

Conservation project helps revive Mahseer in rivers

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Pune: A four-decade-old conservation project has enabled the return of Mahseer in Indrayani river. Experts say the endemic fish, which can only be found in clean waters, was not spotted in the river since the 1970s. However, after a successful project was initiated in 2010, the fish has been spotted again in its waters.

The Indrayani river conservation project is one among several projects, started by the state fisheries department and Tata Power in 1971, included setting up a Mahseer hatchery at Walwan, Lonavla. Till date, the hatchery has supplied 13.5 lakh fish to various states and has the capacity to hatch over five lakh eggs at a time. Over the last 40 years, more than 1.3 crore fertilised eggs have been obtained from the facility and over 7 million Mahseer fingerlings have been produced.

In 1970, C V Kulkarni, the director of fisheries in Maharashtra, collaborated with Tata Power employees S Moolgaonkar and S P Manaktala to start the conservation project. The first batch of 14,000 eggs was brought to the hatchery to be artificially fertilised. Today, the same hatchery breeds nearly 2.5 to 3 lakh fish every year.

HOW THE HATCHERY WORKS

- The Lonavla hatchery has evolved the flow-through method, which involves keeping the eggs in flowing water to simulate conditions of the wild
- Eggs are obtained from an adult female, aged three years and above
- Eight trays are floated in a rectangular cement tank. Each tray can accommodate 30,000 eggs
- The tank has a direct water sprinkling system that ensures the water is kept oxygenated,

which is necessary to bring the eggs to maturity

- Healthy eggs remain transparent while foul eggs turn opaque. The eggs are checked daily and foul eggs are individually removed using a dropper
- Eggs hatch into 1-5 cm long fries in three to four days
- Consignments that are released include fish aged between three to nine months. The remaining fish are released into the six lakes near the hatchery



“ Lonavla's weather conditions are ideal for breeding Mahseer. It needs a temperature between 24 and 30 degrees celsius to breed. Moreover, the water quality here is good. In the wild, it only breeds between July and August. Here, we are able to breed it in March as well

— Vivek Vishwasrao | CHIEF OF BIODIVERSITY, TATA POWER

"Each year, we supply between 25,000 and 50,000 fish to various states, including Karnataka, Jammu & Kashmir, Himachal Pradesh and Manipur," said Vivek Vishwasrao, chief of biodiversity, Tata Power. So far, the fish has been sent to 12 states.

The massive decline in numbers first came to the conservationists' notice in the 1970s. "The construction of dams in the river valleys had a lot to do with its decline. Mahseer breeds by migrating upstream. Structures, such as dams, began to block this process. There were also instances where the fish were killed in large numbers by detonating dynamite underwater for commercial fishing," said Shashank N Ogale, a senior fishery scientist, who spearheaded the Tata Power's Mahseer project.

Mahseer is a popular game fish across the world. The Walwan centre had once received a request for a batch of the fish from Laos. In addition, its use as a table fish lends it higher economic importance, said Vishwasrao. "The river is found to be

REINTRODUCED IN MELGHAT TIGER RESERVE

Earlier this year, 10,000 Mahseer were released into the Hira Bumbai river, which flows through the Melghat Tiger Reserve. The fish was fairly abundant in the river. "Once, the fish was found in large numbers in the Tapi river, but now it has disappeared. We wanted to introduce it there but we thought that it will not be able to survive the dry season when the water levels drop. So we chose the Hira Bumbai, which runs through a protected area," said Shashank N Ogale, project consultant, Maharashtra State Biodiversity Board

very clean at spots where the fish is found because it requires high levels of dissolved oxygen in the water. It cannot survive in muddy waters," he added.

In India, six species of Mahseer are found, apart from three sub-species, said Ogale. The Walwan centre breeds two species—the Deccan Mahseer, found in Maharashtra and nearby areas, and the Golden Mahseer, seen in the northern and north-eastern parts of the country.

"In its natural habitat, the survival rate of the fish is about 30%. But, here at the hatchery, we are able to provide optimal conditions for the eggs and achieve a survival rate of 60-65%," Vishwasrao said.

The fish breeds in clean shal-

low waters in rocky areas in the monsoon. The eggs stick to the rocky surfaces. However, the fish do not tend to the eggs once they've been laid and immediately return to deeper waters, he added.

On the other hand, the invasive species Tilapia, which competes with Mahseer for food, breeds more frequently. Moreover, the adult fish protect its young from predators. This has a direct impact on Mahseer numbers, Vishwasrao added.

Act of Mahseer, a public awareness campaign, was launched in May so as to preserve the fish. Over time, around 300 fishery scientists have also been trained to continue conservation efforts.