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A Vision for the Mekong River Basin

An economically prosperous, socially just and environmentally sound Mekong River Basin

A Vision for the Mekong River Commission

A world class, financially secure, international river basin organisation serving the Mekong countries to achieve the basin vision

The Mission of the Mekong River Commission

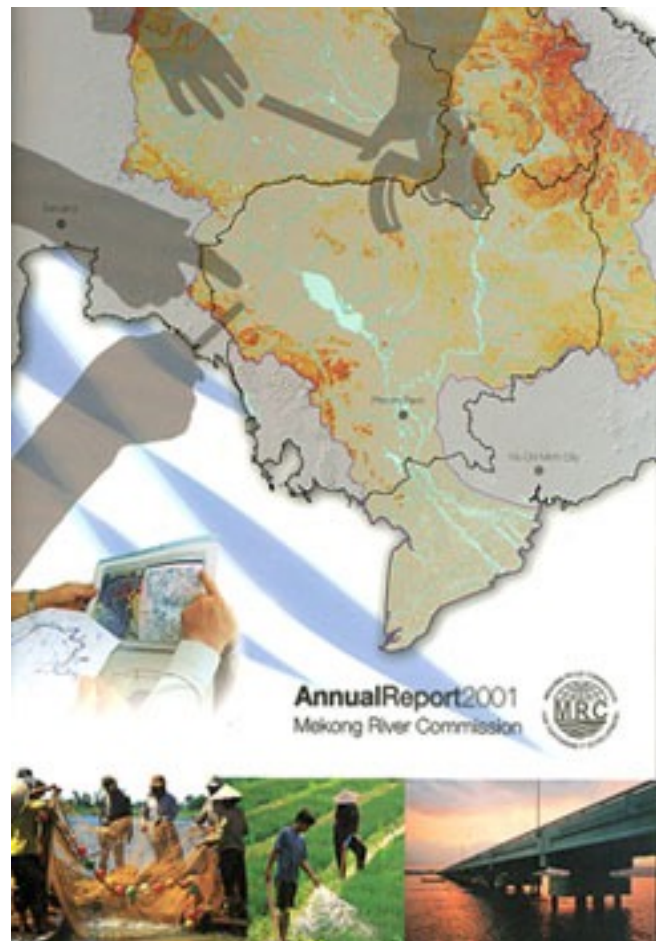
To promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well-being by implementing strategic programmes and activities and providing scientific information and policy advice.

Photos by
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Annual Report 2001 Mekong River Commission



THE MEKONG RIVER COMMISSION

The Mekong River Commission is an intergovernmental body created in 1995 by an agreement between the governments of Cambodia, Lao PDR, Thailand and Viet Nam.



The Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin came about as the four countries saw a common interest in jointly managing their shared natural resources. Signed on 5 April 1995, it set a new mandate for the organisation “to cooperate in all fields of sustainable development, utilisation, management and conservation of the water and related resources of the Mekong River Basin.”

The agreement brought a change of identity for the organisation previously known as the Mekong Committee, which had been established in 1957 as the Committee for Coordination of Investigations of the Lower Mekong Basin – the Mekong Committee.

Since the 1995 Agreement, the Mekong River Commission (MRC) has had a special focus on issues that affect more than one country. Specifically, the MRC is developing “rules” for water-sharing, monitoring the quality of water resources, and supporting a joint planning process called the Basin Development Plan. The MRC is also involved in fisheries management, promotion of safe navigation, agricultural development, flood mitigation and hydropower planning within an overall framework of renewable resources management.

The two upper states of the Mekong River Basin, the People’s Republic of China and the Union of Myanmar, are dialogue partners with the MRC.



Structure and governance

The MRC consists of three permanent bodies: the Council, the Joint Committee (JC) and the Secretariat.

The Council, comprising one member at Ministerial and Cabinet level from each MRC member country, convenes annually and has overall governance of the Mekong River Commission.

The JC, also comprising also one member from each member country at Head of Department level or higher, convenes at least three times a year. This body functions as a board of management. The Secretariat, which provides technical and administrative services to the JC and the Council, is under the direction of a Chief Executive Officer (CEO) appointed by the Council. The Secretariat is located in Phnom Penh, Cambodia. The Assistant CEO is of the same nationality as the JC Chair and serves a one-year term.

The MRC is funded by contributions from the four member countries and from aid donors. Formal consultation with the donor community is carried out through an annual Donor Consultative Group meeting.

The National Mekong Committees coordinate MRC programmes at the national level and provide links between the MRC Secretariat and the national ministries and line agencies. The principal implementers of the MRC programmes and projects are the line agencies of the MRC member countries.

MESSAGE FROM THE CHAIRMAN OF THE MEKONG RIVER COMMISSION COUNCIL



On behalf of the Mekong River Commission (MRC) it is my great pleasure to extend to all readers my warmest greetings and best wishes. I would also like to express my sincerest appreciation and gratitude to all of our partners and friends for their valuable assistance and support extended to MRC in 2001.

In 2000, we refocused the organisation on its mandate based on two pillars for change: a new structure at the Secretariat and introduction of a programme approach to provide the overall framework and direction for our activities. At the Council Meeting in November 2001, we took stock of developments and concluded that the changes have served the organisation well and have put MRC on a rapid track towards realisation of its goals. Most importantly, the three core programmes: the Basin Development Plan, the Water Utilisation Programme and the Environment Programme are now all in operation. Those programmes are the foundation for our ability to develop and manage the natural resources of the river basin. At the Council Meeting, the four member countries reconfirmed their commitment to the programmes and their determination to give the highest priority to ensure their success.

The three core programmes can in many ways be regarded as one. However, we attach particular importance to the Basin Development Plan. With that programme we have started the process of planning the future development of the basin and we are truly grateful to all the donors who are supporting us in this endeavour. The development plan resulting from this process will reflect the priorities of the riparian countries and be based on reasonable and equitable utilisation of water resources. It will also ensure long-term sustainability of the natural resources and maintenance of critical ecological balances. The planning process has the support and commitment at the highest political levels of the riparian governments. The plan will be the outcome of an open, participatory process in which stakeholders in the basin would have been heard.

The four Governments took yet another step towards closer cooperation when the Council in November approved procedures for data and information exchange and sharing under the Water Utilisation Programme. With this decision an important milestone was reached. These procedures are required to ensure that the Secretariat and the National Mekong Committees and line agencies in each of the riparian countries are aware of their responsibilities in managing information and in providing it.

The Capacity Building Programme is the cornerstone which provides us with the managerial and administrative skills to ensure implementation of our programmes. The gender policy, approved by the Council in 2000, is being integrated in programme planning and implementation and also in recruitment of staff where female candidates are encouraged to apply for vacant posts.

In 2000, the devastating flood led the MRC Council to agree that regional flood management and mitigation in the Mekong River Basin is crucial and can only be realised through close cooperation between the MRC Member States. The Secretariat was requested to develop and present to the Council a flood management and mitigation strategy. The strategy was discussed and approved by the Council in November 2001. I would like to stress the unquestionable priority the four Governments attach to the strategy.

Also MRC's new Strategy on Hydropower Development was formulated in 2001, based on five principles approved by the Council and Joint Committee in 1998. Under the strategy, MRC will be involved in the generation and dissemination of information related to hydropower development; policy advice; investigations up to the pre-investment stage; and monitoring of impacts of hydropower-related activities in the Basin. MRC will also promote transparency in hydropower planning and development processes, strengthen planning and implementation capability for hydropower development in the member countries, and promote cooperation and collaboration among the riparian countries and in the region.

The Commission is now on a sound financial footing. It has become more cost-effective and is expanding activities commensurate with the requirements to produce more and work better. We know that this very encouraging situation is not only due to the decision by the riparian countries to raise contributions to the organisation. It is also the result of understanding and support from the donor community. Allow me to express my deepest gratitude for the active donor involvement in securing the basis of our organisation. Our four Governments are determined to take over the costs of running the organisation in the long run in accordance with the decision of the Council in 2000.

**Sontaya Kunplome, Minister of Science, Technology and Environment, Thailand
Chair of the MRC Council for 2001/2002**

A handwritten signature in blue ink, appearing to read 'Sontaya'.

