

Many of the world's most spectacular freshwater fishes are threatened with global extinction by a series of proposed Mekong mainstream dams.

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Ever heard of the Dodo? Great auk? Passenger pigeon? Moa? Ivory-billed woodpecker?

Most people know about some of the iconic birds which have been driven to extinction over the past few hundred years. We regret their passing. The world's conservation movement is pretty much clued up regarding the status of other threatened birds, and of iconic mammals on the brink, including whales, tigers, rhino and aye-aye. Most people are concerned. But until now, threats to the world's freshwater fishes have attracted less attention.

Not even dedicated anglers seem to know very much about some of the most threatened freshwater fish in the world. We don't care? The Mekong River supports many spectacular freshwater fish species, some of which are found nowhere else in the world. Four of the world's ten heaviest freshwater fish, all larger than any bird or tiger, live in the Mekong River and are now threatened by a dam building programme. These fishes have just been highlighted in a report published by WWF.

[http://wwf.panda.org/what we do/where we work/greatermekong/news/?194313](http://wwf.panda.org/what_we_do/where_we_work/greatermekong/news/?194313)

In the 1990s I was fortunate to spend a year and a half living in a fishing village by the Mekong River in southern Laos PDR. Working with local fishermen, I helped to collect data describing many of the 200+ species of freshwater fish found in nearby waters. A high proportion of these fish were migratory, moving upstream or downstream through the area at different times of year. As water levels fell during the dry season (December – April), many cyprinids and other 'white fish' arrived in the area from the shrinking Tonle Sap in Cambodia. As water levels rose during the rainy season catfishes ranging from small sardine sized species to the mighty Giant Mekong catfish migrated upstream.

Wild fish are of vital importance to the people of Lao PDR. They are food, natural heritage, cultural heritage, an important part of what it means to be Lao. Google for papers by Ian Baird, Zeb Hogan and others to find out more.

Here are ten pictures which explain why I am concerned:

1. Photographing fish with Tyson Roberts, by the Xe Pian, 1995. I was introduced to the Mekong River as part of a fish survey team led by Dr Tyson Roberts exploring rivers in Southern Lao PDR. Many of the rivers we visited were earmarked for hydropower dam construction; some of the dams have since been built. Shortly before this picture was taken, we 'discovered' *Botia splendida* (Roberts, 1995) new species, a very attractive yellow-tailed loach. This fish has subsequently generated interest from aquarium enthusiasts. (see: <http://www.loaches.com/species-index/yasuhikotakia-splendida>).



