

# DISTRIBUTION AND CONSERVATION STATUS OF FISHES REPORTED FROM MUNTJIBPUR POND OF ALLAHABAD

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## **Abstract**

*The natural resources are badly exploited by humans due to scientific and technological development. So there arises the need of the conservation of the natural resources. The conservation of environmental resources refers to management of human use of biosphere so that it yields maximum sustainable benefit to the present generation while maintaining its potential to meet the requirements of the future generations. To find out the conservation status of the fishes that naturally exist in it, Muntjibpur pond was studied. From July 2014 to June 2015, the survey was performed. A total of 13 fish species belonging to 12 genera, eight families and five orders were described during the exploration. According to the latest edition of the IUCN Red List, out of 13 fish species listed, 1 species is currently under UV (vulnerable), 1 species is under NT (nearly threatened), 8 species are under LC (least concern) and 3 species are NE (not assessed). No fish species listed here fall under the category of EN (en-dangered).*

**Keywords:** Fish Species and Genera; Family; Order; Conservation Status; IUCN Red List; Muntjibpur Pond

## **I. INTRODUCTION**

Environmental resource protection refers to the management of the human use of the biosphere in order to provide the present generation with full environmental benefit while preserving its ability to meet the needs of future generations. This new definition of growth has become known as "Sustainable Development," described as "development that meets the needs of the present without compromising the ability of future generations to satisfy their own needs." The Norwegian Prime Minister, Gro Harlem Brundtland (1987), who was also the Director-General of the World Health Organization (WHO) from 1998 to 2003, provided

this concept. She chaired the UN's World Commission for Environment and Development (the Brundtland Commission), published the report 'Our Common Future,' also known as the "Brundtland Report," in 1987[1]. Influenced by the International Union for Conservation of Nature's (IUCN) 'World Conservation Plan' of 1980, the study established the concept of sustainable development as stated above. The publication of the report is seen as a landmark in raising international awareness of the value of global sustainable development and in the debate. Sustainable development has become a buzz word today and hundreds of projects have been launched on behalf of developing sustainably [2].

As a consequence of scientific and technological progress, natural resources are poorly abused by humans. Air, water and food are all contaminated and through overexploitation of natural resources, people are heading towards indiscriminate growth. If growth continues in the same way, as indicated by Meadows et al, (1972) in their world-famous academic study "doom day" humans will face a "The Limits to Growth" very soon. In fact, this is unsustainable growth that will lead to the inter-related collapse of this planet's processes. From time to time, a number of scientists such as Glowka et al, (1994), Kaushik et al, (2008), Odum (1971), Subba Rao (2001), Chris Maser (2009), Deswal et al, (2012) and Verma et al, (2012) have already detailed and defined the various aspects of the climate, biodiversity and other related issues (2016 and 2017a). Oh, Verma A.K. The (a) multiple in depth impact of unsustainable agriculture (2017b), (b) environmental ethics: the need to reconsider (2017c), (c) the need for ecological equilibrium for widespread biodiversity (2017d), (d) ecological equilibrium: the need for human survival (2018a) and (e) unsustainable agriculture, ecological ethics and biodiversity (2017a) ecological equilibrium (2018b).

Ichthyology is a branch of zoology that is generally concerned with the study of fish. Fishes are vertebrates of cold-blooded, gill-bearing aquatic craniates that include both bony and cartilaginous fishes, but also jawless fishes occasionally[2]. Fish live in the water and breathe through their gills by consuming oxygen. Since fish are cold-blooded species, the climate determines their internal body temperature. Several fish have scales and use their fins for swimming. Fish have a tail but do not have eyelids or external ears. Fish have air bladders as well, holding them afloat[3]. They belong to the phylum: the chordata; the subphylum: the vertebrata; and the superclass: the fish. The majority of India's population relies on agriculture, including fish farming. As a food source of low-fat, high-quality protein, fish is important for humans. All over the world, fish and fish products are eaten as food. It is also a good source for healthy living of omega-3 fatty acids, vitamin D, vitamin B2, calcium, phosphorus, iodine, iron, zinc, magnesium and potassium. For our climate, fish ecosystems are important because they are undoubtedly part of the natural ecosystem and food chain. Via food fisheries, recreational fisheries and commercial fisheries, fish also have tremendous ecological, cultural and economic values [6]. For staff affiliated with limnology and ichthyology, fish diversity is a strong research material. Fish are more than the number of all other species of vertebrate: mammals, amphibians, reptiles and birds [7]. The diversity of fish species is split nearly evenly between marine (oceanic) and freshwater habitats. Limnological

surveys have been carried out, as well as studies on the ecology of fish in fresh water bodies[4]. Hydrobiological studies and tentative surveys of the Muntjibpur pond fish have been carried out[5]. This study is being conducted from Jul 2014 to Jun 2015 to determine the conservation status of the fish already recorded from the Muntjibpur pond of Allahabad.

