



## Community Fish Sanctuaries of Jammu Region (J&K): A Step Towards Conservation

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<b>KEYWORDS</b>	

A third of all fresh water bodies are globally threatened because of extinction and there is hardly any place in this world where valuable aquatic biodiversity is out of the boundary of threat of extinction. Fish conservation as a concept is being encouraged since Ashoka's time (246 B.C), when catching of fishes was prohibited during certain periods.

India harbours greatest number of endemic fresh water fishes in Continent Asia, many of which are threatened and some are probably extinct. The destruction of fishing habitat by alteration in river system has been going on indiscriminately. Native fresh water fish fauna is declining rapidly because of habitat destruction, pollution, unsustainable fishing practices, overexploitation, biological invasion etc. Moreover, with rapid increase in population, increasing dependence on aquatic fishery resources and continuous introduction of exotic species in natural water bodies has resulted in the loss of indigenous aquatic fish diversity. Under such a scenario, conservation of fresh water fish fauna becomes a major challenge

As a result of stresses during past few decades, fish yield has been declining in different ecosystems. Some reports also indicate that if stresses are owned to continue, the population would crash in genetic bottleneck and even lead to genetic drift, reducing the genetic variance to critical level. Fishes would lose fitness to live in the attractive biological world of ours.

The urgent requirement is status survey of resources, identification of causative factors for stresses, protection from stress, judicious exploitation, endangered species management and conservation of fish genetic resources as a whole. The conservation measures envisage both in-situ and ex-situ efforts. Ex-situ conservation can be done through cryopreservation and mass awareness whereas in-situ conservation is useful when genetic diversity exists and wild life forms are present and this is done through their maintenance within Natural or man-made ecosystem in which they occur. The major advantages in in-situ conservation are : ( I ) Continued co-evolution wherein the wild the species can coevolve with other forms and (II) Natural parks and biosphere reserves may provide less expensive protection for wild relatives than ex-situ measures.

A positive light in the picture of darkness are few jewels of the community, who are not only conserving the dwindling fish fauna but the entire riverine stretch through their simple participatory measures. These are the fish conservation areas, maintained and protected by the people and are called as **fish sanctuaries**. These are maintained by riparian temple authorities and devotees. Establishment of fish sanctuaries in India has historical backgrounds as many of the temple fish sanctuaries had been established in the past. We find many sculptures and incarnations of fishes in the temples near water

bodies. In the present times, even there are many fish sanctuaries in India where the fishes are worshipped as "Meen Avtar" of lord Vishnu. Devotees offer flour balls and puffed rice to these fishes. Catching and killing of fishes in such areas is strictly prohibited and is supposed to be a crime.

In such a scenario, India has true gems of community protection, which cut across geographical boundaries, regions and castes. Because of the efforts of these people, more than 50 conserved fish sanctuaries thrive along Indian rivers, protecting its rich fresh water fish diversity as well as rivers. Out of them, near about 30 sanctuaries have been established in Western Ghats. Now-a-days, community fish sanctuaries are the only places where we can see the native fish. Most of these sanctuaries are found along some stretches of rivers, village ponds and some spring fed "bawlies".

A snapshot of few of sanctuaries in India is as follows: Shringeri fish sanctuary (Karnataka), Chippalgudde Matsya Dam (Karnataka), Shishila Matsya Teertha (Karnataka) and Mahanadi Fish Sanctuary (Andhra Pradesh), Tilasse Fish Sanctuary (Karnataka), Meghalaya Fish Sanctuary (Meghalaya) and Uttarakhand Fish Sanctuary (Uttarakhand).

J&K state has been blessed with large number of fish sanctuaries on the banks of different rivers and streams that harbour large number of endangered fish species particularly, *Tor tor*, *Tor putitora* and *Tor khudree* etc. Temple authorities and riparian communities have strong religious faith in worshipping the fishes as their gods. Devotees offer religious prayers and feed the fishes with puffed rice and flour balls. Catching and killing of the fishes is strictly prohibited in these areas. In this way, fish fauna in such areas flourish and adequate number is found in such areas, thereby, their germplasms are also conserved. Although these areas have not declared as fish sanctuaries by Government yet these can be considered as fish sanctuaries because of great religious significance.



