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## Good report on basin health - so far



The *new State of the Basin report 2003*, released by the Mekong River Commission in August 2003, shows that the Mekong river basin is still in good health - but there are some unexpected trends.

Most importantly, water flows in the basin have changed significantly. With land use changes in upland areas and increasing use of water for irrigation, scientists and water resource planners had expected that there would be more water scarcity in the dry season, and more flows in the wet season.

In fact, long-term observations over several decades show the reverse: more water has been flowing through the river during the dry season, and less during the wet season. This unexpected change has occurred gradually. The effect may be linked to numerous small irrigation reservoirs being built over a period of time all over the river basin. The MRC

estimates that there could be more than 20,000 small dams in the Lower Mekong Basin, built by rice growers and other farmers. Water is stored when it is plentiful, then released slowly during the dry season for individual plots.

"Small developments may be having more impact on the river basin than one or two large ones," said Mr Joern Kristensen, CEO of the MRC Secretariat at the report launch. "Getting the right kind of data is a crucial first step for successful cooperation."

River flows affect the reproductive cycle of many fish species, which are triggered to migrate and spawn when the waters rise. Fisheries and wetland products are an important food and income source for at least 80 per cent of the Lower Basin's population of 55 million.

Although average seasonal flows have levelled out, flooding is still a major

## Good report on basin health

issue in the river basin. Average wet season flows have declined but the frequency of flooding has not reduced. Unusually high flooding brought devastation to many parts of the river basin in the years 2000 and 2001.

The *State of the Basin Report 2003* is the first major report to be released in six years on the state of water and related resources of the Lower Mekong River Basin. It was produced by the Mekong River Commission as part of its ongoing work of reviewing the condition of the river basin.

The report launch, held on 26 August to coincide with a meeting of donors, was attended by many in the government, press and diplomatic community.

## River basin facts and figures

### Population growth by 2025

Cambodia and Lao PDR will increase by 50 to 55 per cent. Thailand and Viet Nam will increase by 20 to 30 per cent.

### Increase in agricultural output between 1995-99

Cambodia 12 %  
Lao PDR 22 %  
Thailand 10 %  
Viet Nam 19 %

### Biggest water user

Agriculture uses most of the water extracted from the Mekong. Only 7 to 10 per cent of cultivated areas in the Lower Mekong Basin were irrigated as of 1998; this ratio will keep increasing. The Viet Nam Delta already irrigates around 60 per cent of its crops. The average ratio of irrigated land to total cultivated area for Asia is 45 per cent.



# 18th JC and 10th Dialogue Meeting held



The MRC's executive body, the Joint Committee (JC), held its 18th meeting on 29-30 September in Phnom Penh.

The event was followed by the 10th Dialogue Meeting of upstream countries China and Myanmar with the MRC on 1 October. At the JC meeting, progress on all MRC programmes was reported.

The MRC Joint Committee endorsed the new MRC navigation strategy and accepted a concept for its implementation plan. The US\$22 million programme over six years consists of five components: socio-economic analysis and waterborne transport planning; strengthening the legal framework for cross-border navigation, traffic safety and environmental sustainability; information, promotion and coordination; and institutional development.

The Agriculture, Irrigation and Forestry Programme (AIFP) reported

the signing of a US\$4.9 million funding agreement with the government of Germany. The programme will focus on watershed management.

The MRC Joint Committee called for the Flood Management and Mitigation Programme's efforts in setting up the new Regional Flood Management Centre in Phnom Penh to be coordinated closely with the relocation of the MRC Secretariat to Vientiane in June 2004.

The MRC will begin work on a new Mekong Wetlands Biodiversity Programme in cooperation with UNDP and the World Conservation Union (IUCN). The programme has a total value of US\$30 million over five years, to be shared between the three implementing agencies. The programme will focus on multi-sectoral planning processes, policy frameworks and macroeconomics, information, capacity-building and community-based resource management.

# VNMC: Broadening the river view

*Mekong River affairs in Cambodia, Lao PDR, Thailand and Viet Nam are coordinated by National Mekong Committees (NMCs), which maintain close contact with line ministries and other sectors in each country.*

*The NMCs are usually made up of senior civil servants representing the relevant ministries, supported by a secretariat in each country. Because the NMCs are established by the individual country members of the Mekong River Commission, each is different in its make-up and history.*

*This feature on the Viet Nam National Mekong Committee is the second in a Mekong News series introducing each of the NMCs in turn.*



The colonial-style building on Hang Tre street, near Hanoi's Old Quarter, houses an equally historic tenant. The Viet Nam National Mekong Committee (VNMC), founded in 1978, had an earlier life in the warmer south, where the Mekong River fans out into the delta that Vietnamese people know as the Cuu Long, or Nine Dragons Delta.

