

# Study on Socio-Economic Status of Fisherman Community of Upper Lake Bhopal: Preliminary Survey

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**Abstract:** A preliminary socio economic survey was conducted on the fisherman community of Upper lake, Bhopal. During the study period it was found that maximum numbers of families are engaged in fishing, whereas rest are engaged in trapa culture, cultivation, Casual labour respectively.

**Keywords:** Trapa Culture, Bhopal, fishing, fisherman community, upper lake

## 1. Introduction

Bhopal, the capital of Madhya Pradesh, India, is known as the city of lakes. Among 25 water bodies in this region, the Upper Lake is one of the oldest and largest impoundments. The various lakes located throughout the city not only provide it sustenance but also comfort during the fierce summer season. Bhopal city lies in a high terrain which slopes towards north and south hillocks of different attitudes are situated along the South West and North West portion of the city. The city covers an area of 90 sq km and divided into two major areas due to presence of Upper lake and Lower lake

Fisheries have a significant impact on the overall economic scenario India. Indian fishery sector is one of the major areas. It supplements India's food production and offers job opportunities to millions of skilled and unskilled rural people, uplifting their economic levels in general and of the fisherman community in particular. Fish is the cheapest source of protein supply to the rural community where potentialities for production exist. In recent years, the development of fisheries has been considered to be an important activity because it is a powerful income and employment and generator as it stimulates the growth of a number of subsidiary industries. The present work was undertaken keeping two objectives in mind to study the fish fauna of Upper Lake and to study the Socio Economic Status of Fishing Community.

## 2. Methodology

The Upper Lake of Bhopal is a long stretch of water body having maximum length of 13 km in East to West, while the maximum width of the lake is about 4 km. The variation in depth at shallow and deeper zones varies from 0.5 meter to 9 meter with a mean depth of 6 meter. The vegetation pattern of the lake reflects that the shallow zones of the lake is covered with rooted, emergent and submerged plants in many places while the deeper zones have limited weed infestation.

The Northern part of the lake especially from Bairgarh /Sehore nalla region is still receiving untreated sewage from

Sehore nalla inlet and is subjected to higher anthropogenic activities as compared to Southern shore. Morphometric feature of the lake indicates that the lake neither has uniform depth nor vegetation pattern. Similarly, Northern and Southern Banks are also depicting dissimilarities in terms of pollution load and external influences responsible for Lake Water quality deterioration.

The particular sites of upper lake where works were performed these landing sites, Kamla park, Karbala, Van Vihar, Boat Club.

### 2.1 Socio Economic and Fish Fauna

A survey was carried out to study the fish species in the lake and the surrounding area of Wetland. This survey was conducted to study the fish fauna of Upper Lake Bhopal and to study the fisherman community dependence on the Bhoj Wetland. A detailed questionnaire was prepared.

### 2.2 Socio-Economic Status of The Fishing Community

The richness of biodiversity is associated with a particular wetland forms a way to existence to some of the mediocre communities that directly or indirectly depends on it. So, it is obvious that their dependences can only view of this insight survey of their communities was conducted between Feb. to May 2010 to get a detailed picture of this dependence

- Locality:-** Fishermen of the Upper Lake were residing in various villages and localities such as Karbala (V.I.P road), Lalghati, Bairagarh, Behtagaon.
- Population:-** The maximum population was found in Behtagaon. The maximum families of fishing communities were found there.
- Sex differentiation:-** During the study period the percentage on the basis of sex differentiation observed was more in males (60%) than females which was observed (40%).
- Age Group:-** Percentage of different age group during the study area is as follows 1-20 (years) 45%,
  - 21-30 (years) 29%,
  - 31-40 (years) 11%,
  - 41-50 (years) 6%,