STRUCTURE OF THE MEKONG RIVER COMMISSION

Members of the MRC Council

Members at Ministerial and Cabinet Level. Responsible for policy and decision-making



H.E. Mr Khy Tainglim
Minister of Public Works
and Transport
Member of the
MRC Council for Cambodia



H.E. Mr Somphong Mongkhonvilay
Minister of the
Prime Minister's Office
Member of the
MRC Council for Lao PDR



H.E. Mr Sontaya Kunplome
Minister of Science, Technology
and Environment
Member of the
MRC Council for Thailand



H.E. Mr Le Huy Ngo
Minister of Agriculture and
Rural Development
Member of the
MRC Council for Viet Nam

Members of the MRC Council

Members at department Head level or higher. Responsible for implementing policies and decisions



H.E. Mr Sin Niny
Vice-Chair of Cambodia
National Mekong Committee
Member of the MRC Joint
Committee for Cambodia



H.E. Mr Sitaheng Rasphone
Vice-minister of
Agriculture and Forestry
Member of the
MRC Joint Committee for
Lao PDR



Ms Siriporn Sailasuta
Director-General,
Department of Energy Development
and Promotion, Ministry of Science,
Technology and the Environment
Member of the MRC
Joint Committee for Thailand



H.E. Dr Nguyen Dinh Thinh
Vice-Minister of Agriculture and
Rural Development
Member of the
MRC Joint Committee
for Viet Nam

Secretariat

Responsible for technical and administrative services



Mr. Joern Kristensen
Chief Executive Officer

ORGANOGRAM of the MEKONG RIVER COMMISSION



Government of
CAMBODIA



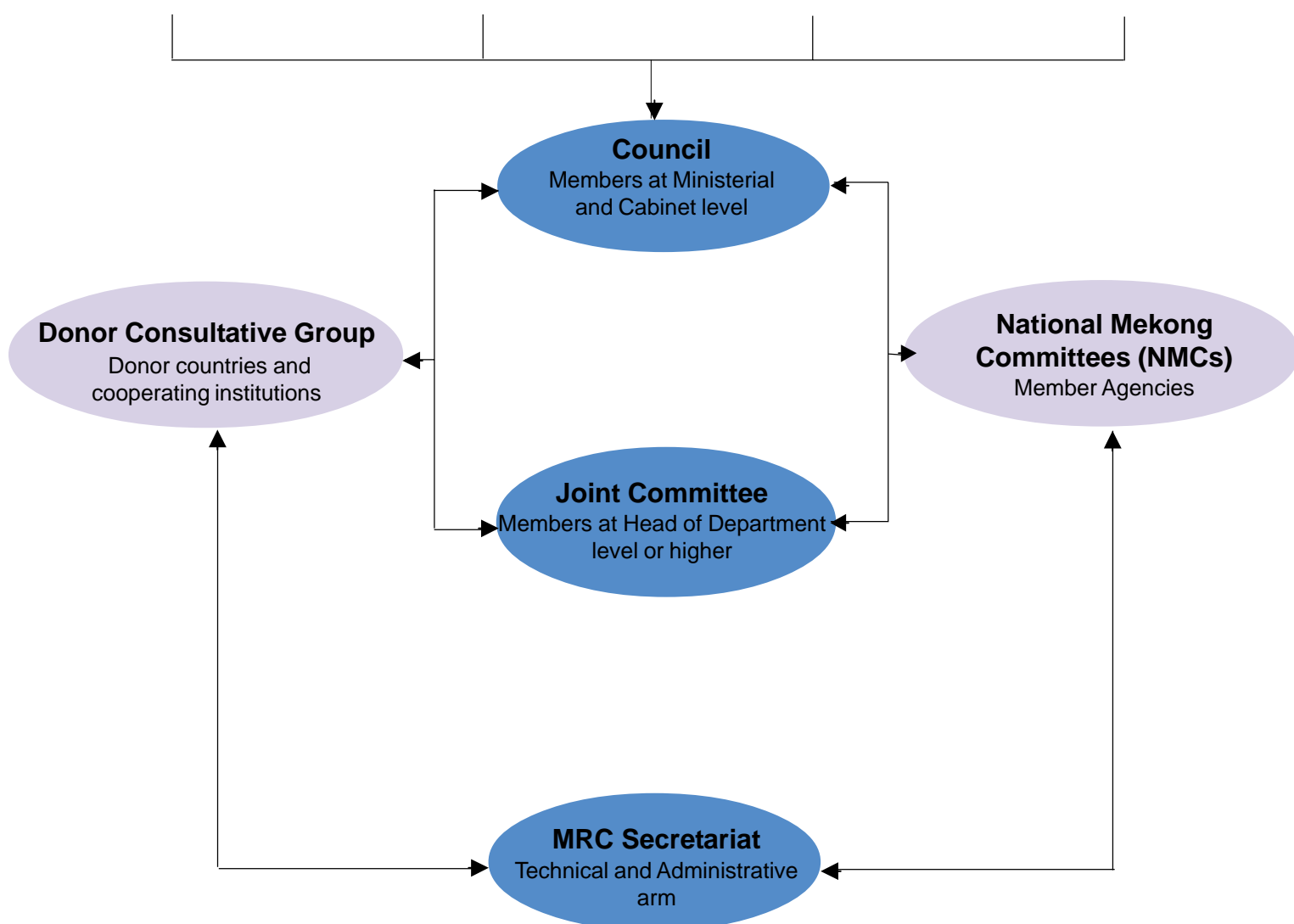
Government of
LAO PDR



Government of
THAILAND



Government of
VIET NAM



BASIN DEVELOPMENT PLAN

The newest of MRC's three core programmes, the Basin Development Plan, began activities in late 2001 with the establishment of a full 8-person team at the Secretariat, and the appointment of National BDP Coordinators in each member country.



The programme began its work with consultation meetings and national launching workshops in each country, and the planning of a high-level regional launch in Bangkok for February 2002. A regional consultation workshop between the four National Mekong Committees was held in early 2002 to develop a Public Participation Strategy for the MRC.

Despite its recent start, the programme was initiated in the 1995 Agreement which established the Mekong River Commission in its present form. Under this Agreement, the Basin Development Plan (BDP) would be the general planning tool for the Joint Committee of the Mekong River Commission to use as a blueprint "to identify, categorise and prioritise the projects and programmes to be implemented at the basin level."

The launch of the BDP now highlights the unique status of the '95 Agreement, which forms the basis of the only

legally-constituted regional organisation mandated from the highest political level to deal with Mekong River management in a holistic manner.

The BDP will create a conducive environment for investment and sustainable development by formulating a strategy for development. This will be based on dialogue between government, private sector and civil society players, using data and analysis that has the unique benefit of representing the collective views of the four lower riparian states. Projects and programmes will be identified that could bring about shared sub-regional growth within a framework of principles based on knowledge sharing, capacity building, and sound environmental management.

At a later stage, investment will be sought for a list of approved projects, most likely in the key areas of irrigated agriculture; watershed management; fisheries; hydropower; navigation, transport and river works; water-related tourism and recreation; water supply for domestic and industrial use; and flood management. Economic and social issues will be considered as the BDP is formulated.

The BDP Team at the Secretariat provides the technical and administrative support base for coordination of the BDP. It supports the work of BDP units and working groups in the member countries. The national BDP units located at each National Mekong Committee represent the member countries, agencies and other stakeholders who are expected to benefit from the BDP.

Investing in people

Rural areas in all the Mekong Basin countries rank among the poorest in the world, with an annual average per capita income of US\$200 to US\$400. The rural poor, who are also often from minority groups, lack access to many basic services including primary education and health care. Social development indicators for health, female literacy and access to safe drinking water are generally low for Cambodia and Lao PDR, countries which lie mostly within the basin. The same indicators for Thailand and Viet Nam are lower within the basin area compared with areas outside the basin, although the basin areas in both countries are of crucial importance to the rest of the country for food production and further agricultural development.

Currently, only about 16 per cent of the basin's people live in urban areas. However, the urban population in the basin is expected to increase rapidly in the coming years, fueled by an increasing population and by immigration from rural areas in response to market-oriented policy reforms.

There is a great need for well-chosen investments in development that will bring benefits as equitably as possible to all, while maintaining the ecological balance of the river basin.

