



Catch and Culture

Fisheries Research and Development in the Mekong Region



Volume 11, No. 3



ISSN 0859-290X December 2005



INSIDE

- Songkhram River Fish Festival
- Pressure eases on catfish fry
- Tonle Sap Lake education campaign
- Mobile hatcheries
- Illegal fishing in the Songkhram



Catch and Culture is published three times a year by the Mekong River Commission Secretariat in Vientiane, Lao PDR and distributed to over 650 subscribers around the world. Free email subscriptions to *Catch and Culture* are available through the MRC website, www.mrcmekong.org For information on the cost of hard-copy subscriptions, contact the MRC's Documentation Centre by email to doc.centre@mrcmekong.org

Contributions to *Catch and Culture* may be sent to mrcc@mrcmekong.org

© Mekong River Commission 2005



Editorial panel

Dr Chris Barlow, Fisheries Programme Manager

Dr Suchart Ingthamjitr, Fisheries Programme Officer

Khamtanh Vatthanatham, Fisheries Programme Officer

Virginia Addison, MRC Secretariat Communications Officer

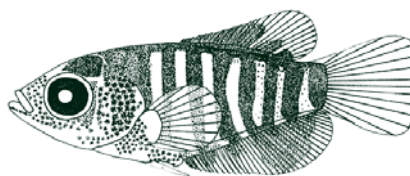
Editor: Peter Starr

Design and cover illustration: Phannavanh Anoulack

All stories by Peter Starr unless otherwise noted.



Editorial



Everyone knows Mekong catfish and barbs can grow to enormous sizes. But until last October no one had set eyes on anything like the 12 monstrous species that descended on Nakhon Phanom in northeast Thailand. Up to eight metres in length, some were larger than the trucks they were hauled in on. Of course, on closer inspection, they were found to be false fish, with scales and fins constructed of paper, plastic and other materials. Nevertheless these grand creations helped to fan the curiosity and lively spirit of the Songkhram River Fish Festival, which drew record-size crowds this year. The annual three-day event - which highlights the river's productivity, species diversity and the need for conservation - hosted a lavish mix of entertainment and education. In addition to a feature article, a special insert in this issue of *Catch and Culture* offers a colourful glimpse of the festival's array of activities.

This issue also examines the effects of increased hatchery operations on the fishery for wild catfish fry in Cambodia. Studies have found that while pressure on these fish has eased slightly in recent years, management problems remain for both the related wild-catch and aquaculture industries.

Further north, another study, based in Thailand's Nongkhai province, is revealing the potential benefits of capturing fish and transporting fish around barriers such as dams to aid their migration - a surprisingly simple and effective solution dubbed the "human fishway".

Meanwhile, monks in Cambodia have helped to kick off an education campaign targeting the environmental, economic and social aspects of the Tonle Sap Lake as it relates to local food security. The 18-month campaign is a joint project of the Asian Development Bank, United Nations agencies and the Royal Government of Cambodia.

Other features of this issue include the United States' decision not to lift anti-dumping duties on tsunami-affected Thai shrimp farmers; the recent design of a mobile fish hatchery which will allow the expansion of aquaculture to previously difficult locations; a regional action plan for fisheries co-management in 2006; a workshop examining the conflicts over illegal fishing in the Songkhram river; and the latest MRC Fisheries Programme staff changes.

Selected articles from this issue of *Catch and Culture* are being translated into Khmer, Lao, Thai and Vietnamese. The PDF files can be downloaded from www.mrcmekong.org as can all the features in English.

Happy New Year and best wishes for 2006.

The Editors

Festival highlights importance of fisheries in the Songkhram River

By Peter Starr and Suchart Ingthamjitr

A three-day carnival in Northeast Thailand sees giant fish fill the streets

With annual floodwaters usually peaking in September, October tends to be a special month for people living along the Mekong and its tributaries. Boat racing and kite flying are popular this time of year, and the cooler weather also heralds the start of the wedding season.

This year was particularly special with the fasting month of Ramadan coinciding with traditional Buddhist festivals across much of the Lower Mekong

Basin in October. But one festival this time of year is unique to northeast Thailand - the annual Songkhram River Fish Festival, an increasingly popular event held every year since 2000 in Nakhon Phanom Province.

In terms of fisheries, the Songkhram is the most productive river in the Thai part of the basin (see *Catch & Culture* Vol. 10, No. 2). With flooded forests like those around the Tonle Sap providing rich spawning grounds for many species, it may also have one of the most fragile river ecosystems. Local researchers reckon the Lower Songkhram River Basin has a complex ecosystem with at least 28 subsystems.



You should see the ones that got away! The giant fish get ready to start their passage through the town.

In addition to 208 plant species, a recent *Thai Baan* survey recorded 124 fish species including nine exotic species. Among the 115 indigenous species were 57 that migrated from the Mekong to spawn. The survey also recorded 10 snail and six insect species along with five species of turtle, four shrimp species and another four species of crab that are targeted by fishers. In the flooded forest area, 79 types of fishing gear have been recorded, both traditional small-scale gear and more modern commercial gear.

“The origins of this festival go back to our wish to conserve fish because fish is the main product of this region,” said Wallapa Nilchet, a retired school teacher in Sri Songkhram district in Nakhon Phanom province. The district, which includes large areas of flooded forest, is where the Nam Oon tributary flows into the Songkhram River just before it reaches the Mekong.

Since Wallapa and other members of a local cultural association arranged the first festival in 2000, the annual gathering has grown in size. The first day of the three-day festival this year, for example, featured nationally-televised boxing matches between fighters from Thailand and the Philippines. Chaowalit Yongchaiyudh, a retired general and former prime minister who hails from the northeast, presided over the Friday afternoon sporting event which was followed by a beauty pageant in the evening.

All this, however, was secondary to the main attraction

on Saturday - a raucous afternoon parade through the streets of the district capital by more than a thousand men, women and children. Accompanied by dozens of music trucks and floats with local musicians and artisans, the two-hour parade featured 12 enormous models of catfishes, barbs and other Mekong species including a spotted featherback and an ingeniously-crafted archer fish. With moving eyes, gills, fins and tails, these brightly-coloured creatures measured up to eight metres in length and are said to be a local adaptation of model birds from elsewhere in Thailand that use painted rice straw for feathers.

“It's very different this year,” Wallapa said the next morning as people milled around an inaugural exhibition of ornamental fishes. “We had boxing and there were many more people.” Back in 2000, she recalled, the first festival was mostly sponsored by local groups and didn't even have any fish floats. “It wasn't so developed and animated as it is now.” Or commercial. Advertisers for the televised boxing included Red Bull, a local brandy and a sports drink.

In addition to political patronage and corporate sponsorship, the World Conservation Union (IUCN) sponsored its own fish float. Meanwhile, the Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme - an initiative of the MRC, the IUCN and the United Nations Development Programme (UNDP) - hosted a small stage off the main stage area.



This oversized *Notopterus chitala* swam through the streets on its own wave of glory.

