

Saving the mighty mahseer

INDIA'S GAME FISH, MAHSEER, CAN BE RESTORED IN NATURE TO THE DELIGHT OF ANGLERS AND SCIENTISTS, FEELS ANIL SARDANA

Come autumn, anglers from across the country come together to journey to various fishing camps to try and pit their wits against India's mighty fish, the mahseer. Mahseer is a well-known game fish and an angler's delight. However, this magnificent fish, also known as the tiger of Indian rivers, is on the verge of extinction. There are various reasons for this - loss of habitat, declining quality of habitat due to human and industrial pollution, loss of breeding grounds, and impact of river valley developmental projects.

Since 1975, considerable knowledge has been gained on breeding season, methods of artificial reproduction, hatchery management, rearing of fry, fingerlings and broodstock and, most importantly, the success of hypophysation (induced breeding) of pond-raised stocks. Research has helped in understanding the breeding season of all Mahseer species, which is between July and October. This has shown the adaptability of the species to different environments. Most Mahseer species are known to have very similar habits and behaviour patterns. Natural spawning grounds in the reservoirs were discovered and their peculiarities were described. Interestingly, adopting the standardised practices, there is a broad scope of setting up Mahseer hatcheries



in the rural areas adjacent to rivers and reservoirs.

While considering large scale propagation of the Mahseer, it is important to understand the natural spawning behaviour and the inherent constraints in its early life cycle. In nature, the spawners try to reach their favoured spawning grounds, which may be in the vicinity or far away, traversing smoothly or ascending the overflowing monsoon streams. The actual spawning area needs to be comparatively calm, having well-oxygenated water and a bed of sand or gravel. The journey to these grounds may be safe or fraught with risks and dangers, but their inner instinct drives the spawners to meet the challenges in order to breed.

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Over the last four decades, Tata Power has developed the best practices for conserving the species. This has led to the development of techniques of breeding, larval rearing and cultural practices at the hatchery farm in Lonavla, which is now capable of producing fry and fingerlings of all the desired species of Mahseer. At Lonavla, after the hatchlings are grown into fry and fingerlings in nursery and rearing ponds, the grown-up fingerlings are released into the lakes. These fry and fingerlings have also been supplied gratis for some years to different State governments and Angling Associations in the country every time there was an opportunity to rehabilitate the fish.

Several systems of hatching fish eggs

are being followed in different parts of the country, but the one developed at Lonavla is the simplest. It involves cement cisterns, wooden floating trays and perforated pipes. The pipes are punctured at regular intervals to provide oxygenated water directly into the trays and on the eggs. In order to facilitate the distribution of Mahseer seed to distant places by air, moist cotton is successfully used. Fertilised eggs are allowed to harden for 24 hours, then placed on moist cotton in two layers in perforated plastic boxes and later packed in suitable tins. As the minimum hatching period is 60 hours, sufficient time is available for transport even over longer distances. The eggs can then be hatched in the normal manner and the resultant fry and fingerlings can be placed in lakes and reservoirs.

In case of reservoirs, there is a need for fish farms to be constructed in close proximity of every dam. A few tanks and ponds should be reserved in each farm for Mahseer, to be bred by collecting ripe spawners from the streams joining the reservoir and stripping them for artificial fertilisation of eggs or using pituitary hormones. Hatchlings should be grown to the fingerling size and then released into reservoirs and downstream rivers.

Efforts must be made to breed Mahseer species on a large scale. Introduction of Mahseer in aquaculture will be excellent for increasing the spectrum of fish species under culture. Thus, if the suggested remedial measures are implemented in stages, the mighty Mahseer of India can be restored to its glory much to the delight of anglers and scientists in the country.

The writer is MD and CEO, Tata Power