Water for development

Around 85 per cent of the total water use in the Mekong River Basin is for agriculture. Domestic and industrial use accounts for the remaining 15 per cent. Although the total amount of water used represents less than 10 per cent of the annual river flow, there is still the possibility of scarcity because of uneven flow distribution, changes in water quality, and growing demand for water. For example, all of the river flow in the Mekong Delta is already being used for agriculture and to curb salinity intrusion.

At present, only around 30 per cent of households in Viet Nam, Lao PDR and Cambodia have a piped water supply, as compared with 80 per cent in Thailand and China. Household use of water is expected to grow by 50 per cent over the next decade, water for agricultural use by 30 per cent, and water for industrial use by 100 per cent.

Rice and fish – the basis for food security

Rice is the principle crop and staple food of the people in the region. The Mekong River Delta alone generates annually about 40 per cent of the total rice production in Viet Nam.

Fish also plays a vital role as food and as a source of cash income for many of the poorest people in the basin. Fish is a major source of animal protein, while traditional products such as fish paste are an invaluable source of calcium, vitamin A and other nutrients. Fish and fish products can justifiably be called “the milk of Asia”.

However, food security is not assured in many parts of the basin. Increases in production are unevenly distributed and hunger is still prevalent. Extreme flooding destroys fields planted with crops and increases the difficulty of infrastructure improvement.

Ensuring food security is the single most important task of the four lower Basin governments – one which requires a regional approach, acknowledging the regional interdependence of the four Lower Basin countries.

People of the Mekong

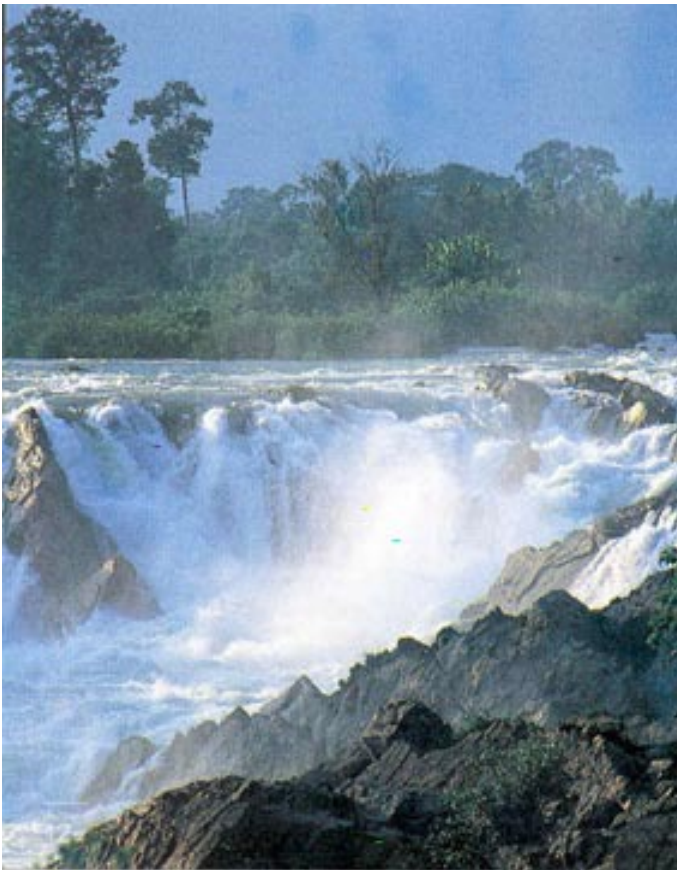
A great diversity of ethnic groups make up the population of the Lower Mekong Basin. Each has its distinct language and customs, in a rich cultural mix including animists, Taoists, Buddhists, Catholics, Cham Muslims, and many indigenous religions.

The inter-mingling of peoples of the basin is vividly displayed today in the floating villages of various ethnic groups who live an independent and almost completely aquatic existence, complete with shops and services, along the Mekong.



WATER UTILISATION PROGRAMME: REACHING THE FIRST MILESTONE

The Water Utilisation Programme (WUP) is an extensive programme with many inter-linked components. The programme will provide the tools and related knowledge base to enable MRC and its member countries to gain a deeper understanding of hydrological linkages between the natural environment, water use and transboundary impacts on water, society and the environment. WUP will also formulate and implement appropriate “Rules” to ensure reasonable and equitable use of the Mekong River Basin’s water and related resources.



At its 6th meeting in October 1999, the MRC Council fully endorsed the WUP, and committed their governments to “undertaking good faith efforts” to negotiate and complete specific sets of rules for water use. These are:

1. Procedures for data and information exchange by the end of 2001;
2. Preliminary procedures for notification, consultation and agreement by the end of 2003;
3. Procedures for monitoring existing water uses by the end of 2003;

4. Procedures for notification, consultation and agreement by the end of 2003
5. Rules for the maintenance of flows by the end of 2004; and
6. Rules for water quality by the end of 2005.

The member countries of the MRC have always recognised that the sustainable development objectives of the 1995 Mekong Agreement can only be achieved when *basin-wide* data and information is used for planning, development and monitoring purposes. For this reason, paragraph C of Article 24 in the Mekong Agreement states that one function of the Joint Committee of the MRC is:

To regularly obtain, update and exchange information and data necessary to implement this Agreement.

In 2001, the first milestone was achieved after a year of training events and active consultation among the four member countries and other major stakeholders.

To reach this milestone, the MRC provided a very structured and closely facilitated process, with a total of over 20 national and regional meetings bringing key players together. A series of training and consultation workshops on data information and exchange was organised in each country, studying examples from other organisations involved in similar work, including the Murray-Darling Basin Commission, the European Union and the World Meteorological Organisation. Regional workshops and meetings of the Technical Drafting Group, which developed the final agreement, were held. To support the process, the MRC secured the services of a permanent legal advisor, plus a range of experts in the areas of international law, multi-lateral agreements and data and information sharing.

ENVIRONMENT PROGRAMME

In line with the Mekong River Commission's mandate for regional cooperation, the MRC Environment Programme focused its efforts on transboundary environmental monitoring in 2001, with major activities in the areas of water quality monitoring, preparing training materials and developing environmental assessment systems.

Water quality monitoring

Potential threats to water quality in the Mekong come from catchment and bank erosion, which increase sediment levels, and from the contamination of pesticides and fertilisers used in agriculture. A desk study and evaluation of MRC's water quality monitoring network shows that there is a low risk of problems developing in the short term, but that the MRC's water quality monitoring network could be improved. Water quality monitoring data is often only analysed when water quality problems arise. As the Basin population grows and industrial development increases, better data collection and improved laboratory procedures will be required for monitoring of water quality.



Under the Environment Programme, MRC has commenced a process of Water Quality Network Revision that should be completed by the end of 2002. This will address concerns such as quality assurance in laboratory procedures. The revision will re-examine the location and number of sampling sites, sampling methods, parameters included, sampling frequency, quality assurance and condition of laboratories. Some of the issues can be addressed relatively quickly and easily, while others, such as upgrading of laboratories, will take longer.

Assessing environmental impacts

The year 2001 saw a number of activities within the Environment Programme focused on aspects of environmental assessment systems, including related areas such as Strategic Environmental Assessment (SEA), Cumulative Environmental Assessment (CEA) and Environmental Impact Assessment (EIA).

One important issue relating to EIA is how transboundary impacts can be accounted for and incorporated into the various Environmental Impact processes. Cambodia, Lao PDR, Thailand and Viet Nam already have standard EIA procedures and legislation in place, but none yet have procedures to deal with transboundary impacts. There are several sets of issues that need to be addressed on a regional basis. These include how to establish mechanisms that allow environmental impact investigations to be carried out across national borders. For example, where a development is proposed which may have a cross-boundary impact, how should pre-project investigations proceed? Should those investigations be carried out by agencies in both countries?

Another issue requiring consideration is how procedures and processes can be set in place so that an Environmental Impact Investigation carried out under the regulations of one country would be accepted by another, potentially impacted, country. This issue is not unique to the lower Mekong. Similar difficulties have been encountered in Europe and North America, and are likely to arise in future in Africa.

The MRC has commissioned consultants to work with the National Mekong Committees to develop guidelines and suggest potential procedures and protocols that may be adopted by the four National Governments as mechanisms to incorporate transboundary impacts into their Environmental Impact procedures.