Bawa Pahar, Udhamapur



**Ban Ganga Stream**



**Fish fauna of Ban Ganga Stream**

One of the major rivers that harbour many fish sanctuaries is River Tawi that originates from Kali Kundi glacier in south-west of Baderwah in Doda district. This river flows through districts of Jammu, Udhampur and small parts of Doda with total catchment area of 2168 sq.km in Indian boarder. There is a myth associated with this river that it was brought to Jammu city by "Raja Pehar Devta" to cure his father with the blessings of "Bawe wali Shri Mata Kali Ji". This river is considered as holy and sacred. An ancient Peer Khocave temple, dedicated to Lord Shiva, Bawe wali Mata temple (constructed in 1020 A.D), Mahamaya Temple and Shahi Mosque are on the bank of river, which give festive looks throughout the year as thousands of devotees throng there to seek blessings. Most Hindus perform Mundan ceremony of their children at "Dev sthan of Pehar Devta Ji in village Katal Batal near Nagrota. People offer food over there to fishes in the form of wheat balls and pray for their well-being and prosperity. The fish sanctuaries on the various stretches of River Tawi are near Diber Air force Station, Udhampur, behind Kol Kondali Mandir, Nagrota (Jammu). Local people call them as "Bhed Devta", who is considered as "Meen Avtar" of Lord Vishnu. small streams are also well established fish sanctuaries such as sanctuaries on Jib stream, Ban Ganga stream at the foot hills of Mata Vaishno Devi shrine, Shiv Khori Shrine in Reasi District.

**River Tawi, Udhampur**



**Jib Stream, Udhampur**



**People feeding fishes**



**Tor sps**



**Mansar Lake, Udhampur**



**Cyprinus sps**



Not only the lotic water bodies of Jammu but a large number of lentic water bodies have the presence of sites viz., Mansar and Surinsar lakes are well established fish sanctuaries since time immemorial. The eastern bank of Lake Mansar, there is a shrine to Sheshnag, two temples of "Umapati Mahadev" and "Narseema". A large number of devotees visit these temples for blessings. Surinsar commonly called as twin Lake of Mansar is also a beautiful and popular excursion destination. According to Hindu mythological legends, the origin of the lake is closely associated with the legendary warrior, "Arjun of Mahabharata". Both the lakes have abundant fauna of exotic carps there, which are fed with puffed rice and flour balls. Fish catch is strictly prohibited in these lakes.



**Shiv Khori Spring, Rajouri**



**Sculpture of Fish as God**



**Sallan Bawali, Udampur**

Springs, locally called as "Bawalis" in J&K also harbour many of the indigenous fish species and these are worshipped as gods. We find many sculptures and incarnations of fishes, carved on the stones and placed on the sides of these water bodies. Activities such as washing of clothes, use of soaps and detergents, cattle wading and fish catch are strictly prohibited

here. In this way, conservation of fish and pollution control go together.

### **Management**

Although Jammu region has been blessed with large number of water stretches where the fish catch and killing is prohibited and regulated by local communities yet they have not been declared as fish sanctuaries. We find diverse fauna and size of fishes in these areas but these need more attention and assistance from the side of Government for their proper management. Following steps should be taken for their management.

Temple trust should be financed adequately towards upgrading the area.

Provision of supplementary food to the fishes.

Suitable river crossing facility for the pilgrims, tourists, academicians, researchers etc. to visit the temple and fish congregating centre.

For the development of congregating centre, a committee with representation from Deptt. Of Fisheries, Forest, Tourism and Temple trust may be constituted.

Fish faunistic studies in relation to breeding and nursery grounds located to enrich its population by salvaging and transplanting its seed.

Cultural, religious, recreational, scenic, tourist significance should be enhanced.

The famous Ramsar sites viz., Lake Mansar and Surinsar are facing serious threats because of introduction of exotic carps. As a consequence of this overcrowding and overpopulation, restriction on fish catch have resulted in the spread of various infectious diseases. So, these water bodies are being exploited as they have to carry fish fauna beyond their sustainable limits. So, for the conservation of local fish fauna, establishment of fish sanctuaries along with their proper management is a necessary step.

Fish sanctuaries thus, play a significant role in the conservation of local fish fauna, maintain a harmony between Nature and man and preserve the cultural diversity too. Although, this is a simple step towards the conservation yet its significance can't be ignored. But in order to do mass conservation of fish fauna particularly indigenous ichthyofauna, establishment of community reserves and special fishery conservation areas should be done. Mass conservation is totally incomplete without mass awareness as knowledge is the first step towards any change. The various mass awareness programmes such as public meetings, poster campaigns, slogans, distribution of leaflets, pamphlets, orientation programmes should be enhanced. Thus, the true meaning of biodiversity will become a reality only through the active participation of the people.