As this year's festival drew to a close, the main stage was prepared for the final event on Sunday night - a concert by leading pop star Tai Ora Thai, a local girl from the northeastern city of Udon Thani who is now a national icon.

When small-town festivals get this big, it's difficult for an eight-metre hard-lipped barb to be the star attraction.

Further reading

Thai Bann Research, 2005, Ecology and History of Flood Forest in Lower Songkhram River Basin (in Thai), Thai Bann Research Network at Lower Songkhram River Basin

Floats at the Songkhram River Fish Festival featured the following fishes:

Pangasius larnaudii
(black ear catfish or *tey po*)

Barbonymus altus
(red tail tinfoil barb or *tapien tong*)

Cyclocheilichthys enoplos
(soldier river shark or *tan joke*)

Osteochilus hasselti
(hard-lipped barb or *i-tai*)

Notopterus chitala
(spotted featherback or *pla kraï*)

Pangasius bocourti
(basa catfish or *pla yang*)

Toxotes chatareus
(common archer fish or *sua pon nam*)

Barbonymus nemurus
(yellow mystus or *kod luang*)

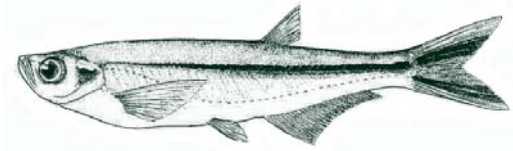
Hampala dispar
(spotted eye barb or *pla kra soop jud*)

Wallago leerii
(type of catfish known as *kao dum*)



Falling Vietnamese demand eases pressure on wild stock of catfish fry

By Lieng Sopha and Kent G. Hortle



Viet Nam's catfish hatchery output is up and large-scale trawling for the wild fry of one species has been outlawed in both Cambodia and Viet Nam. But monitoring is still needed for a recently-legalised small-scale fishery in Cambodia which targets the wild fingerlings of another popular species used in aquaculture.

Pangasiid catfish are popular in aquaculture. Two species - tra catfish (*Pangasianodon hypophthalmus*) and basa catfish (*Pangasius bocourti*) - are the most commonly reared in the Mekong region. *P. bocourti* is usually grown in cages, while *P. hypophthalmus* is farmed in both cages and ponds. Adults spawning in the rivers formerly provided all the seed for the aquaculture operations, illustrating one of the many links between aquaculture and capture fisheries in the Mekong region. Nowadays, hatcheries are providing much of the seed, but the capture fishery is still significant in Cambodia.

At the start of the annual flood around May and June, these and other pangasiid species spawn in large numbers in the Mekong and its tributaries in northern Cambodia. As they feed and grow, the larvae drift downstream. By the time they reach Phnom Penh, many are well-developed fry. They drift into the Tonle Sap (which reverses its flow during the flood) or continue downstream via the Bassac and Mekong rivers into the delta in Viet Nam.

Using fine-mesh dai nets (stationary trawls), fishermen in both Cambodia and Viet Nam used to target this annual drift of fry which were sold live to fish farmers in the delta. The dais mainly caught tra catfish, which are most abundant on the surface, and small numbers of basa and other catfish species. In Cambodia, this fishery began around 1980. Although it was outlawed in 1994, the nets continued to operate. By 1998, the annual haul of 948 nets was estimated at about one billion tra fry and the death of up to five billion fry of non-target species.

Today, there are few fry dais in Cambodia as Vietnamese hatcheries are now producing enough fry for the local aquaculture industry (Viet Nam's fry dais stopped operating in 2000). But hatcheries in Cambodia are unable to meet the demands of

Cambodia's small aquaculture industry. Moreover, the quality of wild-caught fry is considered superior to hatchery fry. So demand for wild fry continues in Cambodia, and some fish are possibly still being sent to Viet Nam.

Demand for wild basa fry is met by a type of fishing gear that Cambodia legalised for small-scale fishers on the Mekong, Bassac and Tonle Sap rivers in 2002. This species is uncommon in dai catches as it lives near the bed of the river where it eats snails and other benthic animals (hence its Khmer name, *trey pra k'chau* or snail-eating catfish). In this fishery between 30 and 60 hooks are arrayed on V-shaped frames which are baited and weighted near the bottom of the river. Each fisher uses three or four sets.

Baits include red-ant eggs and bee larvae as well as sea worms imported from Viet Nam at a cost of between 20,000 and 40,000 riel (\$5 and \$10) per kilogram.

The hook fishery was surveyed in 2001, 2003 and 2004 under the Assessment of Mekong Capture Fisheries Component of the MRC's Fisheries Programme and the Fisheries Department of Cambodia's Ministry of Agriculture, Forestry and Fisheries. The surveys aimed to assess its status and its possible impact on stocks by collecting information about the number of boats and gears and the price of fry. Other information was also collected in 2004.

Fishing effort and catch both decreased between 2001 and 2003 (see Table 1). Prices also fell as Vietnamese demand was met by hatchery-produced fish. The extent of fishing has also been reduced. In 2001, the fishery was operational in Prey Veng, Kratie, Phnom Penh, Kandal and Kompong Cham. By 2004, the fishery was significant only in Phnom Penh, Kandal and Kompong Cham.

In 2004, there were 380-470 boats, each with one or two

Table 1
Cambodian basa catfish hook fishery (2001-04)

Year	No. Boats	No. Fry (millions)	Price per fry (riel)	Value (riel, millions)
2001	2,850	6	100 - 250	389
2003	572	3	50 - 100	257
2004	380-470	3	80 - 200	330-650

Source: Department of Fisheries, Deap Loeung (pers comm.)

Table 2
Status of basa catfish hook fisheries, Based on interviews in October 2004

Location	No. Boats	No. Fry (millions)	Price per fry (riel)	Value (riel, millions)	Daily yield (fry per boat)	Daily income per fisher (riels)
Phnom Penh *	200	2.00	80-200	200-300	100-350	8,000-45,000
Kandal **	100-150	0.55	100-140	100-300	50-200	5,000-40,000
Kg. Cham *	80-120	0.45	100-130	30-50	50-200	5,000-25,000
Total:	380-470	3.00	80-200	330-650	50-350	5,000-45,000

* July to September, 2004 ** August to September, 2005

fishers, and basa catfish comprised between 70 and 90 percent of the catch. Other species included *Pangasius conchophilus*, *Pangasius larnaudii* and *Pangasius pleurotaenia* catfishes as well as *Mystus mysticetus* and *Arius* species. Basa fry from Kompong Cham were smaller than those from Phnom Penh, suggesting multiple spawnings and growth as they move downstream.

The latest survey highlighted several issues which should influence management and monitoring. Between 40 and 50 percent of the fish died while they were transported to farms. Diseases caused by handling and crowding included red spot and ulcers. If the fishery is allowed to continue, improved handling is needed to reduce mortality.