Training for environmental management

During the previous year MRC commissioned the revision of a set of training materials on EIA-related issues. The materials include both general background materials such as an introductory module on environmental science, and quite specific specialist modules, such as the module on ISO 14001, Environmental Management Systems (EMS).

The training materials that have been developed are specific to the lower Mekong Basin. They have been developed through an extensive consultation process, and include a set of 20 case studies taken from the basin. The information in the case studies was developed by staff from the National Mekong Committees and line agencies. The package also includes a set of reading materials that will allow it to be used by participants who lack access to libraries or online information sources.

The EIA training materials are currently being translated into the four riparian languages. Once the translation is complete, later in 2002, the materials will become available for use by staff in line agencies, and within educational institutions throughout the region. The MRC will also develop training programmes that will use the materials.

How clean is Mekong water?

Water quality in the mainstream of the Mekong is usually expected to be good because the large amount of water in the Mekong – the eighth-largest river in the world – dilutes any effluents to insignificant levels. Cities along the river are generally small, and industrial development is still at a relatively low level – reasons why water pollution is not yet a problem.

Major threats to Mekong water quality are the levels of sediment from catchment and bank erosion, and the possibility of contamination from agricultural chemicals such as pesticides and fertilisers.

Even extremely small concentrations of pesticide can accumulate to serious levels in the tissues of fish and aquatic invertebrates. The accumulated pesticide may then be passed on to people and higher predators such as birds, dolphins and otters, which eat the fish.

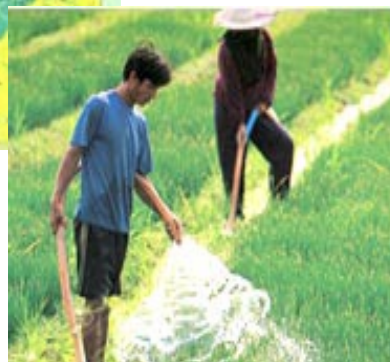
Pesticide contamination is difficult to analyse in water and is best detected by analysing fish tissue. Limited analyses of fish carried out under the MRC water quality network and by other agencies have not detected pesticides at worrying levels. However, this part of the

monitoring program needs to be reviewed in order to ascertain that the results are as accurate as possible.

Sediment levels in rivers are also difficult to measure. Unlike soluble materials such as salt, sediment particles are not uniformly distributed

within the water. To measure the amount of salt in a river, a sample can be taken anywhere in the river and the concentration of salt in the sample can be measured. The concentration multiplied by the volume of water at a location tells you how much salt is present. But with particles of sediment, the smaller lighter particles will be transported rapidly near the river surface while the larger heavier particles will be transported more slowly and nearer the riverbed. The concentration of particles also changes with depth and position in the stream, so that a sample of water will have a different concentration of sediment particles, depending on the depth and location from which it was taken. To accurately calculate the amount of sediment being transported down a river it is necessary to analyse samples taken from different depths. Very little depth-integrated sampling has as yet been carried out on the Mekong.

Existing data, which the MRC has been collecting since 1985, indicate that the water quality in the Mekong is still good. However, the water quality sampling network needs to be improved, in expectation of future needs as the Basin population grows and industry develops.



FLOOD MANAGEMENT AND MITIGATION

Modern floodplain management measures recognise that floods are a regular feature of life. Annual flooding creates the wealth of biodiversity, abundance of fish life and soil fertility in the Lower Mekong Basin. Managing floods, therefore, starts from the premise that floods cannot be prevented but their ill effects, such as loss of housing and destruction of crops, can be mitigated.

Four major categories of flood management measures can be described:

- Land-use planning measures aim to keep people and their work activities away from the most hazardous areas of the floodplain.
- Structural measures such as dams, embankments and flood-proof houses help to keep floodwaters away from people.
- Flood preparedness measures get people ready for the floods before they come. In some cases, this is the only type of management that is feasible or economically justified.
- Flood emergency measures include evacuation, emergency accommodation, cleanup activities and provision of material assistance to people affected by floods.

The MRC's role as a river basin organisation is to provide support services for others, such as national line agencies and emergency relief agencies, to more efficiently fulfil their own tasks in these areas.

In order for the MRC to focus its role more strongly on the transboundary aspects of flood management and mitigation, a Strategy Formulation Team undertook



fact-finding missions in partnership with the National Mekong Committees in each of the four member countries. Team members interviewed key line ministries, international organisations, community groups and individuals right down to village level for a "reality check" on what measures were most needed and how these could be best supported by the MRC.

Findings and recommendations were tabled and discussed at national workshops in each member country, followed by a regional workshop in October 2001. In the process, close partnerships were established with many organisations, including national Red Cross agencies, the International Federation of the Red Cross, the relief agency CARE, the Asian Institute of Technology, the Economic and Social Commission for Asia and the Pacific (ESCAP) and UNDP.

An overall Flood Management and Mitigation Strategy for the MRC was approved by the MRC Council in November 2001, setting the stage for flood issues to become a major focus of MRC's work.

As an organisation that embodies the working cooperation between the four Lower Mekong governments, the MRC's strategic role in flood management and mitigation falls into three categories:

- Providing technical products and services
- Addressing differences and facilitating solutions
- Capacity building and technology transfer

Services in the first category were successfully carried out in 2001 through daily flood forecasting on the MRC website, and sending of flood forecasts to an email list of agencies and individuals.

In the second category, the MRC can be a focal point for flood management and mitigation activities in the region, where they are of transboundary significance. The MRC's reputation as an independent, neutral facilitator with a scientific and technical base of information makes it ideally situated for this role.

The MRC carried out preparation in 2001 for an Annual Flood Forum in the following year. The Flood Forum will support decision-making in the four member countries for better regional integration of flood preparedness measures, by providing a platform for information exchange on flood preparedness measures through a network of participants drawn from international organizations, line agencies and civil society organizations.

Future services in the third category may include standard training programmes for the line agencies in MRC member countries and transfer of technical equipment.

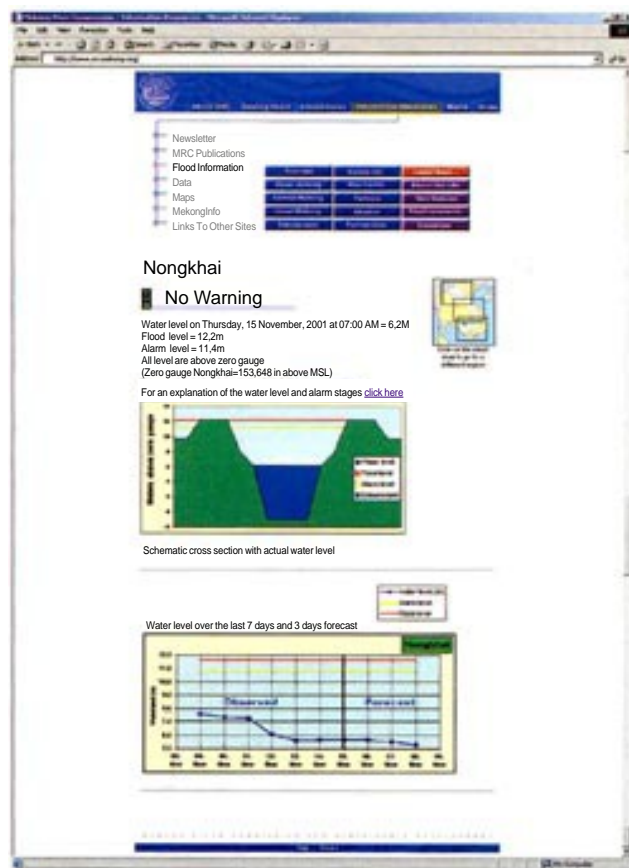
Forecasting floods on the World Wide Web

Click on the station list on the new flood pages on the MRC website. Some of the buttons may flash red: the station is already flooded. Yellow means "warning"; it's time to take some preparatory action. Green means the water level is not yet high. Five-day forecasts, broadcast daily during the July to November flood season, helped agencies and individuals in the Lower Mekong Basin get ready for the floods in 2001.

From July until the rains ended in November, gauge readers, administrators and technical experts in four countries ensured that forecasts were continuously updated. River level readings were taken daily in 21 different Lower Basin locations in Cambodia, Lao PDR, Thailand and Viet Nam. Gauge readers sent the readings by phone, two-way radio or email to a national data collection centre – usually a government ministry. Staff in each country then sent the information to the MRC Secretariat in Phnom Penh every morning. Here, the information was integrated into a daily flood report that went out immediately to an email list of around 100 agencies, government departments and individuals, as well as being posted on the website.

