

Mahseer the fantasy of recreational fisheries and Ecotourism

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Mahseer a large bodied potamodromous freshwater fish endemic to Asian rivers is flagship species of considerable economic, recreational and conservation interest. Mahseer belong to three genus namely *Tor* (Gray), *Neolissochilus* (McClelland) and *Naziritor* (McClelland). However, genus *Tor* constitutes the bulk of mahseer. Mahseer is most popular game fish amongst anglers in India and known to be the toughest fighter amongst freshwater sports fish and is undisputed king of India freshwaters. Since angling was favourite pursuit of the British, Indian mahseer attracted the attention of anglers Beevan (1877), Thomas (1873,1897), Dhu (1906,1918,1923) and Nevil (1915). The lakes of Kumaon hills were stocked by the fish by Sir H. Ramsay Suring 1858 (Walker, 1888) for sport fishing. Mahseer fishery maintains its fame among anglers in Britain. In the 1970s three Englishmen travelled overland to India in search of Mahseer, fishing the water from Kashmir to Tamil Nadu for eight months until they found mahseer in waters of South Karnataka. Kulkarni and Ogale (1979) considered mahseer the noblest sport fish of India, a great favourite of anglers, both from India and overseas.

Recreational fishing, a popular leisure activity, also called sport fishing, is fishing for pleasure or competition, in natural and man-made water bodies. Sport fishing is one of the most sought after adventure tourism activities and has a booming international business opportunity. The most common form of recreational fishing is done with a rod, reel, line, hooks and any one of a wide range of baits. The sport fishing tourism is now developing in India, accounting for 2.7 % growth in tourism sector providing 31 million jobs in India. Today foreign tourist arrival is growing at an average of 4.5 % contributing foreign exchange earnings to the tune of INR 1,35,193 crores in 2015 (Annual Report, Ministry of



Fig. 1. An angling competition at *Jasingfaa Aqua* Tourism Resort in Assam



Fig. 2. A catch of mighty golden mahseer by angling at river Ramganga, Uttarakhand



Photograph courtesy: Mr. Ashok Vashisht

Tourism, 2015). There are three common methods for capturing mahseer: fly fishing, spoon fishing and bait fishing although recent innovations are reported:

- Fly fishing:** Fly fishing or fly casting is a method where artificial fly is used to hook the fish with the help of rod-and-line.
- Spoon fishing:** Spoons, like flies, are artificial metallic shining lures used basically to fish 'heavier' waters where mahseer occurs. Spoon fishing for mahseer is generally grouped into three major types, viz. heavy fishing, medium fishing and small fishing. In heavy fishing, the anglers look for big fish (above 13.5 kg). Mahseer fishing in rivers of northern India generally is of medium type. Small fishing is the most widely used angling for Mahseer as the other two methods are arduous and even risky.
- Bait fishing:** Both natural and artificial lures are used in bait casting. The natural baits are earthworms, minnows and insects.

Today, recreational fishing is also coming up well with *Ecotourism* which is defined as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education". Since 1980s ecotourism has been considered a critical endeavor by environmentalists, so that future generations may experience destinations relatively untouched by human intervention. Ecotourism typically involves travel to destinations where pristine fauna, and cultural heritage are the primary attractions which can provide viable income-generating options for economic development for local communities. Moreover, ecotourism provides opportunity of education and activism among travelers, making them more passionate towards nature and its resources.

Mahseer Watching : A Concept of ICAR-DCFR

Fish may be beneficial to human health not just by eating them, but also by way of watching them. Fish watching has multiple positive physiological benefits