The study also concluded that the fishery provided important income to poor people, supporting about 400 families who operate the gear as well as traders and suppliers of bait and gear. Depending on fishing grounds and skills, fishers can earn up to 45,000 riel (US\$ 11) a day, a significant income in Cambodia.

The impact on the species is not yet clear. Compared to the fry dai fishery which used to take large quantities, the hook fishery catches very small numbers of fry. But the effect on basa catfish is not known as the monitoring of catches (by the Tonle Sap dai fishery, for example) groups it as *trey pra* with three other similar species including *P. hypophthalmus*. Data from the Tonle Sap dai fishery show large fluctuations but no overall trends in catches of the various pangasiid species.

The study concluded that the fishery should continue at a small scale, and that annual monitoring of boats and catches should show over time whether any specific management actions are needed to reduce impacts.

Further reading

Deap, L., Degen, P., and Van Zalinge, N. P. (2003) Fishing gears of the Cambodian Mekong, Inland Fisheries Research and Development Institute of Cambodia (IFReDI), Technical Paper Series IV, 269 pp., Phnom Penh, Cambodia

Deap L. (2001) Report of the Hook Fisheries Survey, Management of the Capture Fisheries Project, Department of Fisheries/Mekong River Commission, Phnom Penh, Cambodia



One little catfish is hooked and on its way to a hatchery.

Department of Fisheries (2003), Internal Report on the Hook Fisheries Survey, Department of Fisheries, Phnom Penh, Cambodia

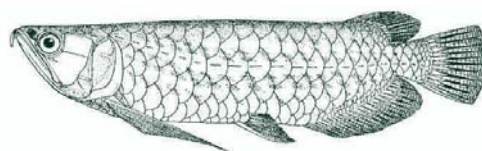
Ngor, P. B. (1999) Catfish fry collection in the Mekong River of Kandal/Phnom Penh, pp 124-134 in Van Zalinge, N. P., Nao, T., and Deap, L. (eds), Present Status of Cambodia's Freshwater Capture Fisheries and Management Implications, Department of Fisheries, Cambodia & MRC/Danida, Phnom Penh, Cambodia

Trong, T. Q., Hao, N. V., and Griffiths, D. (2002) Status of Pangasiid aquaculture in Viet Nam, MRC Technical Paper No. 2, 16 pp., Mekong River Commission, Phnom Penh, Cambodia

Van Zalinge, N. P., Lieng, S., Ngor, P. B., Heng, K., and Valbo-Jorgensen, J. (2002) Status of the Mekong *Pangasianodon hypophthalmus* resources, with special reference to the stock shared between Cambodia and Viet Nam, MRC Technical Paper No.1, 29 pp., Mekong River Commission, Phnom Penh, Cambodia

“A human fishway” - simple solution to complex problem

By Kent G. Hortle, Lieng Sopha, Em Samy and Zeb Hogan



Giving fish a helping hand to overcome physical barriers can help improve the quality of the wild breeding stock.

Human fishways can make economic as well as scientific sense

Fishways, designed to help fish move past barriers like dams, come in many shapes and sizes. Some structures, like rock ramps, are cheap and need little maintenance. But they are only effective at heights of up to two metres. Others, like low-cost channels for taller barriers, require a bit more maintenance but only cater to faster species. At greater heights, locks

and elevators can accommodate many species but are expensive to run. Choosing the best design can therefore be difficult, especially in the absence of a fish monitoring programme.

One option is to simply trap fish migrating upstream and transport them to waters behind the barrier. But does this labour-intensive system make economic sense? A recent case study* of such a trap and transport system in northeast Thailand suggests that it does. Moreover, such a “human fishway” makes

scientific sense too as it maintains genetic diversity and provides better quality fry compared with those from hatcheries.

The study - by Kent Hortle, Ubolratana Suntornratana and Paveena Nedchum at the Inland Fisheries Research and Development Centre in Udon Thani - focused on the Huai Mong Dam in Nongkhai province. The Huai Mong used to flow directly into the Mekong before it was dammed at the confluence in 1987 to store water for irrigation during the dry season and control flooding during the wet season.

Based on knowledge of similar tributaries, the authors assumed that Mekong fishes used to migrate into the

system to access favourable floodplain habitats during the annual floods. Surveys in 1989, 1990 and 1996 found up to 17 families of fish living in the Huai Mong. But the system, which has a watershed area of 2,600 square kilometres, now has few mainstream species from the Mekong and overall fishing has reportedly declined.

But fish still migrate to the base of the dam at the start of the annual flood season. This attracts fishermen who deploy large lift nets mounted on boats to catch fish that gather as waters rise below the dam's gates. Between June and August this year, Paveena Nedchumin, the operator of one of these nets, was paid to collect fish in the morning and in the

Record numbers attend the 7th Technical Symposium on Mekong Fisheries

The MRC Fisheries Technical Symposium provided an international forum for young scientists to present their work

By Tim Burnhill

Subjects as diverse as fish yields on floodplains, gender in fisheries management and the economics of small-scale aquaculture were among the topics presented at the MRC Fisheries Programme's 7th Technical Symposium on Mekong fisheries. A record audience of over 150 fisheries workers attended this year's meeting, held from the 15th to 17th November in Ubon Ratchathani, Thailand. Participants came from as far afield as Australia, Norway and the Netherlands as well as from the four MRC member countries.

"We were delighted by the large attendance, especially the large numbers of counterpart staff from the national fisheries line agencies who were able to be present," said Dr Chris Barlow, MRC's Fisheries Programme Manager. He explained that in addition to providing a forum where fisheries professionals from across the region can meet to discuss recent developments, the symposium gave young scientists from the riparian countries an occasion to present their research to an international audience.

"Helping young fisheries scientists develop and hone their technical skills is a very important aspect of the Fisheries Programme," Dr Barlow explained. "Presenting and publishing are vital parts of research and, indeed, career

development. The technical symposium gives our counterpart staff an opportunity to develop their communications skills. Preparing for the symposium also benefits their future research. The process makes researchers think clearly about the problems they set out to investigate, how they studied them, what they discovered and what these discoveries mean. For many young scientists, presenting the results of their research to a large and expert audience is a challenging, and possibly overawing, proposition. That is why I am so pleased that over 60 scientists from the national line agencies either presented papers or displayed posters."

The programme this year included 26 oral presentations and 37 poster displays. Dr Barlow said he believes the standard of both improves every year. "The subjects increasingly reflect an understanding of the regional character of the fisheries resource and the quality of the slides and the delivery of the talks are increasingly professional."

Recognising the effort the young scientists put into their presentations is also important. Every participant received a Certificate of Appreciation and the presenters who gave the six best papers were recognised with special awards. The Fisheries Programme will publish a volume of papers from the symposium in mid-2006.

late afternoon. Of the total catch of more than 13,000 fish in a 56-day period, 72 percent were fry or fingerlings. The study also identified 83 species from 18 families, especially cyprinids (48 species) as well as pangasids and silurids (nine species each). After the species were identified, almost 10,000 healthy fish were stocked in waters behind the dam's four gates which usually open at the end of the flood.