The daily monitoring during the 2001 flood season was a first in the history of Mekong cooperation. The MRC flood forecasts reached a new and broader constituency, bringing feedback from many different sources: a relief agency located in Kompong Cham, Cambodia; scientists in the United States, provincial government staff working in flood-prone locations. Some had requests for additional information, some sent congratulations, some pointed out mistakes that can occur even with the best information. A number of these exchanges developed into strong working partnerships that improved the accuracy, relevance and ultimate value of MRC's forecasts.

While the floods are over – at least for the present – the MRC is continuing to broadcast seven-day forecasts during the dry season. Activity will be stepped up when the rainy season begins again – this time with improved telemetering equipment that can transmit data directly to computer terminals in the Secretariat in Phnom Penh – and an increased number of measuring stations.



WORKING TOWARDS A GENDER BALANCE

A woman GIS specialist joining the Mekong River Commission in 1994 found that she was one of just a handful of women professionals at the Secretariat.

“In those days, the focus was much more technical,” she said. “There were many engineers on staff, and the work was project-based. Staff who were employed tended to come from areas where men predominate; women professionals were found mainly in the Human Resources section, Environment, Fisheries and in the water quality laboratory.”

Today, her desk looks out over an open-plan office in which staff from many countries work, talk and share coffee. There are many cross-divisional meetings at the Secretariat, where women number 19 out of a total of 60 professional staff.

The MRC’s recruitment policy does not favour women over men, except in the rare instances where two candidates for a position may be of equal standing. Rather, MRC has worked to increase the pool of women applying for positions. These efforts include stipulating on vacancy advertisements that “Women are encouraged to apply”, and headhunting wherever appropriate to attract the best possible candidates. The results are seen in a steady climb in the proportion of women to men staff, as well as a growing proportion of women in professional rather than general service positions (see chart).

An active gender policy in recruitment, plus a move towards giving greater consideration to social and environmental issues, has brought more professional women into the Mekong River Commission. Staff members come from many countries of the world – Australia, Canada, Denmark, Myanmar, Malaysia and Norway – as well as Cambodia, Lao PDR, Thailand and Viet Nam.



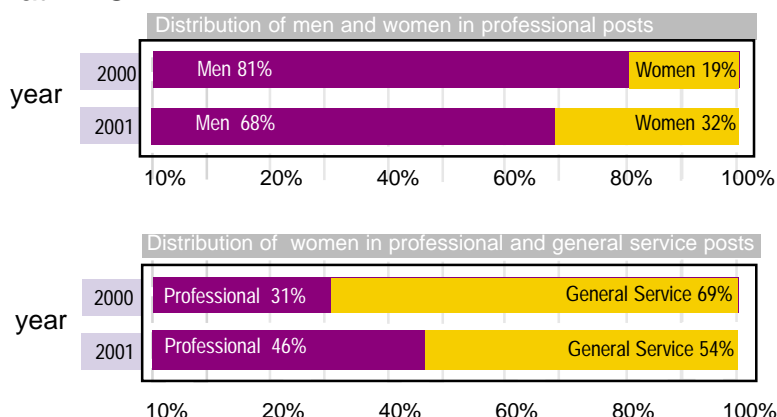
At the Secretariat office in Phnom Penh, where the MRC is based, Personnel Officer Penprapa Worasarn sees a steady stream of candidates for positions at all levels, from administrative and support positions, to senior programme roles. “Women have often not had the same educational opportunities as men,” she said. “Thus, even when they are qualified, they sometimes do not have the confidence to apply to a large agency or see themselves in a more senior role. We try to encourage them to come forward.”

This policy is not a mere numbers game. MRC Gender Policy recognises that “Men and women often play different roles in development, and accordingly, have different needs, interests, access to and control of resources. A gender perspective is required to ensure that the specific needs of men and women, and their vulnerabilities and capacities, are properly recognised and addressed.”

In part, the increase in recruitment of women staff reflects a more holistic perspective taken by the MRC in its core programmes and supporting services. Growing gender equity at the Secretariat ultimately should result in increased effectiveness and relevance in programme work.

Growing equity

Statistic on gender at MRC



Women in Fisheries

With a strong eight-year history of fieldwork as its foundation, MRC's Fisheries Programme took further steps in 2001 to integrate a gender perspective in all of its work.

Women's involvement is more complex than merely ensuring their numbers, and involvement differs according to the target groups concerned. It also varies according to the locus of events: women easily and keenly participate in meetings at village level, whereas events held outside their home towns are predominantly attended by men. Presence at meetings does not always translate into active participation; in higher level meetings, lack of English language can hamper women participants.

In the management of reservoir fisheries, gender-disaggregated indicators have been introduced in order to measure separately for men and women such effects as perceived benefits from co-management systems, satisfaction with management plans and their implementation, participation in training events for users and government staff, and the number of educational scholarships provided.

Women actively participate in a large number of

aquaculture activities and especially fish selling, feeding and daily care of fish. Furthermore, children, the elderly and disabled people are involved in fertiliser applications and fish harvesting activities.

In the Rural Extension Aquaculture Development (READ) Component, therefore, staff members have increasingly encouraged the involvement of women and children in all activities of the component, including record keeping, training, fertilisation, feeding and participation in farmer extension meetings. The component has also adopted a policy of training at least one woman for every man. Women's Associations have been extremely keen to receive training; out of the total number of persons trained in basic aquaculture as of September 2001, 57 per cent were women.

Women in fisheries play an integral role in water resources development in the Mekong region. Yet they face a wide spectrum of problems. For this reason, the member countries of the MRC have taken steps to identify possible solutions, including the establishment of national networks and a regional network to raise awareness of the role of women in fisheries, information gathering and sharing, and to conduct research on women in fisheries among the four countries. The MRC Fisheries Programme has continued to support this work and provides an advisor to the network who is herself another woman professional of MRC.

Working women at the MRC Secretariat



Dongdavanh Sibountong is an Assistant Programme Officer with the MRC Fisheries Programme, educated in Lao PDR and the Fish Culture College in Odessa, Russia. Before joining MRC, she worked at the Lao Ministry of Agriculture and Forestry on an FAO-sponsored programme to improve fisheries production



Nguyen Thi Bich from Viet Nam worked on management of reservoir fisheries in the Central Highlands of her country before joining the Fisheries Programme of the MRC last year.



Muanpong Juntopas is a Thai national and a socio-economist with the new Basin Development Plan team.



Dr. Mak Solieng, Environment/Natural Resources Planner with the Basin Development Plan team, has worked on agricultural Programmes in Cuba, Australia, Viet Nam and her home country of Cambodia

FISHERIES

New consumption studies in selected areas of Cambodia, Lao PDR, Thailand and Viet Nam indicates that the capture fishery yield in this region is as much as 1.75 million tonnes, valued at US\$1.45 billion. In addition, there is another 250,000 tonnes of fish produced from aquaculture in the Lower Mekong Basin.

The MRC Programme for Fisheries Management and Development aims at “Coordinated and sustainable management, use and development of the economic and nutritional potential of the inland living aquatic resources in the Mekong River Basin.”

Through its past years of research and fieldwork, the MRC Fisheries Programme has generated substantial new knowledge about Mekong fisheries. The programme is now moving into a new stage, in which dissemination of knowledge and influencing of planners and policy makers is prioritised.

The programme supports three sub-sectors:

1. Capture Fisheries and Aquatic Resources, aiming primarily at evaluation of fish resources and the development of fisheries management on the regional, national and local levels;
2. Small-scale Aquaculture Development, mainly addressing aquaculture development in the flood plains and the development of aquaculture systems using indigenous Mekong fish species; and
3. Cross-cutting Development, covering capture fisheries management, aquaculture development and coordination with other water resource sectors, and strengthening of inland fisheries information systems.

At the regional level, the programme has generated considerable biological and socio-economic information, with studies of fish migration in the mainstream and in major tributaries. The results of these studies are needed for transboundary fisheries management and impact assessments of water management activities. Research commissioned by the Technical Advisory Board for Fisheries Management was also completed

on river catfish (*Pangasius hypophthalmus*) stocks shared between Cambodia and Viet Nam; status of Mekong giant fishes; and the role of deep pools in the ecology of the Mekong. The programme further contributes to raising awareness of the need and potential for public participation in inland fisheries management, or “co-management”, by conducting a series of sustained and joint training events for fisheries officers from the region over a period of three years.

