



## Sport Fishes in Northeast India

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### Abstract

An attempt is made herewith to identify a few key native and exotic fish species found in the aquatic resources of northeast India having economic importance as sport fishes. Most of these species are harvested from nature for food and are consumed locally. The human intervention due to the growing population has caused immense fishing pressure on the natural resources and henceforth resulting into drastic decline in the fish catch, species diversity along with unprecedented changes in the fish habitat. However, catching these fishes for fun and adventure through angling on the principle of 'catch and release' may offer high remuneration to the river dwellers and the local communities. It is the need of the hour to understand the importance of these fishes which determines the quality of a river or a natural resource in the northeast region of India. Altogether, three major groups and a miscellaneous group of fishes are enlisted herewith along with their distribution in relevant aquatic resources. This information is expected to help in understanding the wide availability of the sports fishes in the region and in planning to take up policies for their conservation and propagation.

**Keywords:** Angling, coldwater, Himalayas, indigenous, recreation

### Introduction

The Northeast region (NER) of India encompassing a geographical area of 2.55 lakh km<sup>2</sup> (about 8% of the country) is rich in its vast aquatic resources in the form of 33824.76 km of rivers and canals, 2762.73 ha of small reservoirs, 16352.3 ha of large reservoirs, 131341.16 ha of tanks and ponds, 33944.18 ha of beels, oxbow and derelict water bodies and 412287.64 ha of other aquatic resources other than rivers and canals (Handbook on Fisheries Statistics, 2022). All these resources harbour a divergent of fish species with food, ornamental and sports importance. Henceforth, adequate utilization of these available aquatic resources for sports and recreational fisheries is an obvious possibility for increasing employment opportunities and generating income for livelihood improvement to the people of the region. At present, the avenues in sport fisheries in the region are limited to certain pockets and a wider

preferment of sport fisheries through various campaigns is imperative. The development of sport fisheries in the region will equally help in conserving the aquatic flora and fauna by understanding their mode of propagation and sustainability.

### The sport fishes of Northeast region

Sport fishing is a process of capturing fish for pleasure or competition in natural and man-made water bodies. Sport fishing has gained much popularity after adventure tourism activities and has a booming international business opportunity. The most common form of sport fishing is done by angling with a rod, reel, line, hooks and any one of a wide range of baits (Baruah & Sarma, 2016). Sport fishing in the recent times is considered as an intrinsic part of ecotourism which involves travel to destinations where pristine fauna and cultural heritage are the primary attractions and can provide viable

income-generating options for economic development for local communities and opportunity of education and activism among travellers, making them more passionate towards nature and its resources.

### The Mahseer

The golden mahseer or the Himalayan mahseer (*Tor putitora*, Hamilton, 1822) is the most popular game fish amongst anglers in India for its superlative fighting quality and henceforth recognized as the 'Tiger in Water'. This fish is an endangered species of cyprinid family and inhabits the rapid streams, riverine pools, lakes and temple tanks in the Himalayan region



(Walker, 1888). The group of mahseer belongs to three genus (Shahi *et al.*, 2023) namely *Tor* (Gray), *Neolissochilus* (McClelland) and *Naziritor* (McClelland). However, genus *Tor* constitutes the bulk of mahseer. Efforts have been made to augment the population of mahseer in natural and manmade aquatic resources by captive breeding and seed production. A mahseer hatchery is established at Iduli fish farm (Roing) and Mokokchung (Nagaland). Another hatchery is under commission at Dolungmukh near to Subansiri Dam under the aegis of NHPC. Efforts have been made to conserve chocolate mahseer (*Neolissochilus* spp.) in fish sanctuaries (*Wari*) of Meghalaya and natural and man-made lakes of Mizoram. Similarly, fish watching decks can be witnessed at Jasingfaa aqua tourism resort (Assam) and few parts of Nagaland. Eco-camps and resorts in the vicinity provide accommodation and fishing trips to the visitors in undertaking other ancillary tourism activities such as rafting down the rivers, trekking, bird watching, camping and sight-seeing which has a positive indirect and direct consequences towards the conservation of mahseer.