The study found that the cost for catching and transporting each fish was about 0.2 baht, or about 2,000 baht (\$50) for 10,000 which is comparable to hatchery-produced fry. But the two-month exercise also yielded some species whose value could not be estimated as they cannot be produced in hatcheries. These included one type of catfish, several sheathfishes and some endemic species. Apart from the competitive cost, range of species and better fry, it was found that the human fishway had other

advantages in that local fishermen were involved and no capital was required. The development of a sense of responsibility for the resource was one of the important outcomes of the activity.

The authors concluded that the system should be considered as a viable option for moving fish past barriers in areas where wild fry are being actively caught and killed. They also noted that the alternatives - stocking hatchery-produced fry or building fishways - were capital intensive and more appropriate for richer countries.

* "A Human Fishway Case Study: Huai Mong Dam" by Kent G. Hortle, Ubolratana Suntornratana and Paveena Nedchum, presentation made to the MRC's Technical Symposium on Mekong Fisheries in Ubon Ratchathani in November 2005.

Move for regional management of deep pools takes shape

A workshop held during this year's Technical Symposium on Mekong Fisheries reaches important conclusions

Fisheries agencies and National Mekong Committees from Cambodia, Lao PDR, Thailand and Viet Nam have agreed on the need for regional management of deep-pool fisheries. A recent workshop in Thailand found that deep pools were a "genuine trans-boundary concern" and that conservation was "critical" to fisheries and livelihoods. Using workshop presentations as a starting point, participants urged the MRC Technical Advisory Body (TAB) on Fisheries Management to ask the Fisheries Programme to develop a specific proposal for regional deep-pool management. Since its inception in 2002, the TAB has been actively promoting greater understanding of the pools.

The workshop, held during the Technical Symposium on Mekong Fisheries in Ubon Ratchathani in November 2005, followed the recent publication of an MRC report on deep pools in Cambodia and Lao PDR (see Catch &

Culture, Volume 11, No. 2). The report called for a series of measures to protect the pools, which play an important role as dry-season habitats for commercially-important species.

"At present, our knowledge of the pools and how they relate to the surrounding environment is inadequate," noted an agreed statement from the workshop. "Further research is needed on the location and classification of deep pools, their faunas and productivity and their importance in the social fabric of the basin." The statement also highlighted the need to publicise the importance of the pools and how they are managed while developing and testing management practices in selected areas.

"Above all, a regional approach is essential to conserve the vitality of the deep pools and develop their appropriate and sustainable management," the statement said. "This will involve trans-national planning, collaboration, networking and information production and sharing in order to achieve a common understanding of the issues involved and actions required."

New education and awareness campaign for Tonle Sap lake

By Peter Starr



Monks lead the way in meeting challenge to improve environmental education

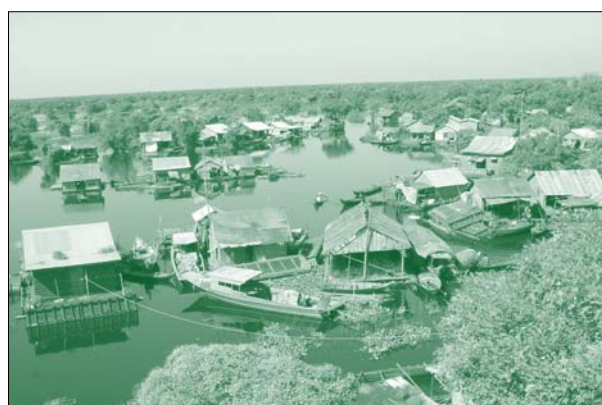
Cambodia has launched a National Environmental Education and Awareness Campaign under a project jointly financed by the Asian Development Bank (ADB), United Nations agencies and the Royal Government of Cambodia.

The 18-month campaign aims to focus on the environmental, economic and social aspects of the Tonle Sap lake as a source of food in an area with special hydrological features and specific threats. The campaign comes under the Tonle Sap Environmental Management Project which is overseen by the Cambodian National Mekong Committee.

Among its first activities, the campaign arranged the government's first National Forum on Environmental Education involving almost 90 stakeholders in Phnom Penh in November. Jady Smith, a former Food and Agriculture Organisation volunteer in Siem Reap who is now an education advisor to the campaign, said monks from Battambang were the highlight of the forum. "Monks in Cambodia are leading the way in innovative approaches to environmental education based on cooperation and efficient use of resources," the Australian biologist said.

A report to the ADB last year found that most people living in the Tonle Sap region had "good to comprehensive environmental knowledge" but lacked the power or money to do anything about it. Moreover, the concept of sustainable development of the Tonle Sap was found to be poorly understood. The campaign is now expected to promote greater understanding of the Tonle Sap region among decision makers, religious leaders and government officials.

Most of the Tonle Sap project is being financed by an ADB loan of \$10.9 million, with the Cambodian government providing the equivalent of \$3.9 million in



Villages like in Koh Chivaeng rely on the lake for their livelihood.

local currency. The Global Environment Fund of the United Nations has offered a \$3.9 million grant. The remaining grant aid is from the United Nations Development Program (UNDP) and the ADB.

Further reading

<http://www.idea.org.au/liveandlearn/>

Information

New Tonle Sap database

Cambodia's Fisheries Action Coalition Team (FACT) is scheduled to release a compact disc in January as part of its Tonle Sap Community Database project. The CD will be available in Khmer and English and published on the Internet. Following a year of development, the database aims to facilitate the flow of information from all stakeholders involved in fisheries around the lake, notably NGOs and local communities as well as other organisations working in the area. FACT was set up in 2000 as a coalition of NGOs working on fisheries and environmental issues on the Tonle Sap.

No change of heart for Thailand's tsunami-affected shrimp farmers



By Peter Starr

Despite tsunami damage to Thailand's shrimp hatcheries, America decides to continue controversial anti-dumping duties on Thai exporters

Following a six-month review triggered by the Indian Ocean tsunami, the United States announced in November that anti-dumping duties on imports of shrimp from Thailand and India would remain in place after all. "Revoking the existing orders would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time," the International Trade Commission (ITC) said.

The original ITC ruling in January imposed anti-dumping duties on shrimp exporters from Viet Nam, China, Brazil and Ecuador as well as Thailand and India (see *Catch & Culture*, Volume 11, No. 1). In late April, however, the commission announced "changed circumstances" reviews for Thailand and India following the December tsunami which devastated many shrimp-farming communities across the region.

In the November 2 ruling, all six commissioners were in favour of a shrimp industry alliance centred on the southern states of the US along the Gulf of Mexico. The ruling did not mention the impact of Hurricane Katrina on the industry in Louisiana and Mississippi, the two states hardest hit. But Richard Gutting, former president of America's National Fisheries Institute, said the September hurricane had "lowered the bar" for future injury findings. Writing in the October edition of *Global Aquaculture Advocate*, he noted that domestic producers conceded they would "bounce back" from the hurricane damage but argued they were "particularly vulnerable to further injury from rising fuel costs."