## II. DEBATABLE AREA

Muntjibpur Pond is a natural pond on the north side of Muntjibpur village (Image1). This lake (photo 1) is surrounded by farms, highways, gardens and covers over 5000 square meters. Via a minor link road, the research area is well linked by the popular GT road. It is situated in Uttar Pradesh's Pratap pur block of Phoolpur tahsil of Allahabad district and is more than 25 km away from the headquarters of Allahabad. Miraipur in the east, Fatuhan in the west, Saidpur in the north and Fulahan in the south surround this village. It is located at 25025'55.16"N latitude and 82003'13.16"E longitude. The studied pond has excellent biodiversity as it is rich in flora and fauna, including fish, planktons, etc. The existence of good bio-diversity is an index of the water body that is stable, increasing, dynamic and economically productive.

For hydrobio-logical properties and fish, Muntjibpur pond was surveyed and studied in depth once a month for a one-year duration from July 2014 to June 2015. For the present survey from Muntjibpur pond, the fishes were captured and collected by hand-nets, gill nets, cast nets, hooks, drag nets with the aid of local people and fishermen. The fish were marked using the standard keys[6]. The author has also been supported in several ways by people from local communities in nearby areas to gather and classify fish.

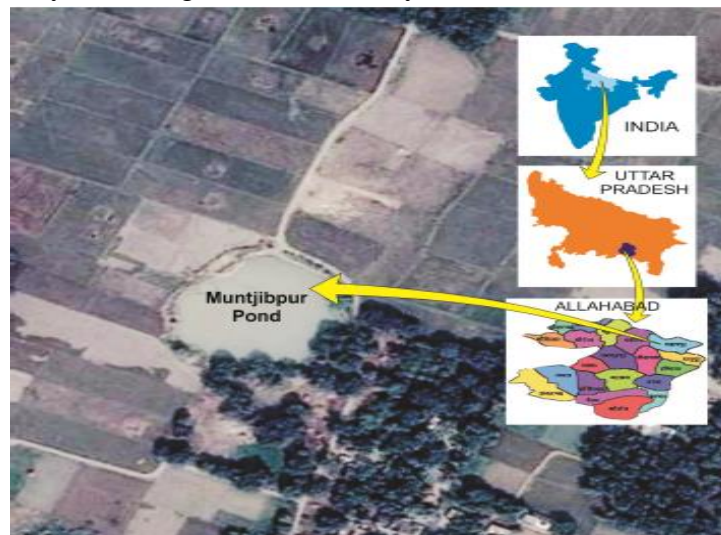


Figure 1: Debatable area



**Figure 2: Muntjibpur pond**

**Table 1: Shows the fishes and the conservation status in the Muntjibpur pond**

S.No.	Zoological name	Family	Order	Conservation status
1.	<i>Catla catla</i>	Cyprinidae	Cypriniformes	NE
2.	<i>Labeo rohita</i>	Cyprinidae	Cypriniformes	LC
3.	<i>Labeo calbasu</i>	Cyprinidae	Cypriniformes	LC
4.	<i>Cyprinus carpio</i>	Cyprinidae	Cypriniformes	VU
5.	<i>Puntius ticto</i>	Cyprinidae	Cypriniformes	LC
6.	<i>Mystus seenghala</i>	Bagridae	Siluriformes	NE
7.	<i>Rita rita</i>	Bagridae	Siluriformes	LC
8.	<i>Wallago attu</i>	Siluridae	Siluriformes	NT
9.	<i>Clarias batrachus</i>	Clariidae	Siluriformes	LC
10.	<i>Heteropneustes fossilis</i>	Saccobranhidae	Siluriformes	LC
11.	<i>Channa punctatus</i>	Ophiocephalidae	Ophiocephaliformes	NE
12.	<i>Gudusia chapra</i>	Clupeidae	Clupeiformes	LC
13.	<i>Notopterus notopterus</i>	Notopteridae	Osteoglossiformes	LC

The IUCN (International Union for Conservation of Nature) Red List categorized the species into nine categories, including EW (Extinct in the wild), CR (Critically Endangered), EN (Endangered), VU (Vulnerable), NT (Near Threatened), LC (least concern), DD (Data de Endangered), DD (Data de Endangered), on the basis of rate of decline, population size, area of geographical distribution and population degree, distribution fragmentation, etc (not evaluated)[7]. A total of 13 fish species belonging to 12 genera, eight families and five orders were described during the exploration. According to the latest edition of the IUCN Red List, of the 13 fish species listed, 1 species is currently under UV (vulnerable), 1 species is under NT (near-threat-ened), 8 species are under LC (least concern) and 3 species are NE (not evaluated). No fish species described here fall under the categories of EN, CR and EW.

### III. CONCLUSION

This Muntjibpur pond gathers and distinguishes fishes from five classes, namely Siluriformes, Cypriniformes, Ophio-cephaliformes, Osteoglossiformes and Clupeiformes. A total of 13 fish species belonging to 12 genera, eight families and five orders have been reported in the current investigation. As far as their conservation status is concerned, of the 13 fish species listed, 1 species is currently under UV (vulnerable), 1 species is under NT (nearly threatened), 8 species are under LC (least concern) and 3 species are NE (not assessed). For irrigation as well as fish culture, the water present in the said pond is useful. While there is some pollution, the water quality of this pond is suitable for agricultural purposes as well, as it is rich in organic humus, planktons and nutrients.

#### IV. REFERENCES

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