With the development of a fisheries communication strategy under way, the MRC is ensuring that the importance of fisheries is considered within its own core programmes,

in particular, the Basin Development Plan and Water Utilisation Programme. Major elements of the Fisheries studies have been reported in international forums, print materials and CD-Rom. A film on capture fisheries of Cambodia is being made, and a report on “Local Knowledge in the Study of River Fish Biology” was published in an attractive format as the first in MRC’s new *Mekong Development Series*.

At the national level, the Programme has been closely involved in the establishment of the Community Fisheries Development office and its functions in Cambodia, as well as contributing to the development of a new sub-decree on community management of the fishery. Planning for the construction of the Freshwater Fisheries Research Institute in Cambodia was concluded. Throughout the region, more emphasis has been given to publication of results in riparian languages and in English.



With an emphasis on local-level management, the Reservoir Fisheries Component has carried out activities with a view to enable and facilitate the involvement of resource users and members of government line agencies as equal partners in management. Such activities centred on suggesting improvements in policy formulation on fisheries management, reservoir-specific fisheries management planning and implementation, and capacity-building of fisheries co-managers.

Within the aquaculture sub-sector of the Fisheries Programme, the results of a recent economic survey have confirmed the direction taken by the Programme, showing that integrated fish culture significantly increases fish production and improves the well-being and cash income of poor and marginal rural households (see chart 2).

Exotic species bred in ponds can escape into the waterways during seasonal flooding, causing long-term changes in Mekong ecosystems. Work therefore is continuing on the development of husbandry systems for fish species indigenous to the Mekong.

The Technical Advisory Board for Fisheries Management, made up of high-level representatives from the riparian line agencies, continued its work on current transboundary fisheries issues during 2001. Staff within the Fisheries

Programme are the primary coordinators of the Network for Women and Gender in Fisheries Development of the Mekong Region, providing leadership and organisational support to the network. In addition, the Programme continued to host its Annual Meeting and Technical Symposium. These two meetings are now the major annual forums for fisheries managers and research and development personnel in the Lower Mekong Basin, thus serving as the primary coordinating point for regional fisheries planning.

A sector status report on fisheries over the last 10 years is being published. Preparations also began for a major Symposium on Large Rivers and Fisheries, to be held in 2003 in Phnom Penh, in which the MRC Fisheries Programme will play a major role.

Chart1: The higher the river, the greater the fish catch. Time series data is essential for monitoring the health of the fishery

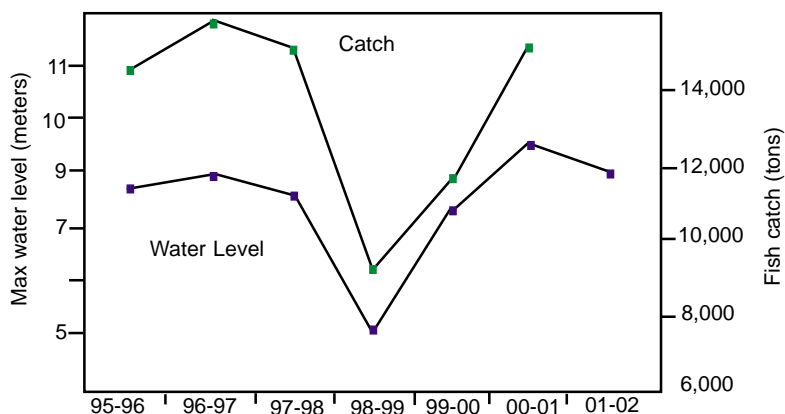


Chart2: Rice farmers in the same area earn about US\$1 to US\$1.50 a day, compared with higher returns from aquaculture



NAVIGATION

News headlines in 2001 focused on a major event underlining the quest for better river transportation and trade by the four Upper Mekong countries. The governments of China, Lao PDR, Myanmar and Thailand signed an Agreement on Commercial Navigation, agreeing to measures that would make the river navigable all year round and improve shipping safety.

The Mekong River Commission offered to assist the countries that signed this agreement by carrying out an Environmental Impact Assessment of proposed river works that would be undertaken under the agreement.

Meanwhile, increased maritime shipping could also become a reality for the cities along the Lower Mekong, bringing increased revenue from international trade, contributing to economic diversification and generating demand for labour.

At present it is possible for seagoing vessels in the South China Sea to reach Phnom Penh Port through the Mekong Delta and up the river. In practice, few ships make this journey, due to various physical and non-physical constraints.

Non-physical constraints could be addressed by the negotiation of a comprehensive legal and operational framework for maritime navigation between Cambodia and Viet Nam, the introduction of common navigation rules and regulations, facilitation of cross-border procedures, provision of better port handling and maintenance facilities and better river police and rescue services. Physical constraints could be addressed by improvements in vessel design, morphological and hydraulic studies of the river, installation of buoys and beacons, regular hydrographic surveying and mapping, and better information and classification of the waterways.

With these issues resolved, increased trade would bring foreign currency, economic diversification and increased demand for labour to the cities of the Mekong, linking it more closely to shipping within and out of the ASEAN region.

The Mekong River Commission carried out initial work in 2001 on developing a Master Plan for the Water Transport Sector in the Mekong Delta, and Capacity Building for Improvement of Navigation in Cambodia.

The MRC also secured finances in December 2001 for formulation of a Regional Strategy and Programme for Navigation Development and Coordination in the Lower Mekong Basin. Its activities are due to be completed by end of 2002.

Two major projects were also completed in 2001: a study of the Chaktomuk River Junction in Cambodia, and a joint MRC-ESCAP project, Harmonisation of Aids to the Navigation Systems Along the Greater Mekong River.

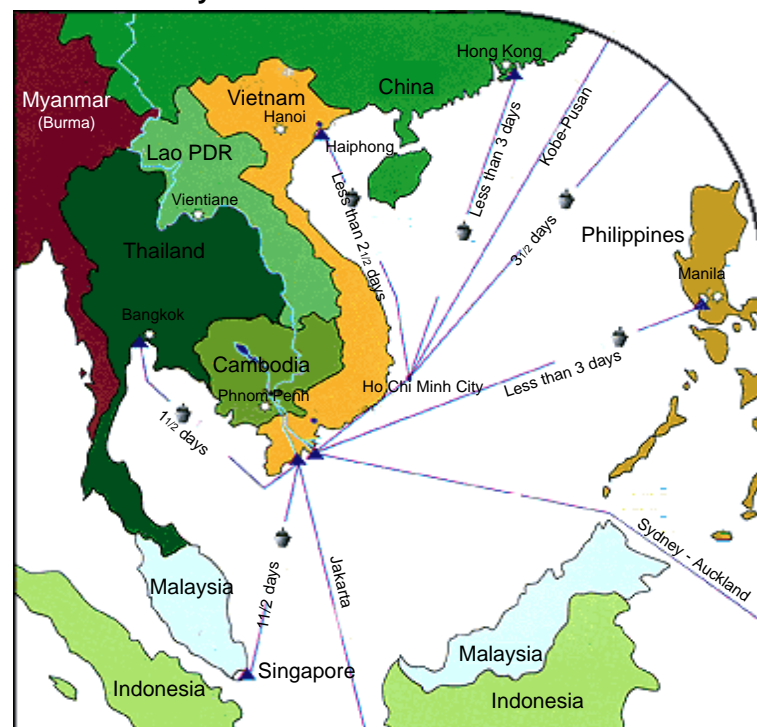
Improving access to Phnom Penh Port

Navigation from the Mekong Delta up to Phnom Penh Port depends on access through the Chaktomuk river junction in Phnom Penh, Cambodia. Situated at a "crossroads" between the Upper and Lower Mekong, and the Bassac and Tonle Sap rivers, Chaktomuk junction is the key to flow distribution between the four river branches and to their morphological and hydraulic development.

Over the years, the flow distribution at the junction has altered, with increased siltation potentially blocking the navigation channel to the port of Phnom Penh.