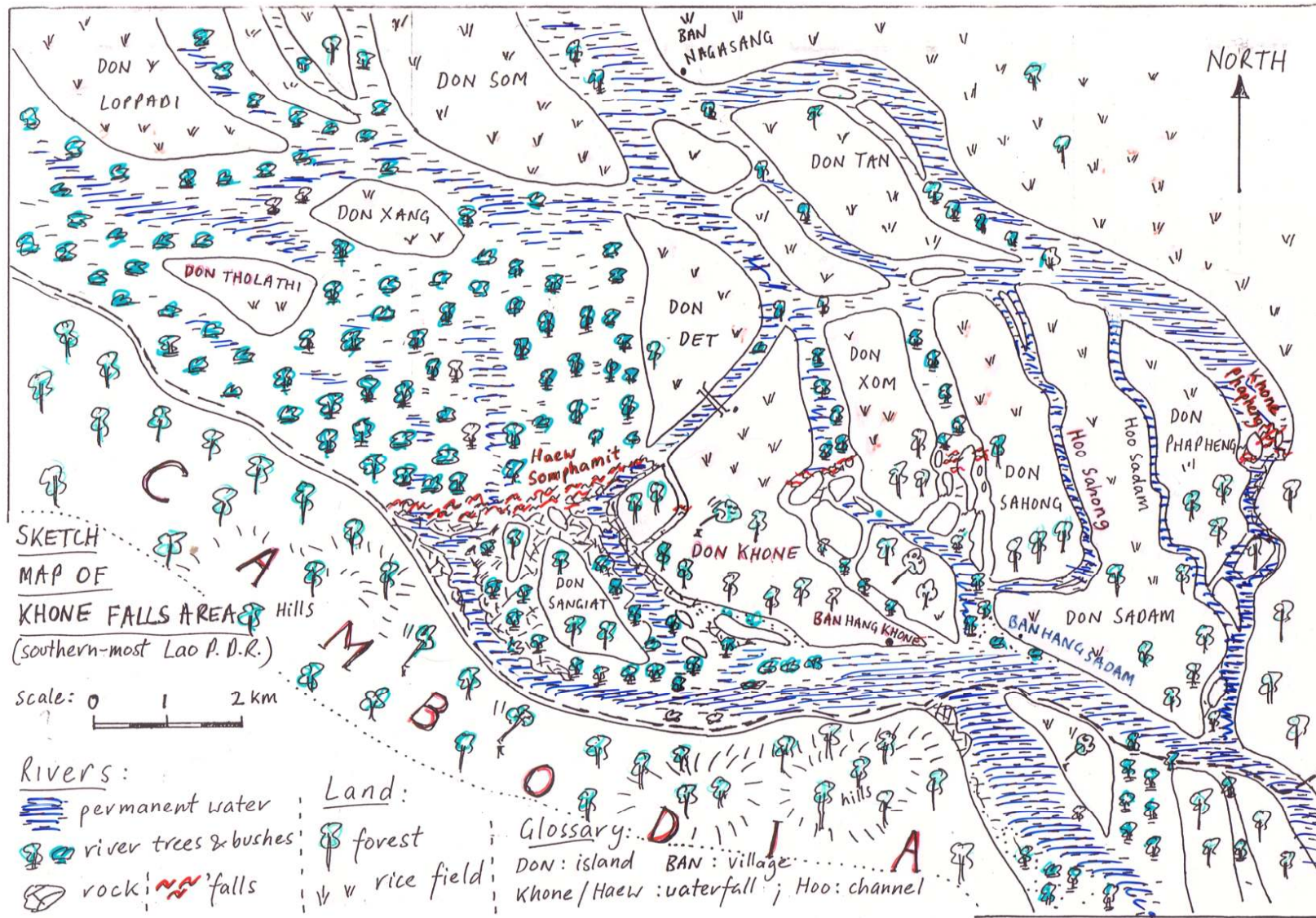
2. This is the construction site of the Hoay Ho Dam on the Bolaven Plateau in 1995. After the trip I wrote an article for the BBC Wildlife Magazine to raise awareness of the threat to some of the world's most biodiverse and spectacular wildlife habitat from proposed hydropower development. Yes, prior to development of dam construction roads there were tigers in the area.



3. Here I am in 1995 with a fabled 'pa saak', now known to be *Luciocyprinus striolatus*. This spectacular predatory cyprinid (member of the carp family) is only found in clear flowing tributaries of the Mekong river. I hooked one in the Xe Kaman, but it got away. In 1997 I photographed one in the Vientiane fish market; it measured 120cm but was very thin. Dr Walter Rainboth said it was the biggest one he'd seen, though there were reports of even larger ones.



4. In 1996 I started a VSO (Voluntary Services Overseas) posting with the Lao Community Fisheries and Dolphin Protection Project based at Ban Hang Khone, near the Khone Falls of the Mekong River in Southern Lao PDR opposite Cambodia. I lived and worked with local fishermen and explored much of the falls area between December 1996 and March 1998. It is now quite a popular tourist destination with guest houses on Don Det.



5. The Khone falls area has some of the world's most spectacular traditional fisheries for some of the world's most spectacular fish set amidst some of the world's most spectacular riverscapes. What a privilege to be able to document the seasonal fisheries and life of the community over a whole year. We recorded trap catches and gill net catches. The picture which I took in 1997, shows some of the fish traps in the Hou Sahong, the most important channel over the falls for migratory fish. [This is a scan of a print of a scan so not as good definition as on the original slide: I can send you a higher resolution picture if you need one!]