like greater drops in blood pressure, stable better moods and relaxation etc as per reports from several researchers. Many of the upland lakes, religious and protected tanks, river streams and pools are examples of fish watching spots which not only attracts tourists but also indirectly facilitates *in-situ* conservation of the some of the endangered fishes like the mahseer. Such kinds of fish watching spots are served in many tourist places of the country. Upland lakes such as Nainital, Bhimtal, Sattal, Naukuchiatal, Khurpatal, Shyamtal, Deoriatal, Hemkund, Roopkund, Kagbhushandital, Kedartal, Sahastratal in Uttarakhand, situated at an altitude ranging from 1200 to 5050 m are some of the best spots where one can find fish to watch. Mahseer (*T. putitora*) can be best watched in the Kumaon lakes viz., Nainital, Bhimtal, Naukuchiatal and Sattal and tanks such as Nal Damayanti (Fig. 3 & 4). Similarly, the Tawang and Upper Siang districts of Arunachal Pradesh are recorded with numerous numbers of lakes which can give a multidimensional importance as angling, scenic beauty, bird watching and hill trekking etc. More number of lakes and tanks with an eco-tourism importance in Northeast region are Mehao lake (1640 m asl) and Sally lake (435 m asl) in Lower Dibang Valley district, Lake Mechuka (1829 m) in West Siang and Lake Geker Sinyi/Ganga Lake (750 m asl) in Papumpare district of Arunachal Pradesh, Ward's lake (1496 m asl) at Shillong, Dighali pukhuri (56 m asl) at Guwahati, Cole park and Padum pukhuri at (48 m asl) at Tezpur, Joysagar and Gaurisagar tanks (95 m asl) at Sibsagar, Jarain pitcher plant lake and Thadlaskein Lake near Jowai (1380 m asl). Many such lakes and tanks are scattered and may be located near the roadside and others at some trekking distance. These types of water bodies offer excellent sites for development of sport fisheries and fish watching spots together with other recreational facilities like boating, children's park, food court etc.

Mahseer eco-park concept is a new dimension to the eco-tourism where nature lovers can get to see world famous game fish in a particular place similar to the concept of bird watching, tiger watching etc. ICAR-DCFR has been promoting the concept of mahseer watching and developed several eco-park (Fig. 5 & 6) and sanctuaries in Uttarakhand (Sariyatal;



Fig. 3 & 4: A fish watching spot at Nal Damayanti tank near Bhimtal



Fig. 5: Inauguration of eco-park at Sariyatal in Uttarakhand



Fig. 6: Mahseer seed ranching at Mehao lake for promotion of eco-tourism



Fig. 7: Rods for mahseer angling

Photograph courtesy: Mr. Naushad Ali



Fig. 8: Fishing equipments used by anglers (Arunachal Pradesh anglers' report)

Photograph courtesy:
Mr. Dorjee Sona



Fig. 9: Fishing gears used by anglers (Assam anglers' report)

Photograph courtesy:
Mr. Naushad Ali

Lake view Resort, Kherna), in Meghalaya (Nongmahir), Arunachal Pradesh (Mehao lake) etc.

The anglers' Gears and Equipments

Angling or sport fishing is catching fish with the use of an angle or a hook. The hook is usually attached to a fishing line, which is tied to a fishing reel and the fishing rod. The method of catch is by luring the fish with a bait on the. Baits can be of naturally alive or dead animals like worms, insects, earthworms and maggots or artificial substances simulating real bait. There are three types of angling – spinning, fly fishing and bait fishing. Mahseers take on lures and thus angling mahseer is something which requires patience as one has to sit on the bank, cast bait and wait and wait. It requires casting and retrieving the lure hundreds of time, most of the times in hot sun. The angler prepares himself for angling with a typical

setup of a spinning rod (Fig. 7) a fixed spool reel (Fig. 8), about 10-20 lbs (breaking strength), monofilament (Fig. 9) and finally a lure at the end. During operation, the angler needs to open the "bail arm" of the reel, cast far, turns the handle and the bail arm closes and starts retrieving again. Lures are chosen according to the water and the fish you target. Lure fishing covers with (a) Spoons (b) Spinners and (c) Plugs of all kind.

Conclusion

Although there is tremendous potentiality of angling tourism in many sites in different parts of hill states, yet it has to develop to the expected level. There is an urgent need to identify the sport fishery areas in different states, policy formulation for sport fishing including development of platform for promotion.

Entrepreneurship development for promotion of fish based eco-tourism with supportive and ancillary service development which is a far cry. National and international publicity, awareness and marketing strategies for promoting angling tourism are important sectors that need immediate attention for its development. The type of ecotourism developed in the country based on mahseer angling and mahseer watch has both, as outlined, positive indirect and

direct consequences towards the conservation. It is now acclaimed by some angling societies and trusts that the population of mahseer on account of angling and recreation has not fallen below the critical level, sustaining support to recreational fisheries, ecotourism and mahseer conservation appears a viable approach through development of suitable policies and guidelines.

*“There is enough
on earth for
everybody’s need
but not for
everybody’s greed”.*

-Mahatma Gandhi