In August 2001, the MRC concluded 10 months of surveys and studies by international and Cambodian experts with a seminar demonstrating why the river flow has changed, and recommending a stabilisation plan based on mathematical models. This plan is the basis for further work that, amongst other positive impacts for the Chaktomuk area, would keep the shipping channel open.

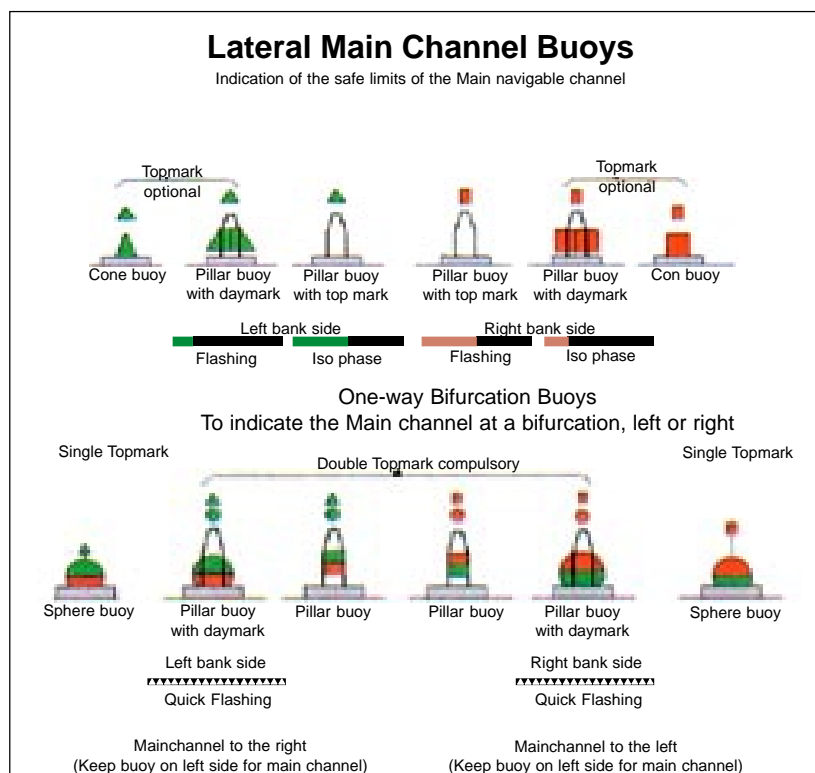
Travel times from key Asian ports to the Mekong-Bassac estuary



Harmonisation of Aids to Navigation

Until October 2001, there were six different systems for navigation channel markers along the Greater Mekong River; each Mekong country had its own system. Aids to navigation (ATN) such as buoys and beacons are vital elements for safe passage. But the application of different systems on the same river causes accidents, endangers the lives of passengers and crew, and hampers cross-border river and maritime transport. Therefore ESCAP and MRC joined efforts for the urgent task of harmonising the different systems.

After national consultations in the six Mekong countries, a meeting of country experts in October 2001 in Bangkok agreed that the Khone Waterfalls in Lao PDR do not permit cross-border navigation between Cambodia and Lao PDR, and that therefore two separate systems could be permitted. The ESCAP/MRC recommendations for ATN on the Upper Mekong River, based on the Chinese system, were approved for use in China, Lao PDR, Myanmar and Thailand. The two Lower Mekong countries Cambodia and Viet Nam agreed in principle to use the international IALA/SIGNI system. Final deliberations on the adoption of the international system were planned for January 2002.



AGRICULTURE, IRRIGATION AND FORESTRY

The Agriculture, Irrigation and Forestry Programme (AIFP) was approved by the MRC Council in October 2000 with a total budget of US\$ 31.3 million. In 2001, the programme was pledged support of around US\$5 million by the German and Japanese governments, enabling it to begin some planning and appraisal work.

The AIFP is based on a catchment management approach, focusing on activities to promote the sustainability and further development of food production from the land and water resources of the Basin in areas where cooperation between member countries is required for success. There are three components to the programme: (i) water use efficiency, (ii) catchment management, and (iii) capacity building within the MRC.

Importance of transboundary catchment areas

The Mekong region is endowed with a rich natural resource base, on which the economies of the four Lower Mekong Basin (LMB) states will rely heavily for some time to come. Agriculture provides employment for some 85 per cent of the Basin's population, and is dependent on water resources of the Basin. Forestry practices have far-reaching impacts on the economic and ecological health of the Basin.

Thirty per cent of the LMB catchments, due to their biophysical conditions, should be classified as hydrological protection forests (so-called Class I) areas, or protection and limited production forests (referred to as Class II areas). Class I areas include the headwaters of rivers, which are usually at high elevations, have very steep slopes and should remain under permanent forest cover. Class II areas are usually found at high elevations with steep to very steep slopes, and land forms that require soil and water conservation restrictions. By far the highest percentage of both Class I and Class II areas lie within the Lao part of the LMB, followed by Thailand with 14 per cent, Viet Nam with 13 per cent and Cambodia with 4 per cent. Watersheds in Lao PDR also contribute the largest flow volume to the Mekong river system, accounting for 43 per cent of the total average flow.

A large number of the most critical watersheds, requiring immediate interventions from the riparian states, are shared by two or more riparian countries. These include the Se San and Se Prok sub-basins which are shared between Cambodia and Viet Nam, Se Kong sub-basin which is shared between Cambodia, Viet Nam and Lao PDR, and the Nam Num sub-basin, shared between Lao PDR and Viet Nam. Furthermore, degradation of any watersheds within national borders will affect water flows into the Mekong river system, possibly causing severe soil erosion, siltation, flooding and drought.

MRC areas of expertise

Over the past few years, MRC has executed GIS-related information-collection exercises, designed to provide analytical tools for land use planning and forest and watershed management. One of the MRC's strong points has been the practice of engaging experts from the four riparian countries to undertake its studies and project work. Because these riparian experts are seconded by line agencies in their respective countries, it has fostered technology transfer and dialogue between agencies in the riparian countries.

With the newly-pledged donor support in 2001, the AIFP is now poised to embark on an integrated basin-wide approach for the first time. An appraisal team has begun work in all four member countries of the MRC, to consider:

- Institutional capacity and know-how within each country to execute the AIFP
- Possibilities to work in areas which have been marked as critical watersheds
- Institutional arrangements needed for programme implementation of the proposed components
- Identification of opportunities and benefits relating to transboundary cooperation in catchment management

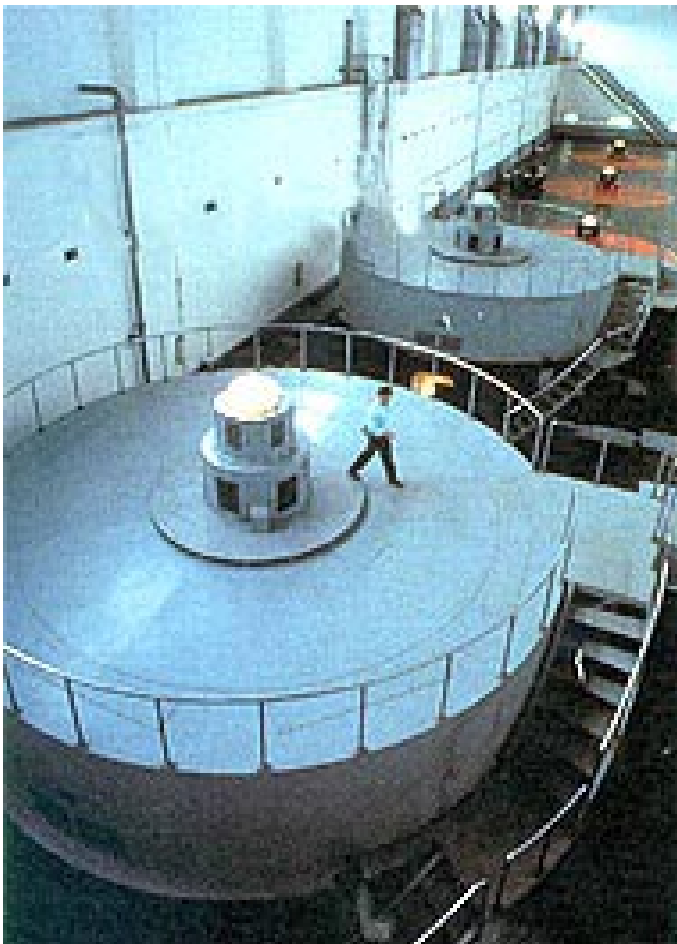
The future for AIFP

In 2002, watersheds in the LMB will be inventoried and key areas will be selected for programme activities focusing on the impacts of human activity in the areas of agriculture, irrigation, forestry and fisheries. Criteria for selection include the size and transboundary significance of the watershed, characteristics representative of upstream and downstream conditions, ease of border crossing and road access, similar institutional capacities on both sides of the border, and extensive use of natural resources by local people.