In the 1950s and '60s, the early years of Vietnamese cooperation in Mekong affairs was through the National Cuu Long Committee. Its location within the Ministry of Public Works, South Viet Nam, reflected one of the committee's main interests - flood control in the Delta.

There was a hiatus from 1975 to 1978, due to the war. When Viet Nam was unified in 1975 under the Hanoi government, the files of the old Cuu Long Committee made the long trip north, along with the contents of many other ministries of the government previously located in old Saigon.

A new committee, the VNMC, was set up under the Ministry of Water Resources with eight member ministries. Agriculture, fisheries, electricity generation and navigation issues were priorities and remain so to this day.

During this period of the 1970s and '80s, environmental concerns began to be raised in the context of the Mekong River. "As the country furthest downstream, waters entering the Delta have always been a major issue for Viet Nam," explained Mr Nguyen Nhan Quang, Deputy Secretary-General of today's VNMC.

Agriculture in the Mekong Delta is vulnerable to the intrusion of seawater in the dry season, so adequate flows of freshwater need to be always maintained. The mangrove system, which nourishes fish and shrimp and filters groundwater, also needs to be protected for the sake of human health and livelihoods.

Discussion on issues such as these, not only by Viet Nam but also the other Mekong countries, led to the signing of the four-country Agreement on Cooperation for Sustainable Development of the Mekong River Basin that created the Mekong River Commission in 1995. The Mekong countries had moved beyond the data-gathering, investigation and project planning role under the former Mekong Committee, committing now to a broader view of development in which the countries would cooperate - among

other matters - to maintain river flows for their mutual benefit.

In the same year, Viet Nam showed an increased emphasis on the role of the people in development planning, by incorporating five new members into the VNMC. They were the river basin provinces of An Giang, Dong Thap, Tien Giang and Can Tho in the Mekong Delta, and Dak Lak province in the Central Highlands.

The VNMC reports directly to the Prime Minister of Viet Nam and has its office in the Ministry of Agriculture and Rural Development (MARD), a new body created the same year by the merging of three ministries: water resources, forestry and agriculture. The VNMC has three Vice-Chairs: the Ministers of Planning and Investment, Agriculture and Rural Development, and Foreign Affairs.

Commenting on the overall priorities for river basin development in the Viet Nam context, Mr Quang said, "Most of the river basin population are poor farmers. We need to create more jobs and help them in their struggle against poverty. Viet Nam wants to be an industrialised country, so electricity generation is also very important for us."

## Broadening the river view

Rice production in the Mekong Delta has increased greatly in the past decade, bringing with it the need for constant improvement of irrigation systems. Current government plans do not include any further expansion of cultivated areas. Rather, crop diversification is considered a priority. Vietnamese coffee farmers have suffered from price fluctuations, and current government thinking is now to manage carefully the extent of area under coffee cultivation, so as to avoid local gluts. Already, there has been too much exploitation of groundwater in the Central Highlands, leading to water scarcity today.

On electricity generation, the Vietnamese government has entered into cooperative arrangements with its near neighbours. It hopes that Cambodia will buy electricity from Viet Nam, and also has plans to assist Lao PDR with the construction of the Sekaman hydropower dam.

In addition to inland waterway transport, coastal zone navigation and developing the transport links between Hongkong and Singapore with Ho Chi Minh City and Can Tho port, is also a high priority issue. Trade into and out of the Mekong Delta in Viet Nam, excluding trade with Cambodia, has been estimated at US\$4,000 million.

Flood control, the issue that first brought Viet Nam into the Mekong cooperation arrangements, is now seen as a much broader issue of "living with floods". This means thinking in terms of adapting built structures and land use practices to the recurring cycles of nature, while helping people to protect themselves in a variety of ways including through better warning systems, emergency relief and skillstraining (such as swimming lessons for children).

In July this year, Viet Nam took on the chairmanship of the Joint Committee,

the Mekong River Commission's executive body. The position rotates on a yearly basis around the four member countries. The increased profile is likely to support Viet Nam's voice in Mekong affairs beyond the day-to-day programme activities related to the work of the Commission.

At present, the VNMC is interested in best practices in river basins around the world, and in other multilateral treaties relating to international watercourses. "Besides the cooperation framework within the MRC, we would like to strengthen our bilateral activities with upper basin countries as well as with Thailand, Lao PDR and Cambodia," said Mr Quang. "We would also like to work more through the Greater Mekong Sub-region (GMS) and ASEAN channels. In all these matters, we are interested in the application of international standards to the sharing and management of Mekong river waters."