6. The project supported fisheries management initiatives by local communities. Many of the villages chose to designate a pool as a fish conservation zone to protect their most important fish especially during the dry season when river levels fell. I learnt to paint. After I returned to Scotland I painted this scene (next page) for a poster of fish conservation zones in southern Lao PDR. It shows two of the 4 Mekong giants: *Pangasius sanitwongsei* and *Catlocarpia siamensis* and a few of the many other notable species. Both of the 'giants' were reported to occur in local FCZs. I saw juveniles in local markets: they were surviving! 1000 copies of the poster were printed for distribution in local villages [note that the black bits in the school roof are supposed to be solar panels, not holes!].





7. For me, the most spectacular Mekong fish is *Aptosyax grypus*, (Rainboth, 1991). This endemic fish is another unique visually orientated predatory cyprinid (member of the carp family) which was only found in the middle Mekong in northern Cambodia and southern Laos. It grew to 30kg. The resemblance to a salmon is striking. I took this picture in Pakxe fish market in February, 1997. A few moments later it was chopped into steaks, revealing a belly full of eggs. Was I the last person to photograph an adult *Aptosyax*? I have come across no confirmed reports of this fish surviving into the 21st century. What a tragic loss to the people of Cambodia, Laos, Thailand and to the global community. Or does it still exist?



8. Many of the Mekong fishes are highly migratory. *Pangasius krempfi* is a spectacular anadromous salmon-like catfish which travels all the way from the South China Sea on its upstream spawning migration. It goes all the way up to Vientiane. When I was in the village there was still doubt in the minds of some scientists as to whether it was indeed an anadromous (sea-going fish). But one day I shared a special fermented fish dish made from *P. krempfi*, prepared by Meh Len. I could taste the marine fish oils! The picture below was taken in May 1997 from my house, overlooking the area where Meh Len (right) and her daughter and son in law are preparing *Pangasius krempfi*. It is one of my favourite photographs.

