments are the major reasons for decline of fishery resources in the rivers. The

respondent also reported use of small mesh sized nets by poachers and use of insecticides by the outside people. Pollution of river water caused by several man-made causes was also perceived as a reason for decline in fish diversity by half of the respondents.

Table 3 Perceived reasons for decline of fishery resources in the rivers Ghagra and Sharda

S. Reasons No.	Perceived by		
	Local fishermen (N=50)	Seasonal fishermen (N=60)	Local fish traders (N=28)
1	42 (84)	54 (90)	12 (43)
2	37 (74)	45 (75)	14 (50)
3	28 (56)	21 (35)	10 (36)
4	31 (62)	38 (63)	16 (57)

Figures in parenthesis indicate percentage

3. Measures suggested by the people for fish conservation: The people suggested a few measures, which in their view, could be taken for conservation of fishery resources in these rivers (Table 4). An overwhelming majority of the respondent opined that the government department should undertake fishery enhancement measures in these rivers. People, particularly the fishermen, were of the view that poor fishermen who are finding it hard to earn livelihood by fishing can not do much on our own for conservation of fishery resources. The fishermen emphasized that the water bodies should be regularly given on lease to the local fishing cooperative societies instead of the contractors. This would enhance their income and they will be able to care more for the sustainable utilization of the fishery resources. The people also wanted control measures to be undertaken by the government

department to stop water pollution in the rivers. People also felt the need to create awareness among the fishermen for sustainable utilization and conservation of fishery resources.

Table 4. Measures suggested by the people for conservation of fishery resources in the rivers Ghagra and Sharda

S. Reasons No.	Perceived by		
	Local fishermen (N=50)	Seasonal fishermen (N=60)	Local fish traders (N=28)z
1	38 (76)	42 (70)	14 (50)
2	22 (44)	37 (62)	11 (39)
3	41 (82)	34 (57)	04 (14)
4	29 (58)	26 (43)	08 (28)

Figures in parenthesis indicate percentage

CONCLUSIONS

It is clear from this study that the fishing community people in the selected areas are very poor. However, the opinion expressed by the fishermen indicates that they are aware of not only the decline of fishery resources, but also its causes, as well as, a few of the remedies. However, they are too occupied with earning a bare minimum livelihood amidst the declining fish catches, to undertake any resource enhancement or conservation measures. But the people expect the Government to initiate measures for enhancement and conservation of fishery resources in the rivers and they are willing to cooperate in such endeavors.

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