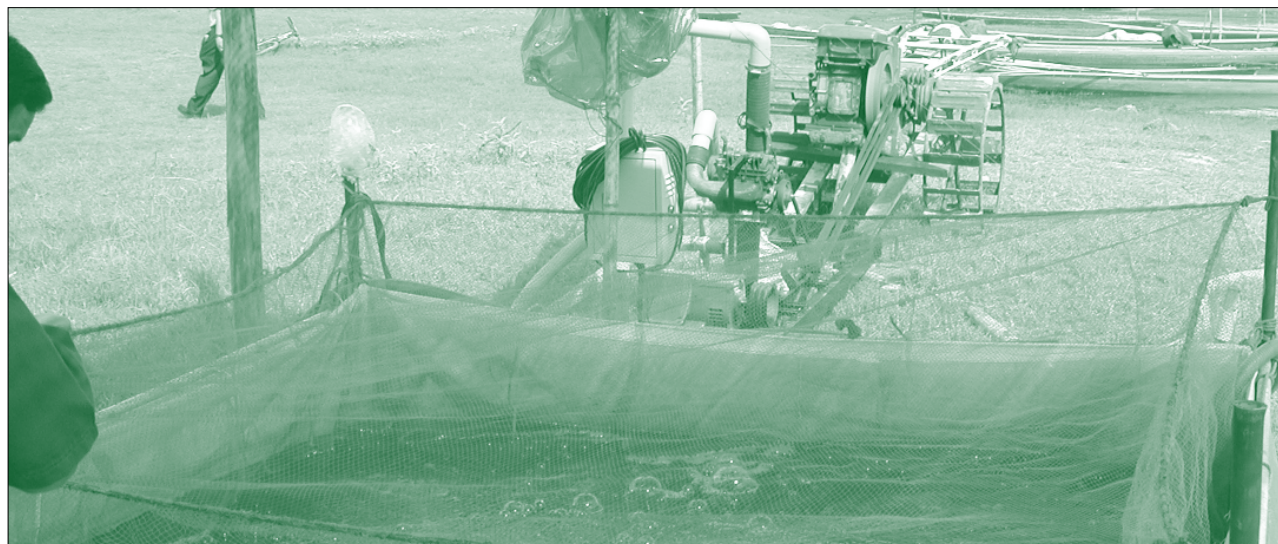
Gutting said that issues raised during October hearings at the commission were "quite different" from the earlier probe. "In the original investigations, the



Last year's tsunami wreaked havoc on Thailand's coast.

commissioners looked backward at past sales and the effects imports were having on the US shrimp industry," he said. "In the changed circumstances review, however, the central issue concerns the impacts future sales might have on domestic industry." Moreover, he said, the original investigation assessed the cumulative impact of imports from all six nations. "Now, only exports from the two countries are being reviewed and the commission can choose to evaluate the exports from each country separately."

The extent of tsunami damage to Thailand's fisheries, agriculture and forestry sectors was still unclear six months after the disaster. In June, the regional office of the United Nations Food and Agriculture Organisation (FAO) in Bangkok noted that its damage estimates "tend to differ" from government estimates. For example, it said, the existence of illegal aquaculture installations may have led to under-reporting of damages. "On the other hand, unfounded claims for compensation may have led to over-reporting of damages."



Mobile fish hatcheries are one of the tools now being used to restock native species and help poorer people improve their lives.

Restocking the basin

By Tari Bowling

Fishing communities are playing a larger role in the sustainable management of their resource

The health of the Mekong and its aquatic biodiversity is under increasing pressure from loss of natural habitat, barriers to migration and introduced species displacing native fish. Fish and aquatic animals from the Lower Mekong Basin are vital to the livelihoods of many rural households, both as an essential part of their diets and an important source of income. One way to support current and future demand is to stock rivers, reservoirs and lakes with threatened indigenous species and mobile fish hatcheries are one of the tools now being used to do this work.

In many remote rural areas, long distances and poor roads hinder access to fish hatcheries that provide such stocks. To help overcome this problem, the Aquaculture of Indigenous Mekong Fish Species (AIMS) component of the MRC's Fisheries Programme designed and built a mobile hatchery at the Nakhon Phanom fisheries station in Thailand in 2002. The hatchery allows aquaculture to be practised in areas where transporting fingerlings from central hatcheries is difficult if not impossible.

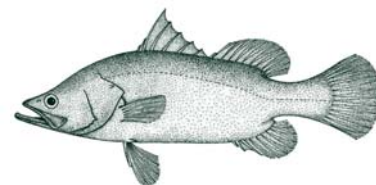
The mobile unit is small and simple - a water tank of two cubic metres, a pump, an air blower and a mobile

generator along with hatchery and some specialised equipment needed for breeding the fish. The pump and blower are run by a 7.5 HP diesel engine or a 5 HP electric motor. When disassembled, the hatchery can fit into the back of a pickup truck and easily transported to various locations.

In terms of egg production, fertilisation, and hatching rates, the mobile unit compared favourably with standard hatcheries. It was also more flexible than expected and generated local community interest. Apart from aquaculture, it can also be used for fish-breeding demonstrations including egg production and fertilisation using local broodstock to ensure genetic similarity to the wild population. Such demonstrations have been given at Nakhon Phanom, Udon Thani and Mukdahan in Thailand and Nam Houm in Lao PDR.

Following the success of the project, the Fisheries Programme gave financial support to the Living Aquatic Resources Research Center (LARReC) to develop a second mobile hatchery in Lao PDR in early 2003. Based on the original prototype but adapted for local requirements, this hatchery was set up at Huey Siet reservoir in April 2004. District staff and fisheries officers from across the border in Nakhon Phanom helped the local fisheries cooperative develop the second mobile hatchery.

Songkhram stakeholders address future of degraded resources



By Wolf Hartmann

A recent workshop highlights the need for urgent action to help resolve conflicts over illegal fishing and to promote job opportunities outside the agricultural sector

The Songkhram River in northeast Thailand is one of the country's major tributaries to the Mekong and one of its most productive in terms of fisheries. It's also the heart of frequent conflicts over the use of illegal and destructive fishing gear (see *Catch and Culture*, Volume 10, No. 2).

In an initial step towards finding a solution to these

problems, the MRC Fisheries Programme and the Thai Department of Fisheries held a three-day workshop in Nakhon Phanom in August. The 86 participants represented government and non-government agencies, small and large-scale fishers, local community leaders and members of tambon administrative organisations. Representatives of international agencies and the department's head office took part as observers.

The workshop concluded that management measures were urgently needed to sustain the fishery, which provides major livelihoods and sources of income for local people. Although the resource has been exceptionally productive, heavy fishing pressure in



Workshop participants agreed that there was an urgent need to introduce management measures to sustain the fishery.



Poor people in the region need to find alternative sources of work.

recent decades has taken its toll and few community members either understand or follow existing rules and regulations.