The first phase of implementation will emphasise multi-stakeholder dialogues, the need for land use planning on a regional basis, and strong cooperative processes – all of it ultimately aimed at improvement of livelihoods while maintaining ecological balance in some of the most critical areas of the LMB.

HYDROPOWER

Through its lifetime, the former Mekong Committee built a reputation for its investigations into hydropower development, including feasibility studies for mainstream and tributary projects. But the signing of the 1995 Agreement, which established the Mekong River Commission (MRC) in its present form, marked a turning point. Since then, the MRC has shifted away from such involvements, towards a focus on providing information and policy advice on broader, basin-wide issues in the sector.



After an extensive consultation process, an MRC Strategy on Hydropower Development was finalised in 2001 by the Water Resources Management Programme of the MRC, outlining an approach that treats hydropower potential as one of many available renewable natural resources, and which should only be developed in a basin-wide context, where overall impacts are taken into account and different uses and users of water are given due consideration.

The process involved representatives of concerned agencies and individuals in the four MRC member countries, including the National Mekong Committees and the relevant national line agencies, as well as a wide range of civil society organisations and international agencies such as the Asian Institute of Technology, the Asian Development Bank, the World Commission on Dams, the Global Water Partnership, the World Wide Fund for Nature, Oxfam America, the TERRA Foundation, and others.

In line with the MRC's broader approach to hydropower planning, a workshop was held at the Secretariat in June 2001 to raise awareness among the National Mekong Committees and line agencies of the recommendations of the World Commission on Dams.

The MRC Strategy on Hydropower Development is based on five principles approved by the MRC Council and Joint Committee in 1998. These principles focus on information exchange; close cooperation with relevant international institutions; coordination and monitoring of basin-wide activities; studies and methodology development with respect to cumulative environmental impacts and socio-economic aspects, including mechanisms for public participation; and private sector involvement.

These five principles have now become the foundation for formulating the strategy.

Under the strategy, the MRC will be involved in the generation and dissemination of information related to hydropower development; policy advice; investigations up to the pre-investment stage; and monitoring impacts of hydropower-related activities in the Basin. It will also promote transparency in hydropower planning and development processes, strengthen planning and implementation capability for hydropower development in the member countries, and promote cooperation and collaboration among the riparian countries and in the region.

Hydropower as an activity of the MRC plays a modest role now compared with the past, and compared with other MRC areas of work. MRC's hydropower activities are to ensure that the increasing demand for electric energy in member countries is met without being detrimental to the environment or communities – an aim which requires a hydropower strategy in keeping with best practices.

ADMINISTRATIVE AND FINANCIAL ISSUES IN 2001

In the year 2001, the Secretariat provided overall support in the further transition of the Mekong River Commission from a project-oriented organisation to a programme-oriented one.

Despite an increased activity level, the MRC managed to further reduce the operational expenses for 2001 throughout the year. This year the MRC also deemed it necessary to realise some irrecoverable losses from previous years, creating a temporary deficit to be carried forward into 2002. It is expected that this deficit will be recovered early in 2002, due to transfers of 2001- related income.

The Secretariat will continue its tight budget control and seek cost-effective solutions in providing overall support to the programmes.

The year was also a very challenging one in that the Basin Development Plan programme was fully staffed and became operational towards the end of 2001. This required an intense level of recruitment activity, which has resulted in highly qualified personnel now being in place.

The year 2001 was also the first year of full and independent running of the new financial management system SOLOMON. It has already contributed significantly to the overall financial management of MRC.

MRC also revised and updated all Policy Manuals relating to Programme, Personnel, Administration and Finance, ensuring the smooth execution of programme activities



DONOR COOPERATION IN 2001

Four years ago, donor support for the Mekong River Commission was at an all time low. The year 2000 was a turning point in terms of funding, indicating renewed confidence among the donor community in the direction and management of the MRC. Donors continued to show their support with further commitments and pledges in 2001 with an approximate total of US\$ 15.62 million in agreements and another US\$ 13 million in pledges. In addition, a donor country has reserved an amount of US\$ 2.7 million for Cambodia, Lao PDR and Viet Nam for MRC purposes for 2001-2004.

In 2001, MRC received funding and pledges from Australia, Denmark, Finland, Germany, Japan, New Zealand, Norway, Sweden, Switzerland, and UNDP.

New Funding Agreements in 2001

Total value of new funding agreements:

US\$ 15.62 million

Programme	Thousands of \$ (approximate conversion)
2. Multi-functionality of paddy fields in the Mekong River Basin	370
2. MRC institutional support	50
3. Consolidation of hydro-meteorological data and multi-functional hydrologic roles of Tonle Sap lake and its vicinities	404
4. Extension of the sustainable management of resources in the Lower Mekong Basin	885
5. Mekong River Commission long-term Environment Programme	2 000
6. Modelling of flow regime and transport phenomena in the Great Lake of Tonle Sap	1 263
7. Institutional support	225
8. Updating strategy and programme for navigation development and coordination in the Lower Mekong Basin	385
9. Formulation of the Mekong River Commission Basin Development Plan	3 300
10. Support to the Environment Programme, Basin Development Plan and institutional support	3 400
11. Appropriate hydrological network improvement project	3 340
12. MDBC/MRC strategic liaison project - phase II (combined total for items 11 – 14)	
13. Support for expert in natural resources planning for the BDP	
14. Australian consultants' trust fund	

Firm Pledging Received in 2001

Total approximate value of firm pledging:

US\$ 13 million¹

Programme	Thousands of \$ (approximate conversion)
1. Basin Development Plan	1 200
2. Environment Programme	1 620
3. Core support	1 580
4. Formulation of regional Flood Management and Mitigation Programme	221
5. Implementation of regional Flood Management and Mitigation Programme	1 330
6. Flood forecasting	227
7. Agriculture, Irrigation and Forestry Programme catchment management component	1 990
8. Agriculture, Irrigation and Forestry Programme integrated forest rehabilitation	4 420
9. Gender mainstreaming in water resources development in the Lower Mekong Basin	260
10. Communications officer post	150
11. Bilateral cooperation through Cambodia, Lao PDR and Viet Nam	2 700

(Footnotes)

¹ This amount does not include bilateral arrangements for MRC purposes.

INCOME AND EXPENDITURE STATEMENT

	2001 USD	2000 USD
Contributions		
Donors	12,111,815	8,561,315
Riparian governments	623,160	780,000
	12,734,975	9,341,315
Revenue		
Professional income	22,604	-
Interest	65,319	173,716
Miscellaneous	19,880	16,547
	107,803	190,263
Total Income	12,842,778	9,531,578
Expenditure		
<i>Project expenditure</i>		
Personnel services	5,545,192	6,266,308
Sub-contracts	558,169	1,460,977
Training	1,169,193	1,743,582
Equipment	894,938	1,211,759
Miscellaneous expenses	499,816	855,680
Water Utilisation Project	1,486,245	-
	10,153,553	11,538,306
<i>Administrative expenditure</i>		
Staff salary and fees	914,908	930,280
Common staff costs	405,100	464,258
Travel	3,327	12,094
Contractual services	56,465	32,126
General operating expenses	164,840	263,702
Supplies	20,639	26,805
Furniture and equipment	86,867	4,669
MRC meeting expenses	88,244	68,975
Support to National Mekong Committees and programmes	88,847	39,281
	1,829,237	1,842,190
Total Expenditure	11,982,790	13,380,496
Foreign Exchange Gain	6,574	231,137
Movement in Fund Balances	866,562	(3,617,781)
Fund Balances as at 1 January	6,222,733	9,840,514
Fund Balances as at 31 December	7,089,295	6,222,733

Note: Previous years' income and expenditure statements contained separate lines for Secretariat Support Costs. These items have now been incorporated into the donor contributions, following our external auditor's recommendation.