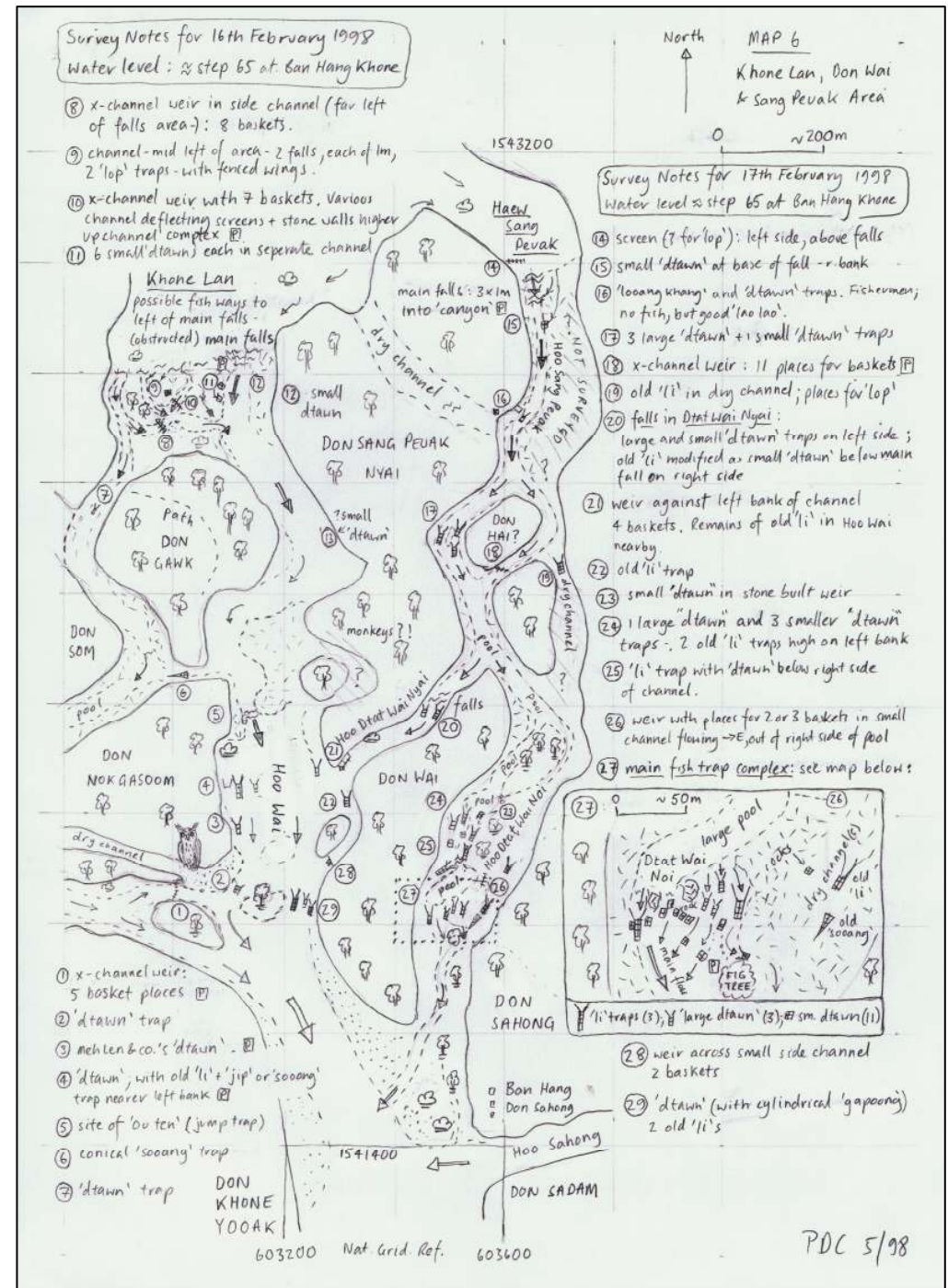


9. During my last few weeks in Khone, before becoming ill with pneumonia (largely as a result of dusty bus ride through the ADB7 road construction project) and returning to Scotland, I surveyed the fish traps around the Khone Falls, from one side of the river to the other. Here is one of my sketch maps. There are many different channels between the islands with waterfalls which are impassable to most fish migrating upstream for much of the year. The only channel which is passable to most fish throughout the year is the Hou Sahong. Over the years, the Lao villagers and Government have taken great care to ensure that fish are able to migrate upstream through the Hou Sahong past the many fish traps.

But now a hydropower dam has been proposed to be built across the Hou Sahong. To me it is like putting a giant barrier across the Straits of Gibraltar to prevent swallows, storks, cuckoos, birds of prey from completing their migration.

10. (next page) This is my last picture: the Hou Sahong. This is the channel that the Giant Mekong Catfish (*Pangasius gigas*), the Giant 'dog eating' catfish (*Pangasius sanitwongsei*), the Giant Mekong carp (*Catlocarpia siamensis*), the Mekong 'salmon' (*Pangasius kremfi*), the Mekong salmon carp (*Aptosyax grypus*), the striped carps *Probarbus labeamajor* and *Probarbus jullieni*, the endangered Mekong Herring (*Tenualosa thibaudeaui*) and dozens of other very special endemic Mekong fish species use to ascend the waterfalls. For the conservation of global freshwater fish biodiversity I know of no more important fishway of comparable size in any river in the world, although any dam across the lower Mekong is likely to have an equally profoundly negative impact on the survival of these fishes. I painted the picture, with five species of kingfisher seen locally perched on parts of a fish trap in the Hou Sahong, whilst staying in Ban Hang Khone village in 1997; it appeared in a calendar of the birdlife of the area in 1998. The Stork billed kingfisher is a wonderful bird which in my mind I can still hear, 13 years later!

Are your savings financing the Mekong dam building programme?



PDC 5/98



Lee Hwa

Hoo Sahong

Peter D. Cunningham
1997