Some participants blamed greed for illegal fishing while others pointed to an absence of alternative work in an area where agriculture is limited by floods and droughts. Indeed, the household incomes of most small-scale fishers in the lower basin are below the poverty line and education levels are inferior to other parts of Thailand.

Illegal fishing mostly involves large-scale gear and fishing with electrical devices, explosives and poison. At the same time, illegal encroachment has diminished important fishing grounds and habitats such as flooded forests. Combined with over-fishing, these activities have increasingly degraded the fisheries resource. Furthermore, marketing is hampered by seasonal production, fluctuations in

quality and quantity, and weak bargaining power. Participants also noted insufficient and outdated fisheries information, ineffective communication channels and inadequate coordination and cooperation.

Although integrated planning has recently been introduced, it has not yet been fully carried out. Communication between stakeholders also remains insufficient, partly due to limited manpower and budgets.

Among three ideas to emerge from the workshop was a suggestion to review fisheries legislation and make amendments if necessary to reduce conflicts in the basin. To ensure full understanding and compliance with the law, participants suggested that effective communication be strengthened and recommended that clear demarcation of boundaries was needed, along with coordinated measures to improve the management and conservation of critical habitats.

The workshop also highlighted the need for stakeholders to draw up management measures to sustain fisheries resources. Some noted that gender issues should be more fully considered and that efforts should be made to take into account all scientific, social, economic and local knowledge.

Participants also stressed the importance of developing alternative job opportunities outside the agricultural sector. In addition to small-scale business activities such as handicrafts and cottage industries, participants suggested services such as beauty salons, repair shops and tailoring. They also mentioned valued-added activities like food processing, packaging, eco-tourism and aquaculture involving indigenous species.

Recommended activities included developing fisheries legislation as a tool for conflict resolution, assessing fisheries resources and developing alternative sources of income. Other possible measures include rehabilitating and conserving the flooded-forest ecosystem, developing an effective fish-marketing system, enhancing co-management and improving information and communication systems. The Fisheries Programme plans to take up some of these activities in an integrated, multi-component project from 2006 onward.

Regional action plan for fisheries co-management

By Peter Starr



Regional body seeks to break nexus between overfishing and survival

The Asia-Pacific Fishery Commission (APFIC) has drafted an action plan to mainstream fisheries co-management in the region and plans to consult with fishing communities and donors before adopting it in 2006. The draft plan, discussed at an APFIC workshop in Siem Reap in August, includes eight specific strategies as well as key actions to be taken by governments, regional and inter-governmental organisations, researchers and non-governmental organisations.

Because the workshop was not representative of fishing communities or donors, participants agreed that these two groups should be consulted to develop the various actions proposed.

The workshop, chaired by Cambodia's Fisheries Department Director-General Mr Nao Thouk described poverty as one of the main challenges to the successful co-management of fisheries. Other

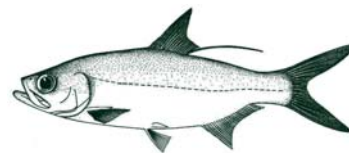
challenges include a lack of awareness of potential benefits, a lack of power sharing, legislative constraints, a lack of empowerment, insufficient institutional linkages and inadequate human capacity. The workshop also concluded that co-management should be cost-effective and integrated into governmental development strategies such as decentralisation and poverty reduction.

Given the failure of many projects when donor funding dries up, APFIC is trying to promote co-management as a mainstream practice for government and non-government agencies as well as fishing communities. It says a "more holistic livelihoods approach" needs to be taken to "break the nexus between overfishing and the need to survive." In addition to empowering communities to have more say in issues affecting their future, the idea is to deal with problems in sanitation, education and water supply before addressing the more lofty issues associated with responsible fishing.

Further reading

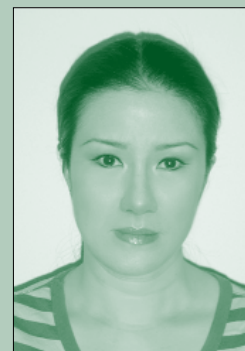
www.apfic.org/modules/xfsection/article.php?articleid=16

Staff movements



Incoming

Pham Mai Phoung is scheduled to start as a junior programme officer with the Fisheries Programme in January. Pham comes from the Research Institute for Aquaculture No. 2 (RIA2) in Ho Chi Minh City where she has been working with the programme's Assessment of Mekong Capture Fisheries component in addition to other duties with the institute. She has a B.Sc. in biology from the University of Ho Chi Minh City and a M.Sc. in international fishery management from the University of Tromso in Norway. We welcome her to the fisheries programme.



Outgoing

Dongdavanh Sibounthong

completed her assignment as an assistant programme officer in December to return to the Lao Department of Livestock and Fisheries. Dong joined the programme in December 2000 and was based in Cambodia before moving to Lao PDR with the MRC Secretariat in June 2004. She contributed to many aspects of the programme's administrative work and was a good friend to all. We wish her every success in her future work and life.



Kent Hortle

resigned as coordinator of the programme's Assessment of Mekong Capture Fisheries component in November to return to Australia to be with his family. But he will remain involved with the programme in finalising reports on activities over the past couple of years. Kent joined the programme in November 2001 and was initially based in Lao PDR before moving to Cambodia. Staff from line agencies greatly appreciated his knowledge of all aspects of fisheries, and the time he devoted to assist with planning and report writing. His friendly manner will be missed by all. We wish him every success and happiness back in Australia.



Mekong Fisheries Index



Six breeding centres planned

Viet Nam News, 24 September 2005

The Ministry of Fisheries will open six national breeding centres in different parts of the country in 2006 to boost production and the aquaculture sector. These research centres will implement new technologies, preserve genes and increase production of marine products. They will reintroduce original breeds and supply them to provincial and district breeding centres. The centres will also provide training to technicians and fisheries workers.

Phu Yen residents profit from sea eels

Viet Nam News, 24 September 2005

Living standards have risen among villagers of Phu Yen in the southern province of An Giang following the introduction of a sea eel breeding programme. The village is considered poor, but local farmers have found it easy to raise and sell the eels in cages and ponds and earn four times their capital investment. Local authorities have helped by setting up teams to raise the sea eels and providing the farmers with loans to buy stock and build cages. The eels are now also being exported to mainland China and Taiwan.

Officials expect high yield this fishing season

Cambodia Daily, 1 November 2005

Fisheries officials expect this year's fish catch to be a good one as the Mekong River floodwaters took a long time to recede, allowing for nutrients to enrich the river's waters and allowing a high survival of fish fry. Mr Nao Thuok, Director of the Fisheries

Department for the Ministry of Agriculture, Fisheries and Forestry said that while the flood was slightly lower than the previous year, it lasted longer so fish could spawn and live in a larger wild area. He said at least 40 fishing areas in Phnom Penh, Kandal and Takeo waters would be opened for commercial fishing and each was expected to collect an average of 20,000 tonnes of fish during the year. Fisheries experts say more effective government crackdowns on illegal fishing will help boost catches.