- 4) Above 50(years) 9%.
- e) **Education:-** Total literacy found was about 55% and the illiteracy found about 45%. During the study period in male literacy rate was more as compared to females.
- f) **Economic condition:-**Maximum number of families have earning about 15000-25000 yearly.
- g) **Occupation:-**During the study period it was found that maximum number of families are engaged in fishing, whereas rest are engaged in trapa culture, cultivation, Casual labour respectively.
- h) **Settlement:-** During the study period it was found that few families which are about 33% have pucca house. Whereas maximum families which are about 72 % have Kaccha houses. Some have jhuggi house also.
- i) **Contribution:-** Women play a vital role in all activities of fishing which involves Fishing, Net making, Net repair, Domestic affairs, Labour, Fish marketing etc. Women spend their maximum time at homes as compared to males. Net repairing is generally done by women. In fishing women generally spread net.
- j) **Caste:-** During the study period maximum fishermen families were found belong to majhi caste whereas others include Kahar, Kewat, Keer, Raikwar etc.
- k) **Craft:-** Craft is wooden boat is locally known as donga. The length of the boat varies from 8ft-15ft. The height of the boat varies from 1ft-1.5ft. The boat (donga) is made of Sagaun (Tectona Grandis). The boat cost about 15000.Fisherman also shares their crafts with each other.
- l) **Net &Gears :-**During the study period it was found that 5 types of net and gears used by the fishermen which are as follows:
- 1) Gill net. Mesh size used by fishermen varies from 8mm to 150mm.
  - 2) Cast net. Mesh size used by fishermen varies from 1cm to 4cm.
  - 3) Hook Line. Hook number used by fishermen varies from 5 to 18no.
  - 4) Scoop net. size used by fishermen varies from 3mm.-4mm.Bar
  - 5) Trap net. Size depends upon the fish size.

### 3. Fish Fauna

Fishes are the keystone species which determine the distribution and abundance of other organisms in the ecosystem they represent and are good indicators of the water quality and health of the ecosystem. Fishes have a range of physiological tolerances that are dependent upon which species belong to. They have different lethal temperature, dissolved oxygen requirements and spawning needs that are based on their activity levels and behaviours. Because fishes are highly mobile, they are able to deal with unsuitable abiotic factors in one zone by simply moving to another. Fish exhibit enormous diversity in terms of their morphology, habitat and biology (Harmer,1998). They can be used for ecological assessment (Harris, 1995). Besides these credits, they are considered as important protein rich food source (Shukla and Upadhyya, 1995).Therefore it is the need of the hour to study fish diversity in order to conserve water bodies and increase our national economy by culturing them on scientific basis. Distribution of Ichthyofauna population in the ecosystem, their composition and seasonal variation are essential prerequisite for any successful

resources management. During the present study 20 species were recorded in Upper Lake Bhopal.

### 4. Socio Economic Status

Economically, the fishes constitute a very important group of animals. About 5.38 million people are dependent on fishing in India, of which about 3.28 million people live along the coast line with the rest on lakeside or river banks or near backwaters (2<sup>nd</sup> citizen's report, 1984-1986). Besides being used as a food it provides by-products of various kinds .such as fish liver is an important source of oil and has medicinal values which are used for the treatment of different diseases. Fishes also provide fish fertilizer fish manure and several other products. Fishes have a great nutritive value and due to this, fishes are consumed in abundance not only in India but all over.

In most part of the World, fish production is mainly from the wild. As the world population grows, fish resources are being depleted at an increasing rate as a result of environmental degradation, over harvesting and pollution, thus fish production could no longer meet the demand of the growing population. This had led an increase in the involvement of stakeholders in aquaculture. This method has also been plagued by the problems of overcrowding, poor environmental conditions and pollution which often result in reduced immunity of fish and higher susceptibility to parasites and diseases (Murray, 2005).

Fishing is prohibited during the close season which is observed in Madhya Pradesh from 15june – 15 august. At that time the fishermen find enough time for their part time job like trapaculture etc. But the fishermen sometimes disobey. The government rules and catch the juveniles of fishes. In this way endangering the fish diversity. So, it is essential to aware the fishermen about threat by adopting various activities e.g seminars, posters, mass communication, advertising, environmental education programs etc.

### References

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