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Study of Fish fauna from the Salaimendha Dam Dist. Nagpur (MS), India: For the purpose of Ecological efficiency

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Abstract

In the preliminary observation the water bodies situated in Located in Salaimendha is a small village in Hingana Taluka in Nagpur district of Maharashtra State, India. It is located 20 km towards west from district headquarters Nagpur. As per ecology point of view a lot of work has been incomplete on hydrobiology as well as the biotic fauna present in the aquatic habitats of the Nagpur district. Thus, the recent investigation on fish fauna of Salaimendha dam is proposed. The existing outcome revealed that the dam is the habitat of 13 fish species from 6 families. Cyprinidae was the most dominant family. The family Cyprinidae represents seven (7) species followed by Siluridae (2), Channidae (1), Gobiidae (1), Anabantidae (1) and Clariidae (1).

Key word : *Salaimendha Dam, Ecology, Hydrobiology and Fish fauna.*

Indian fisheries sector has grown at an excellent pace of 6-7% per year over the past 40 years, with a total fish production of 13.76 million tonnes at present. The notable increase in aquaculture productivity, particularly from the freshwater aquaculture industry, has been primarily responsible for the astounding eighteen-fold expansion in production during the previous 70 years. An economically significant and rapidly expanding production sector that makes a substantial contribution to the national economy is the Indian fishing industry. For a major portion of the nation, this industry primarily provides food, nutrition, socioeconomic development, and means of subsistence. India ranks among the top exporting countries in the world and is the second-largest producer of aquaculture. In order to manage ecosystem services, sustain livelihoods, and guarantee the long-term health and resilience of freshwater ecosystems, it is imperative that freshwater ecosystems and their biodiversity be protected[1].

The distribution and variety of

ichthyofauna offer important insights for developing and putting into practice conservation plans. In order to address challenges to biodiversity and promote its protection, attention must be directed toward the identification and administration of protected areas inside biodiversity hotspots. The great biodiversity is supported by the diverse physico-geographic topography and weather. Various viewpoints from people in various fields have led to differing interpretations of biodiversity[2].

Over the course of the study from Salaimendha dam, the fish study was conducted February 2022 to January 2023. With the assistance of local fishermen, fish were gathered throughout their fishing season using gill nets, cast nets, and drag nets, among other types of nets. In separate specimen jars based on species size, fish were transported to the lab and preserved in a 10% formalin solution. Big fish were preserved by making an incision in their belly, whereas little fish were put straight into the 10% formalin. In order to identify and confirm species, conventional keys and books[3,4].

Results from Salaimendha dam habitat of 13 fish species from 6 families. Cyprinidae was the most dominant family. The family Cyprinidae represents seven (7) species followed by Siluridae (2), Channidae (1), Gobiidae (1), Anabantidae (1) and Clariidae (1). The species names of genus, family and order along with fin formulae presented in table 1 also pie digram showing family wise distribution of fish fauna. To capture fish from the Salaimendha dam, mostly for household use, fishermen employ a variety of traditional

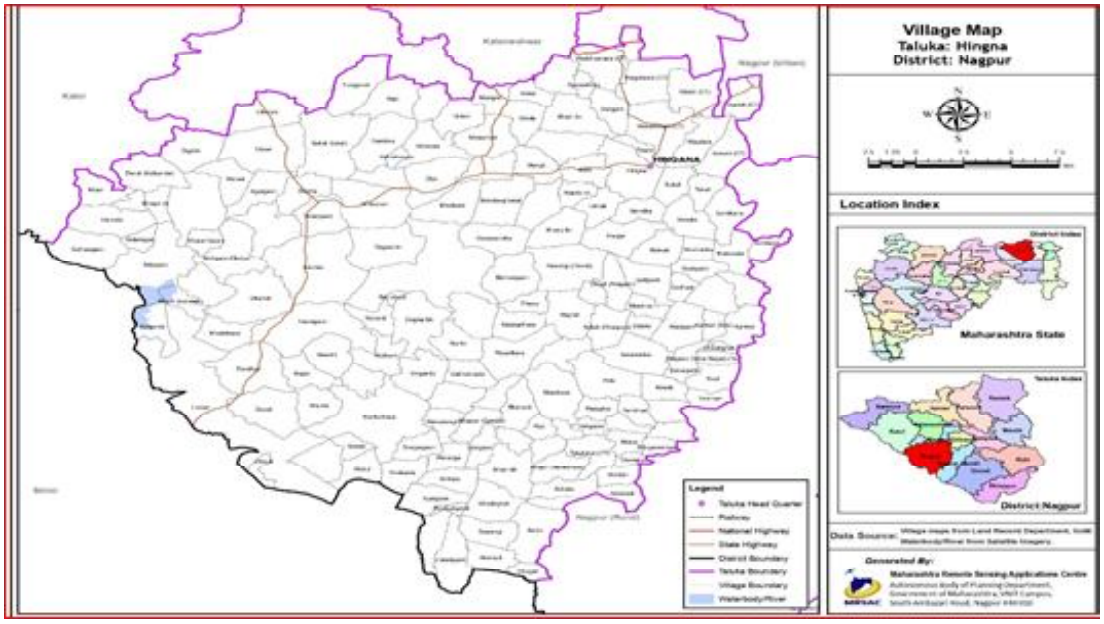

Fig. 1. Map Showing Exact location of Salaimendha dam, Tahsil Hingana, Dist. Nagpur (MS), India.