NA considers law to regulate fishing sector

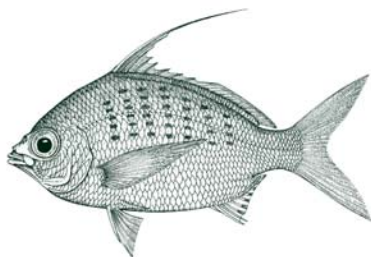
Cambodia Daily, 2 November 2005

A draft law to govern the nation's fishing sector is now in the National Assembly and several fisheries officials say it is important for the proposed law to be submitted for approval by the Assembly early next year. An FAO representative said there was a "sense of urgency" among fisheries officials to see the new law, which would give more management control to local authorities, approved. The prior fishing law was outdated and the new draft is said to contain enough measures to ensure the sustainability of the fisheries sector in Cambodia.

Mekong catfish death sparks rethinking of law

Cambodia Daily, 16 November 2005

The death last week of a 2.5m long Mekong giant catfish has spurred fisheries experts to set in motion a revision of the policy regarding their catch. Eng Cheasan, deputy director of the Fisheries Department for the Ministry of Agriculture said that officials had



floated a new proposal to fine fishermen who don't immediately turn over rare giant catfish alive. "When giant catfish are caught the fishermen must release them by law, but it has been difficult to enforce this," he said. Zeb Hogan, a research biologist and coordinator of a specialist group on the catfish for the Mekong Wetlands Biodiversity Programme said fishermen were previously compensated for the market value of the catfish if they could prove they had caught one and released it alive. Government officials are still determining what the new policy and punishment will be.

Catfish whets US appetites

Viet Nam News, 17 November 2005

Viet Nam will have the opportunity to make further inroads into the American market following a visit by representatives of the two large seafood companies, Mazzetta and Amanda, that trade Vietnamese seafood in America. Mazzetta is the main supplier of McDonald's and has bought Vietnamese shrimp for four years. The representative visited An Giang Fisheries Import Export Joint Stock company (Agifish) to research putting Vietnamese basa catfish into the fast food distribution system.

Aquaculture farms need monitoring system

Viet Nam News, November 2005

The Fisheries Ministry has asked the Government to issue a directive to regulate chemicals and antibiotics used in breeding and processing aquaculture farming products. The regulations are also expected to clearly define and allocate ministerial responsibility concerning the issue. Under this directive the fisheries authorities will issue a list of banned antibiotics and chemical agents. It is also expected to require organisations that import, manufacture and sell antibiotics to supply labels with information and instructions on their use. Processing facilities will be required to buy only those supplies which have already been tested and meet veterinary standards.



Mekong river delta develops sea crab aquaculture

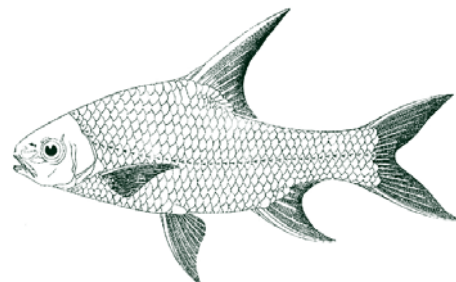
Nhan Dan, 24 November 2005

Can Tho University has been successful in a piloting a project to raise sea crabs which will open a new development direction for aquaculture in the coastal areas in the Mekong river delta. According to experts, sea crabs are easy to raise and take a short time, only four months, to be harvested. Currently, Vietnamese fishermen catch around 400 tonnes of sea crabs a year naturally. Soft-shelled crab is an product of high export value and is currently in high market demand. Last year, Viet Nam earned US\$25 million from exporting 6,000 tonnes of sea crabs.

Decline in freshwater fish stocks threatens rural poor

SciDev.Net, 30 November 2005

Overfishing of the world's lakes and rivers is an unrecognised threat to the economy, biodiversity and health of developing countries, warn researchers in the December issue of *BioScience*. Inland waters are a crucial source of income for rural communities in developing countries, particularly in Africa and Asia. They constitute a major source of dietary protein for the poorest. "There is very heavy pressure on rivers and lakes over much of the world, mainly in Africa and Asia," says Robin Welcomme, one of the study's authors. "Overfishing is changing the composition of species, with larger species being reduced and sometimes eliminated." Eric Baran, of the WorldFish Center in Cambodia, says fish catches in the Mekong River have increased over the last 60 years, despite very intensive fishing. "Big valuable species are becoming rare, and are being progressively replaced by short-life, small-size, low-value opportunists," he said. Among a series of case studies, the *BioScience* paper points out that in the Mekong River, the giant catfish is close to extinction. Slowing the decline in stocks is "crucial to avoid disruption of the natural food supply to the poor," says Baran.



MRC Fisheries Programme gains US\$5 million support from Denmark

MRC press release, 1 December 2005

The Government of Denmark, through its aid arm Danida, will provide 30 million Danish kroner (approximately US\$ 5 million) to fund the first three years of the second phase of the Mekong River Commission Fisheries Programme. The new funding agreement was signed by H.E. Mr Peter Lysholt Hansen, Ambassador, Royal Danish Embassy, and Dr Olivier Cogels, Chief Executive Officer MRC at the conclusion of the 10th Donor Consultative Group Meeting held in Chiang Rai, Thailand. The funding will be spread over the years 2006-2008 and represents a continuation of the solid support Danida has given the MRC Fisheries Programme in the past. The MRC Fisheries Programme aims to manage the productive Mekong fisheries so as to sustain their high yield and economic output well into the future. The programme undertakes research into capture fisheries, trains fisheries managers, promotes aquaculture of indigenous Mekong fish species and disseminates information to policy makers and planners in the four Lower Mekong countries. It has been operating since the MRC was formed in 1995 and has developed a wide range of programme activities throughout the four member countries.