## Why it was dry

The Mekong's typical rise and fall was muted this year, causing 2003 to be termed a "hydrological drought" year.

Lower water flows and less rainfall than usual meant that until the end of August water levels were unseasonally low. But a historical analysis of flows by Mekong River Commission hydrologists found that this is a normal part of the drought-flood cycle spanning decades, and that the effect could not be linked to specific river developments.

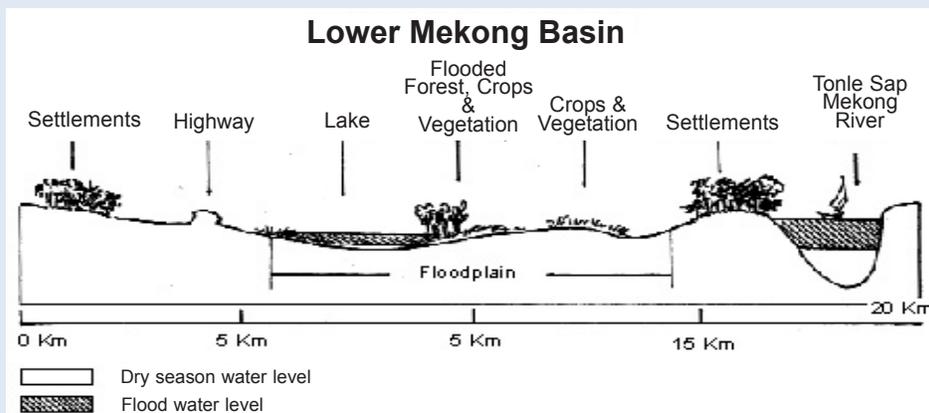
River flows in 2003 were comparable to conditions in 1992 and 1998, which were also hydrological drought years. They were followed by "meteorological drought" years in 1993 and 1999, when lack of rainfall caused widespread water shortages in

Thailand and severely affected farming in the Mekong Delta part of Cambodia and Viet Nam. Parts of Cambodia also suffered from a very long dry spell in 2002, leading to rice cropping failures particularly in Kompong Speu, Kampot and Takeo provinces.

Though the flood season started with very low water levels, by early September, the floodplains in the Mekong Delta of Cambodia and Viet Nam had filled, and

levels at the Vietnamese stations of Tan Chau and Chau Doc had already crossed warning levels by the second week of September.

In conclusion, MRC hydrologists reported that, "The cumulative impacts of reservoirs and their operation in the tributaries are present, but not to the scale which could have a sudden impact on the flow on the mainstream."



*Cross-section of typical landscape in the Lower Mekong Basin*

# MRC Events

## Mississippi-Mekong partnerships

Heavy industry zones, congested waterways and flood protection levees ranging hundreds of kilometres - some scenes of Mississippi river life appear to have little in common with the Mekong. But there are many shared issues.

The Mekong River Commission's executive body, the Joint Committee, completed a 10-day tour of the Mississippi river basin on 16 October, with the aim of drawing from the lessons of the Mississippi's past. Their visit was coordinated by the University of Minnesota and the Mississippi River Basin Alliance, an umbrella organisation whose members have a focus on the sustainable development of the river.

The visit brought senior officials from the governments of Cambodia, Lao PDR, Thailand and Viet Nam into discussions with academics from the University of Minnesota, environmental

groups and some US government agencies including the US Army Corps of Engineers, which manages a river transport system moving 380 million tons of commodities annually.

The Mississippi river basin is the world's third-largest and is home to around 84 million people. River development began in the 18th century and many of the Mississippi's environmental issues are long-standing ones, including industrial pollution, wetlands losses linked to flood protection structures, biodiversity impacts and soil erosion. To restore the damage of years past, some dams and embankment structures are now being taken down, and restrictions on toxic discharges into the river are being enforced.

Officer-in-charge of the MRC Secretariat, Mr Dao Trong Tu, accompanied the delegation of Joint Committee members on the Mississippi visit. The most important lesson, he said, was that in the Mississippi river basin, the cost of development to the environment has been much higher than expected.

"What we learned was that planning for sustainable development has to start as early as possible. Don't leave it too late - it will be more expensive," he said. "The Mississippi was developed without a basin-wide discussion of the issues. We believe that the Mekong region can contribute to a Mississippi-Mekong partnership through our own model of a proactive, transboundary approach."