Table-1. Table showing Fish fauna of Salaimandha dam dist. Nagpur (MS), India.

Sr. no.	Genus	Common Name	Family	Order	Fin formula.
1.	***Catala catala***	Catla	Cyprinidae	Cypriniformes	D. 18; P1. 20; P2. 9; A. 8
2.	***Labeo rohita***	Rohu	Cyprinidae	Cypriniformes	D. 15-16; P1. 16-17; P2. 9; A. 7
3.	***Labeo gonius***	Khunus	Cyprinidae	Cypriniformes	D. 14; P1 15; P2. 9; A. 6
4.	***Cirrhenus mrigla***	Nain	Cyprinidae	Cypriniformes	D. 16; P1. 17; P2. 9; A. 8
5.	***Cyprinus carpio***	Common carp	Cyprinidae	Cypriniformes	D. 19; P1 17; P2. 9; A. 6
6.	***Ctenopharyngodon idella***	Grass carp	Cyprinidae	Cypriniformes	D. 10; P1 17; P2. 8; A. 16
7.	***Amblypharyngodon mola***	Molwar, Mola	Cyprinidae	Cypriniformes	D.9 (2/7); P1. 15: p2 9; A. 7(2/5)
8.	***Channa punctatus***	Girai	Channidae	Perciformes	D. 29; P1 17; P2. 5; A. 21
9.	***Glossogobius giuris***	Bulla, Ghisada	Gobiidae	Perciformes	D. 6; P1 19; P2. 5; A. 9
10.	***Anabas testudineus***	Koi	Anaban-tidae	Perciformes	D. 16; P1 15; P2. 5; A. 10
11.	***Ompak pabda***	Papta	Siluridae	Siluriformes	D. 4-5; P I 11-13; P2 6-7; A 48-54
12.	***Wallago attu***	Padhani	Siluridae	Siluriformes	D. 5; P I 13-15; P2 7-9; A 74-93
13.	***Clarias batracus***	Mangur/ Magur	Clariidae	Siluriformes	D. 56; P1 9; P2. 7; A. 26

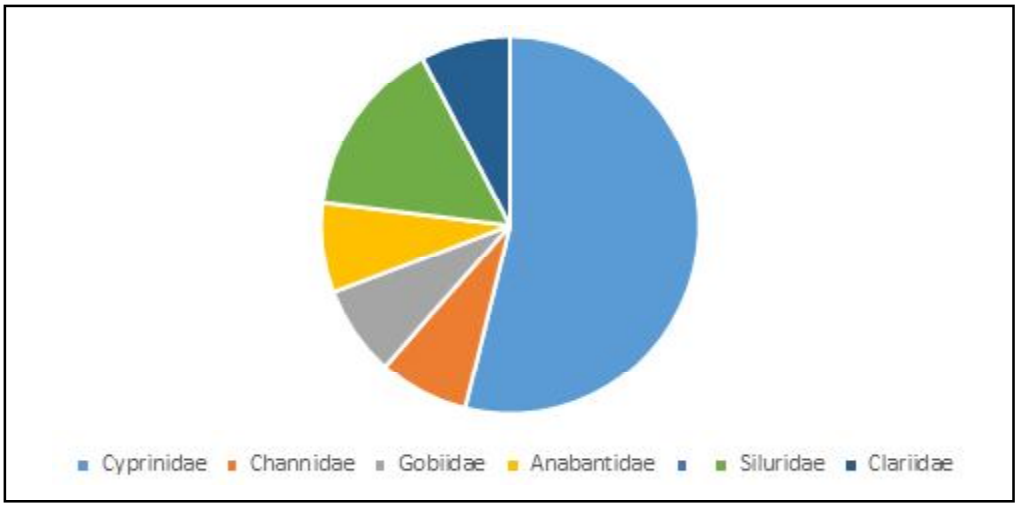

Fig. 2. Pie diagram showing the quantitative analysis of fish fauna from Salaimendha dam.

techniques. While many of these conventional approaches are also harmful, some are environmentally beneficial. Fishermen use these techniques in accordance with the fishes' habitat, behaviour, and abundance throughout the year. For commercial fishing, local fishermen employ these techniques. These techniques are mostly limited to the areas around fish markets. Nonetheless, the fish are sent to fish markets, and fishermen frequently use these techniques in isolated locations. Despite the fact that the majority of fish farms attempt to overfish, if these techniques are used sparingly, they pose no harm to the fish. Overexploitation of aquatic resources is being attempted in light of population growth and technological advancements, which will produce more fish in less time and with less labour. Numerous damaging fishing methods are introduced during this process. The destructive tactics destroy all aquatic organisms, including fishes, regardless of their life stage. These consist of using chemicals, insecticides, and explosives.

Conclusion remark on reported fish fauna, a few points were chosen, and the results are favourable. Since this survey was likely the first of its sort at the study location, more research is necessary to determine the precise variety of fish from Salaimendha Dam in Hingana Nagpur.

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