Man, wife electrocuted while fishing together

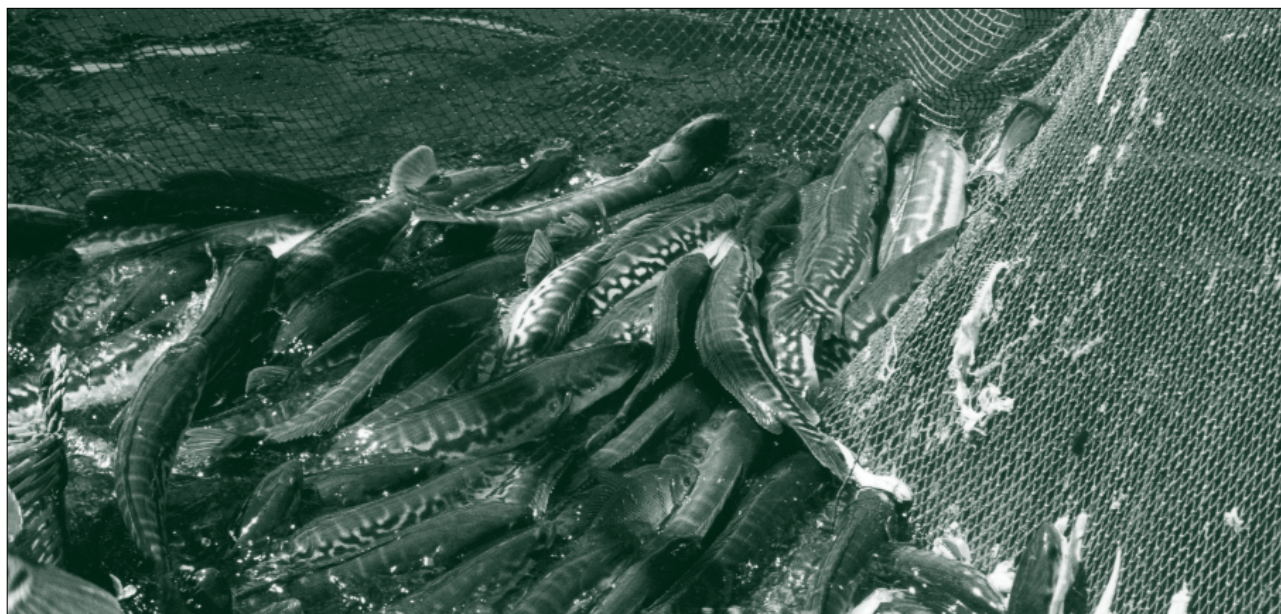
Cambodia Daily, 3-4 December 2005

A couple was electrocuted in Kompong Cham province while using electrical equipment to fish. The couple died in a rice paddy in Prey Chord district's Boeung Nay commune, according to the district's police chief. "We found them clinging together in the water," he said.

Southern province sustainably develops catfish production

Vietnam News Agency, 15 December 2005

The Agriculture and Rural Development Department (ARDD) of southern An Giang province plans to simultaneously conduct five projects on sustainable development of the local catfish raising practice. The province is located in the Mekong River Delta, which boasts the largest production of tra and basa catfish in Viet Nam with an annual output of 300,000 tonnes. Catfish prices have slightly rebounded recently after a long period of decline. This positive sign of price increases is attributed to the avian influenza outbreaks in many localities and seafood taking the place of poultry in every family's daily menu. According to the Viet Nam Association of Seafood Exporters and Processors (VASEP), Viet Nam's basa fish products have been exported to Australia in addition to the existing large markets of the United States and Japan. Australia is projected to consume 7,000 tonnes of ba sa fish imported from Viet Nam in 2005.



Published by the Mekong River Commission Secretariat

P.O. Box 6101, 184 Fa Ngoum Road, Unit 18, Ban Sithane Neua,
Sikhottabong District, Vientiane 01000 Lao PDR

Phone: 856-21-263 263 **Fax:** 856-21-263 264

Website: www.mrcmekong.org



Mekong River Commission

P.O.Box 6101, 184 Fa Ngoum Road, Unit 18, Ban Sithane Neua,
Sikhottabong District, Vientiane Lao PDR

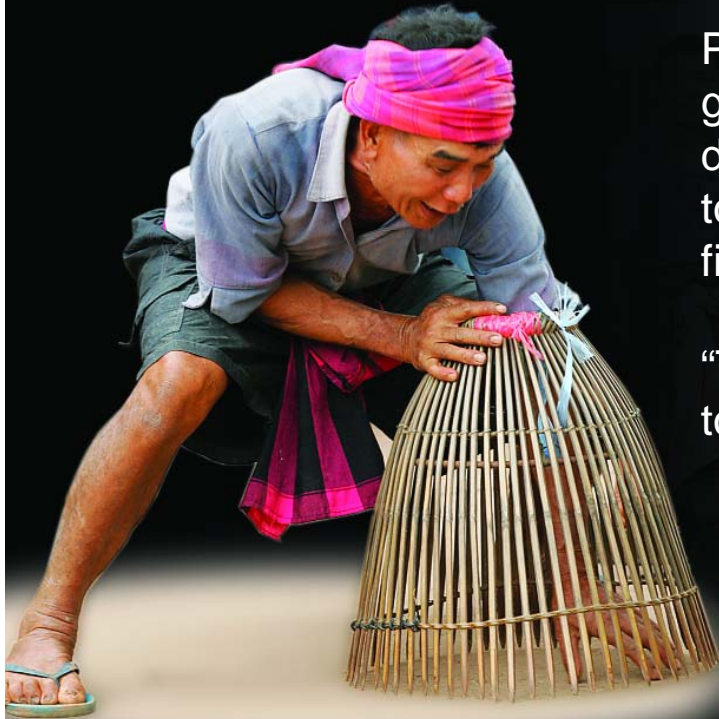
Telephone: (856) 21 263 263 **Facsimile:** (856) 21 263 264

E-mail: mrcs@mrcmekong.org

Website: www.mrcmekong.org



A tradition of conservation



Processions of traditional fishing gear, accompanied by skits displaying their techniques, added to the festival's spirit and made fish conservation a key theme.

“The origins of the festival go back to our wish to conserve fish.”

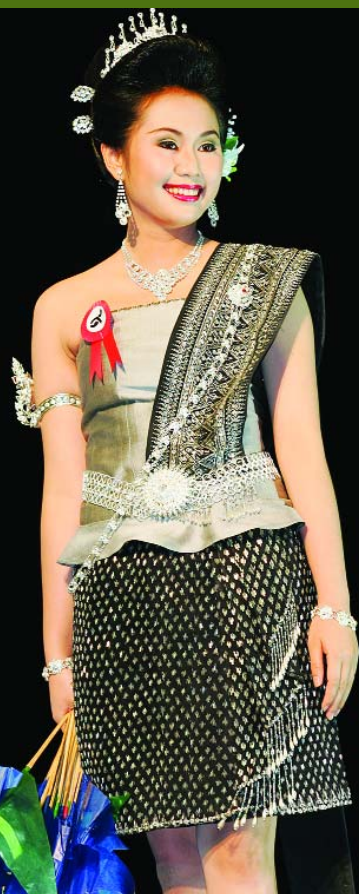
*--Wallapa Nilchet
Sri Songkhram district, Thailand*



Catch and culture

Songkhram River Fish Festival

Crowds flood to Nakhon Phanom's annual fish festival



Northeast Thailand's Songkhram River got a special tribute this year as singers, dancers, beauty contestants, boxers and thousands of spectators converged for a lively three-day celebration in honour of its fisheries.

It was the festival's fifth anniversary, and its popularity climbed to new heights with more performances and people than ever.



Monster fish parade



Mammoth models of catfish, barbs and other Mekong species were the highlight of the festival's second-day parade. More than 1,000 spectators were treated to an afternoon of entertainment and education focusing on the region's most important asset - its fisheries.



People and partnerships

Representatives from the World Conservation Union and the Mekong River Commission contributed to the effort to raise awareness about the River Basin's complex ecosystem and its vital importance to the region's people.