Delegation members noted that there were important differences between the Mekong and Mississippi scenarios, including the possibility for the US Federal government to adjudicate on difficult issues - a prospect that does not exist for the Mekong River Basin, which is shared between six countries. However there is high potential for new technical cooperation, reviving a US-Mekong relationship that was strong in the 1950s and '60s.

The visit was supported by a grant from the Council of State Government's State Environmental Initiative (CSG/SEI) which is funded by the US Agency for International Development (USAID).

## Flood Forum and Mekong HYCOS



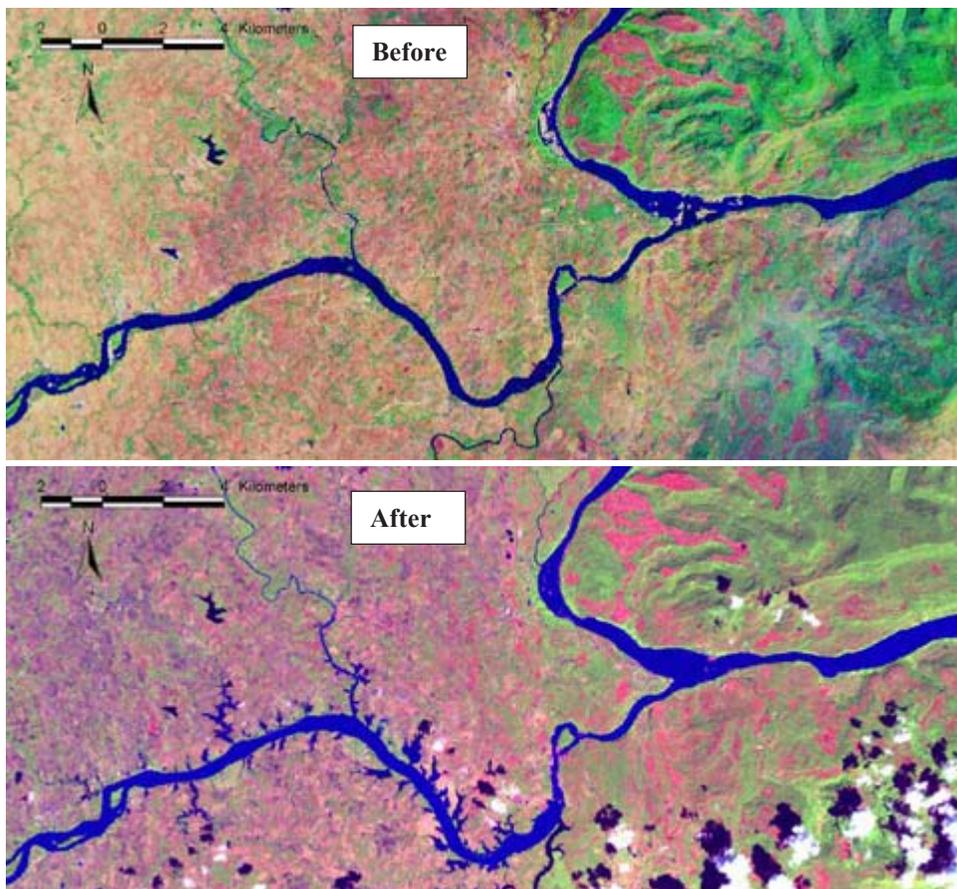
Government officers, NGO staff and academics from the Mekong region met at the 2nd Annual Mekong Flood Forum in Phnom Penh, which drew over 140 participants on 28-29 October 2003. This year's forum was organised around the theme of "information flow, networking and partnership". The year 2002 brought both floods and drought to different parts of the river basin, and delegates shared lessons they had learned in dealing with both.

The Flood Forum was followed by a meeting between senior officials from hydro-meteorological departments and

services in the Mekong countries to discuss the establishment of a hydrological cycle observing system (HYCOS).

Such a system would build on current MRC work and allow for more hydrological monitoring stations to be established in the Mekong region, filling current information gaps and opening the way for Mekong data to be integrated into a global information system known as WYCOS (World Hydrological Cycle Observing System), managed by the United Nations' World Meteorological Organisation (WMO).

# Eye in the sky: Seeing the Mekong from space



*Satellite images of the Pak Mun, a tributary of the Mekong, highlight changes in river flows and the surrounding vegetation since the Pak Mun dam was completed in 1994.*

Sharp-eyed visitors walking the halls of the MRC Secretariat in the past would have noticed banks of old filing cabinets, labelled by place names and dates going back, in some cases, to the 1960s. These held the products of aerial photography exercises in the early days of Mekong cooperation. At the secretariat's Technical Services Division today, much more data is held digitally - the output of numerous satellite surveys and ongoing river level monitoring.

