Mekong Giant Catfish

(Pangasianodon gigas)

IUCN Red List: Critically Endangered

CITES Appendix I

Introduction

The Mekong giant catfish is listed by The Guinness Book of World Records as the Earth's largest freshwater fish. Reaching a maximum size of three meters in length and 300 kg, the species is unique to the Mekong River where it migrates huge distances to spawn.

A century ago, Mekong giant catfish were found in relative abundance throughout their range, in the Mekong and major tributaries from Vietnam to southern China. Since then populations of this species, and other giant fish in the same system, have plummeted. Scientists estimate that the total number of Mekong giant catfish has decreased about 90 percent in just the past two decades.

Despite its imposing size, the Mekong giant catfish is of little threat as it is almost entirely vegetarian, living on a diet of algae and other tiny plant life growing on the riverbed. It is distinguished from other large catfish in the Mekong most obviously by its lack of teeth, its very low-set eye position, and the almost complete absence of "whiskers".

The species is now also bred in captivity from a small number of wild fish caught in Thailand over the past 10 years. Sadly current indications are that these captive-bred animals do not survive well or reproduce if released to the wild.

Distribution

Found in the mainstream of the Lower Mekong in Burma, Laos, Thailand, Cambodia and Vietnam. Although it apparently used to be relatively common in various areas along the Lao-Thai border, such as around Nong Khai, the giant catfish is now extremely rare along most of this stretch, and has not been caught at all for many years in other areas.

Habitat and Feeding

Living in the mid-water to bottom levels in the Mekong mainstream and large tributaries, the Mekong giant catfish feeds predominantly on vegetation. The food of the fish consists largely, perhaps exclusively, of algae cropped from stones on the bottom and sides of the river. Stones up to the size of a clenched fist have been found in its stomach, suggesting that they have been inadvertently swallowed in efforts to remove the algae. The young feed mainly on tiny animal plankton for the first few months, but can also be cannibalistic.

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Fisheries

Caught with seines, gillnets and stationary bagnets, it is a highly desirable food fish in parts of the basin. Until recently, large individuals of the species were caught in significant numbers in Thailand, particularly at Chiang Kong in the vicinity of reported spawning grounds. Although a few animals have been caught in the last two seasons, the numbers have dropped off dramatically with no individuals captured there in the preceding three years. In Cambodia, small numbers are still caught in the stationary bagnet (or dai) fisheries every year.

The fish is marketed fresh. In Cambodia, where it is caught prior (presumably) to its upstream migration, the flesh is very fatty and it is not highly regarded; further upstream at Luang Prabang in Laos the flesh is reportedly much less fatty and is in good repute as food, thus bringing a high price at the market. In Cambodia the fish was sold for about one dollar per kg, while it fetches a price around ten times higher in Thailand.

The species is now also bred in captivity. This was originally individuals raised from wild brood stock and widely introduced through Thailand, although now offspring of artificially reproduced parents can be produced (first obtained in 2001 by the Thai Department of Fisheries).

Conservation Issues and Solutions

Threats to the Mekong giant catfish, and several other giant migratory fish species in the Mekong, include infrastructure developments such as dams that block migration routes and isolate some populations. Without the ability to move up and down rivers, the fish have fewer opportunities to breed and less chance to interact with other individuals, which cuts down overall numbers and overall genetic diversity. Navigation projects have also destroyed critical spawning grounds and over-fishing has led to depleted fish stocks and conflict between resource users, highlighting the need for more effective management strategies.

Efforts to save this species from extinction will hinge on many factors-including how well biologists understand the ecology and particularly the migratory behaviour of these animals. So little is know about the species in the wild that gathering this information is essential to developing sound and effective management plans.

In addition to the pressing need to better understand this species, immediate conservation measures are urgently needed to save the species from extinction before we can build up this knowledge. The relevant government departments in the Mekong basin are already working towards this. A monitoring and reporting network established with the dai fisheries in Cambodia to report, tag and release individuals that are caught in the nets as quickly as possible. The Thai Department of Fisheries is also working on tagging and releasing fish captured from the wild while also continuing research in its captive breeding programme.

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