



# ONE RIVER, ONE FISHERY, TWO COUNTRIES

## Transboundary Conservation of the Critically Endangered Mekong Giant Catfish



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# The Mekong Giant Catfish and People

## The Mekong Giant Catfish

The Mekong Giant Catfish *Pangasianodon gigas* is one of the most culturally significant and fabled fish of Southeast Asia. Weighing in at 300 kg and measuring up to 3 m length, it is one of the largest freshwater fish in the world, and among the most endangered. Only several hundred – or less – of these huge fish are thought to remain in the murky waters of the Mekong River. It is ranked as “Critically Endangered” under the Red List of IUCN (International Union for Conservation of Nature), the highest form of threat ranking before a species becomes extinct in the wild. Reflecting its threatened status, it is also listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which bans all international trade in the species except with very strict controls.



Mekong Giant Catfish *Pangasianodon gigas* Bang Sai Aquarium, Bangkok, Thailand.

The Mekong Giant Catfish is found only in the Mekong River of the Mekong Basin, which flows over 4,800 km from its icy headwaters on the Tibetan plateau to the South China Sea off Vietnam. A century ago, this species may have occurred widely over 3,000 km or more along the Mekong River, from southern China through Myanmar, Lao PDR, Thailand and Cambodia to Vietnam. Today, it is no longer recorded from China and Vietnam, and the current distribution of the species appears to have shrunk by over 1,000 km, remaining only in the mainstream in Cambodia, Lao PDR and Thailand. Its decline has been due to a combination of factors, including over-fishing and destruction of critical spawning sites from blasting and dredging.

Like many fish species of the Mekong Basin, the Mekong Giant Catfish undertakes long distance migrations spanning hundreds, perhaps thousands, of kilometres as part of its life cycle requirements for feeding and spawning. This makes it especially vulnerable to developments along the river which are destroying or reducing the quality of its habitats. In the future, new and possibly severe impacts to the species could occur if large infrastructure projects are constructed along the Mekong mainstream that would disrupt the migration routes of giant catfish and possibly block their migration to and from feeding and spawning sites.

Despite its size, the Mekong Giant Catfish is the friendly giant of the basin. It has no teeth and lives on a diet of algae and detritus sucked from the riverbed. Most aspects of its ecology are poorly known and more data is urgently needed to help conserve the species, including locations of spawning sites and breeding habitat requirements – a wide field of exciting research opportunities exists for national and international researchers alike.



Mekong Giant Catfish *Pangasianodon gigas*, Thailand.

# The Challenge and Proposed Solution

## The Fishery

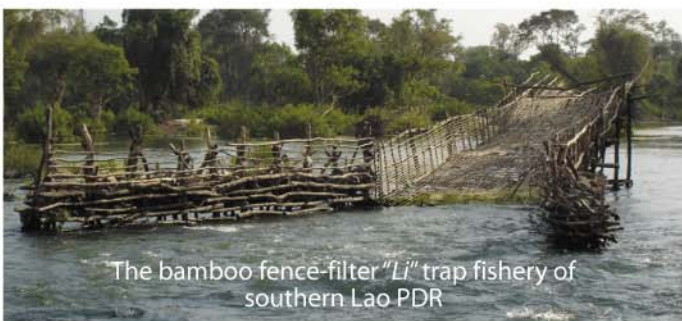
From April-May each year, Mekong Giant Catfish are seen in a small section of the Mekong in northern Thailand and Lao PDR, and it has long been thought they migrate here from Cambodia to breed and spawn. Some communities along the riverbanks in Chiang Rai (Thailand) and Bokeo (Lao PDR) provinces have captured Mekong Giant Catfish for many years, and the Chiang Khong Fisherman's Association also attempts to catch the species each year.

Mekong Giant Catfish are captured with special nets with very large mesh. Catching one of these giants brings cultural status and a high cash benefit: the annual catch is celebrated by thousands of visitors, and local restaurants may pay up to USD16(=500 Baht)/kg for giant catfish meat – a specimen weighing 250 kg will bring in over USD4,000! Despite this, very few Mekong Giant Catfish are now caught due to their low numbers, and catches have declined steeply since the species was first studied in the 1930's.



A fisherman preparing his gillnet "Nam" to capture the Mekong Giant Catfish.

In southern Lao PDR and Cambodia, there is no targeted fishing or trade of Mekong Giant Catfish. However, they are regularly caught as by-catch in the huge stationary trawl "Dai" fisheries of Cambodia, and in 2007 it was confirmed that Mekong Giant Catfish are also caught in the bamboo fence-filter "Li" trap fishery of southern Lao PDR. In this area the local communities do not eat giant catfish, and many people consider it a sacred fish that deserves protection. Some fishermen in southern Lao PDR refer to the species as a "spirit fish" or "Pa Khamkhoun" and believe it will bestow luck to them if they protect and release the fish.



The bamboo fence-filter "Li" trap fishery of southern Lao PDR

## The Challenge

**To prevent the extinction of the last populations of Mekong Giant Catfish** in the Mekong River. National agencies in Cambodia, Thailand and Lao PDR have been involved in conserving the Mekong Giant Catfish for many years. In Cambodia, efforts have focused on releasing fish from the "Dai" fisheries. In northern Lao PDR and Thailand, the challenge is to establish a transboundary policy for the shared section of river between Bokeo (Lao PDR) and Chiang Rai (Thailand) provinces, in order to protect spawning sites of the Mekong Giant Catfish, agree on harvest quotas, and for common management of aquatic resources.

## The Proposed Solution

*One River, One Fishery, Two Countries.* In 2007, the Lao Department of Livestock and Fisheries, Thai Department of Fisheries, and WWF began a four-year project to save the Mekong Giant Catfish in northern Lao PDR and Thailand. The project is building transboundary links to maintain the river's aquatic habitats for the benefit of the Mekong Giant Catfish, other migratory fish, and local communities. In the future, it is hoped the project will expand to other important sites for Mekong Giant Catfish conservation, including southern Lao PDR and Cambodia. The project is funded by the Aage V. Jensen Charity Foundation, Denmark.

## Major Threats

- Over-harvesting and unregulated fishing effort for Giant Catfish
- By-catch in the stationary trawl "Dai" fishery in Cambodia and "Li" trap fishery in Lao PDR
- Impacts to migration pathways from alteration of the natural hydrological cycle due to dam construction on the Mekong River and its tributaries
- Loss of spawning habitat through dredging and blasting of rapids for infrastructure projects like ports and bridges

# Project Activities and Contacts

## Project Activities

A range of actions are being undertaken to prevent the extinction of the Mekong Giant Catfish in the Mekong River, including:

- Documenting traditional knowledge of Mekong Giant Catfish spawning, migration and other aspects of ecology
- Technical surveys to locate Mekong Giant Catfish spawning sites
- Community workshops and training to improve management of sites and habitats in the river which are used by Mekong Giant Catfish, and to strengthen fishery management and food security in these areas
- Transboundary meetings with key Thai and Lao government agencies to facilitate agreements on common approaches to Giant Catfish conservation, especially harvest limits
- Raising national and international awareness of the Mekong Giant Catfish and ensuring that key threats to catfish ecology and habitats are addressed by national agencies, especially the impacts of new dams, river navigation, gravel extraction and other infrastructure development



The Lower Mekong Basin and the project site



## Migration and spawning habitats of the Mekong Giant Catfish in the Mekong River between Bokeo, Lao PDR and Chiang Rai, Thailand.

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- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption



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