### The Goonch

The group of *goonch* (in Hindi), *baghair* (in Bengali) and *baghmas* or *gorua* (in Assamese) are basically represented by two species namely *Bagarius yarrelli* (Skyles, 1839) and *B. bagarius* (Hamilton, 1822). The fishes belong to the Order Siluriformes and Family Sisoridae. The species at present is considered as vulnerable on the IUCN Red List due to their over exploitation in the natural systems. The muscular feature of the fish has been realized as 'giant devil catfish' and is considered as an ideal quest for an angler of a big catch. The home to the fish is the river

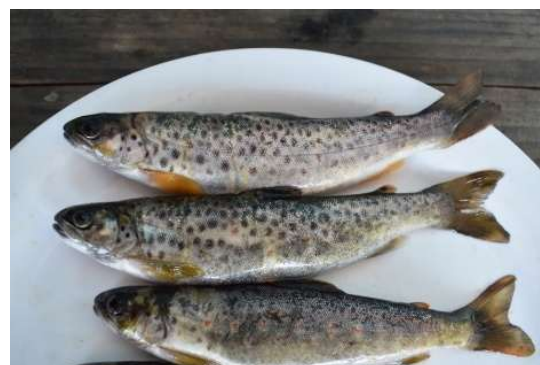


Siang and Dibang in Arunachal Pradesh. *Goonch* is less frequently observed on the baits of the anglers which may be attributed due to lack of information on their habitats, food and feeding, migration

pattern, diurnal behaviour etc in the wild.

### The Brown Trout

The river resources with the existing thermal range below 16°C, delivered with clear and oxygenated freshwater (6.0-9.5 mg/l) and surrounded by sparsely populated human habitation has the potential to sustain suitable habitats for brown trout *Salmo trutta fario* Linnaeus, 1758. This species was introduced in India from Europe by British settlers around the beginning of the last century primarily for sport



fishing or recreational angling (Baruah *et al.*, 2019). Some of the important stretches of river and their upstream harbouring the brown trout has been reported at Menchukha valley (Shi Yomi district), Tawang and Anjaw districts situated in the northern part of Arunachal Pradesh. These river stretches may further be

considered for establishing angling beats which can offer potential fishing spots for capturing the brown trout on catch and release practice. Although, the seed production of brown trout in the region is very meagre, attempts have been made at the trout hatchery of Shergaon (West Kameng district) and Nuranang (Tawang district) to produce seeds by breeding ample numbers of brown trout in the recent years.

### Other fishes

Altogether, 422 fish species, belonging to 133 genera and 38 families were reported from northeast India by Goswami *et al.*, (2012). Apart from the fish groups mentioned above, the other game fishes encountered are the cyprinids viz., *Raiamas bola* (Hamilton, 1822), *Labeo dyocheilus* (McClelland, 1839), *Bangana dero* (Hamilton, 1822), *Barilius* spp., Schizothoracines (snow trout), murrels (*Ophiocephalus* spp.), featherbacks (*Notopterus notopterus*, *Chitala chitala*) and few catfishes (*Wallago attu*, *Sperata aor*). These groups of fish are occasional catches in search of the major game fishes. Noose and line fishing is one of the most practiced indigenous fishing methods by *Monpa* community along the banks of river Dirang chu in West Kameng district of Arunachal Pradesh for catching the snow trout (Baruah *et al.*, 2021). The floodplain wetlands of Assam, locally known as *beels* are one of the prime sources of natural capture fishery.



### Conclusion

Sport fishing is fishing for pleasure or competition in natural and man-made water and is a popular leisure activity in the country. Fish based ecotourism can be a well-adapted model in northeast India as the region typically has numerous destinations to travel where pristine fauna and cultural heritage are the primary attractions and henceforth can provide viable income-generating options for economic development for local communities. Angling for mahseer, goonch, hill trout etc along with associated recreational avenues depends on healthy aquatic ecosystems. The ever-increasing

population in the country imposes a significant pressure upon these inland water ecosystems leading to indiscriminate killing of the fishes by destructive and illegal methods of fishing. However, the fish guides, resort and home stay owners are vigilant these days towards the poaching of fish in their respective beats as they are much aware on the endangered status of the game fishes. Furthermore, active and concerted efforts by the various public sector organizations have generated mass awareness at the rural front in conserving the game fishes in their natural habitats for economic benefits. Commercial catch of these important game fishes by fishermen for consumption have been stopped and fishing is practiced solely on catch and release by the anglers. Fishing for recreation in this region offers future generations in experiencing destinations relatively untouched by human intervention, thus making them more passionate towards nature and its resources.

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### Conflict of interest

The authors declare no conflict of interest.

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