The Mekong cooperation arrangements have always been rooted in tasks of surveying, classification and inventory. The difference today is in how the data is used.

In the Mekong region, governments once had the largest claim on such data,

which was often generated through technical support from donors. Today, as the countries move towards becoming fully-fledged market economies, the role of government includes providing the right conditions for the private sector and civil society to take part in the business of running a nation state. The public availability of data therefore has become more important. In terms of river basin management, access to information about what is happening across borders is fundamental.

This fact was recognised by the four MRC member countries in drawing up their schedule of agreements on rules for water utilisation. The very first rule to be agreed upon was on procedures for the sharing and exchange of data and information, signed off in 2001.

As of August 2003, the MRC has listed data products on its website as part of a process to improve accessibility. They will be added to as new data becomes available.

The MRC data comes from many sources, including hydrological gauges, satellite imagery and aerial photos. These have many uses.

Satellite data in combination with information-gathering on the ground, for example, can provide quantifiable information for monitoring of changes in land use. In some parts of the world, information about how quickly deforestation was taking place led to controls or moratoriums on logging. Such data is also used for crop predictions, flood forecasts, and pest and fire control.

The newer data technologies encourage us to think of the river basin spatially. With the explosion in popularity of GIS in the 1990s, it became more possible to feed data from various sources into models of water resources and how they are changing. For example, satellite imagery of the Pak Mun dam not only shows the river backing up into its tributaries, but can give details on just where the water goes at different times.

This information can be provided routinely and put together with information about rainfall, dam operation and other conditions to help map out exactly what is happening, who is being affected, and what might happen in the area if various factors were to change.

In short, the "virtual Mekong" helps us take care of the real one.

# Picturing the Mekong's future

Children of the river basin were invited to show the Mekong River Commission the kind of future they want for the river when the MRC launched an art competition on 29 October during the 2nd Annual Mekong Flood Forum.

"Our Mekong, our future" is the theme of the competition, which aims to showcase the views and visions of the generation that will inherit the legacy of current river basin development. The competition is also intended to raise community awareness of the regional cooperation processes for Mekong management.

The competition is open to children and young people aged 9 to 15 years living in the Lower Mekong Basin, which includes northeastern Thailand, Cambodia and Lao PDR, and the Mekong Delta of Viet Nam. Entries can be submitted from now till 20 February 2004 and will be judged by a panel comprising representatives from each country.

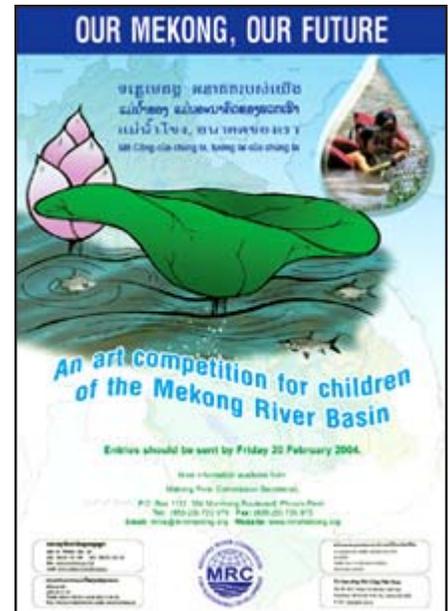
Winners will be announced on 5 April 2004, the anniversary of the signing of the 1995 Agreement. The best entry in each age group and country will receive

a cash prize of US\$50, art materials or sporting equipment, and a book about the Mekong. The best entry in the region will receive a cash prize of US\$100, materials and a celebration at their school.

To ensure that poorer children of the river basin can take part in the competition, the MRC is making a limited amount of art materials available through NGOs working directly with children in the river basin. Packs of art materials are being provided to NGOs together with a video about the Mekong in the language of the country. The packs are designed to support a supervised drawing activity, with materials for up to 10 children per pack.

The competition is funded by the cash prize accompanying the Thies Services International Riverprize, which was awarded to the MRC in 2002 for excellence in river management.

Information about the competition is available on the MRC website, [www.mrcmekong.org](http://www.mrcmekong.org) To inquire about "Our Mekong, our future" art packs, contact Siet Sisopheak at the MRC Secretariat, on [sopheak@mrcmekong.org](mailto:sopheak@mrcmekong.org)



“ Our Mekong,  
Our Future”

art competition for  
children now open for  
entries

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