Annual Report 2012

Mekong

River Commission

The Mekong River Commission

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Vision: Mekong River Basin

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

Vision: Mekong River Commission

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

Mission

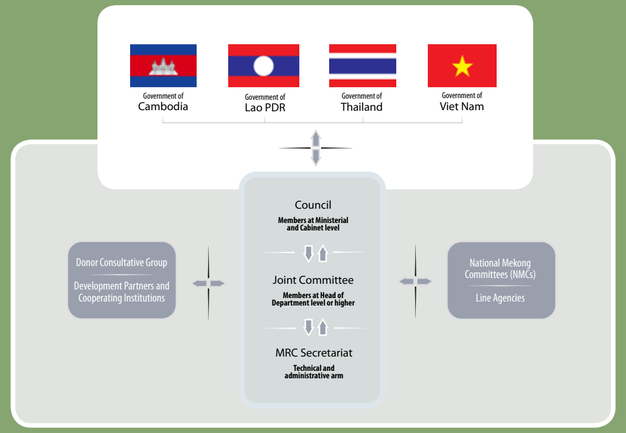
To promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well-being

Contents

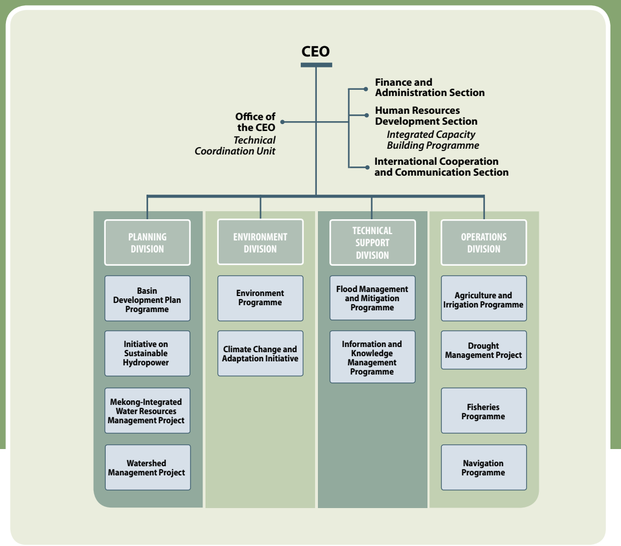
List of Acronyms

AIP	Agriculture and Irrigation Programme
BDP	Basin Development Plan Programme
BDP 2	Basin Development Plan 2
CCAI	Climate Change and Adaptation Initiative
CEO	Chief Executive Officer
CF	Core Function
DMP	Drought Management Programme
EIA	Environmental Impact Assessment
EP	Environment Programme
ESCIR	Ecosystem Study Commission for International Rivers
FAS	Finance and Administration Section
FMMP	Flood Management and Mitigation Programme
FP	Fisheries Programme
FAO	Food and Agriculture Organisation
GIS	Geographic Information System
GMS	Greater Mekong Sub-region
HRS	Human Resources Section
ICBP	Integrated Capacity Building Programme
ICCS	International Cooperation and Communication Section
IKMP	Information and Knowledge Management Programme
IRRI	International Rice Research Institute
ISH	Initiative on Sustainable Hydropower
IUCN	International Union for Conservation of Nature
IWMI	International Water Management Institute
IWRM	Integrated Water Resource Management
JC	Joint Committee
JICA	Japan International Cooperation Agency
JRP	Junior Riparian Programme
LMB	Lower Mekong Basin
MDG	United Nation's Millennium Development Goals
M-IWRMP	Mekong Integrated Water Resource Management Project
MOU	Memorandum of Understanding
MRC	Mekong River Commission
MRC-IS	Mekong River Commission's Information System
MRCS	Mekong River Commission Secretariat
NACA	Network of Aquaculture Centres in Asia Pacific
NAP	Navigation Programme
NIP	National Indicative Plan
NMC	National Mekong Committee
NMCS	National Mekong Committee Secretariat
OEB	Operating Expenses Budget
OSP	Office of the MRC Secretariat in Phnom Penh, Cambodia
OSV	Office of the MRC Secretariat in Vientiane, Lao PDR
PDIES	Procedures for Data and Information Exchange and Sharing
PMFM	Procedures for the Maintenance of Flows on the Mainstream
PMS	Performance Management System
PNPCA	Procedures for Notification, Prior Consultation and Agreement
PWQ	Procedures for Water Quality
PWUM	Procedures for Water Use Monitoring
RAP	Regional Action Plan
RBC	River Basin Committee
RBM	River Basin Management
SEA	Strategic Environmental Assessment
SEAFDEC	Southeast Asian Fisheries Development Center
SIMVA	Social Impact Monitoring and Vulnerability Assessment
SOB	State of the Basin
Tb-EIA	Transboundary Environmental Impact Assessment
TCU	Technical Coordination Unit
WFC	World Fish Centre
WMTF	Water Management Trust Fund
WSC	Watershed Committee
WSMP	Watershed Management Project
WWF	World Wildlife Fund

The Lancang–Mekong Basin



Mekong River Commission Governance Structure



Mekong River Commission Secretariat Operational Structure

Message from the Chairperson of the MRC Council for 2011-2012

I am very pleased to present this 2012 edition of the Annual Report of the Mekong River Commission (MRC).

This publication will highlight just some of our many efforts during 2012, many of which will carry on to next year and beyond.

Over the course of 2012, which was the second year of implementing the MRC Strategic Plan, 2011-2015 , the MRC Programmes worked together in many different capacities and areas with significant progress and achievements towards the common goal of poverty reduction and sustainable development of the Lower Mekong Basin.

In 2012 the growing interest in hydropower in the region, in particular the Xayabury Hydropower project on the Mekong mainstream became a sensitive issue with a growing public attention and concerns. The MRC's Initiative for Sustainable Hydropower (ISH) provided valuable technical input to the Procedures for Notification, Prior Consultation and Agreement (PNPCA) process and continued development of its Preliminary Design Guidance for the proposed mainstream dams. The ISH also looked at the benefit sharing options of hydropower and there was more development of the Rapid Basin-wide Hydropower Sustainability Assessment Tool (RSAT) and continued engagement of stakeholders.

For me, one of the highlights of 2012 was the Mekong2Rio International Conference convened by the MRC in Phuket, Thailand. We were able to show the world the Mekong spirit of cooperation during an event, when over 350 participants from around the globe, as well as representatives from 14 different river basin organizations gathered to address the transboundary dimension of the link between water use, energy and food security with an emphasis on the challenges that rapid human-made developments and environmental change pose to the sustainable management of transboundary river basins.

The Conference also sent a message to the Rio+20 Conference to raise awareness of the particular issues of transboundary river basin management.

I am very thankful to the MRC Development Partners for their continued generous support, which helps the MRC respond to the development challenges as they

HE Mr Lim Kean Hor,
Minister of Water Resources and Meteorology
Chairperson of Cambodia National Mekong Committee

occur throughout the Mekong Basin. I am certain that many of the MRC achievements would have not been possible without their support.

In 2010 at the First MRC Summit, Prime Ministers from the four MRC Member Countries decided that the Commission needed to be financially self-sufficient by 2030 and also examined the feasibility of decentralisation of the MRC's core river basin management functions.

This ambitious step is one of the many ways the Member Countries are working together to enhance the ownership and to improve the efficiency and effectiveness of the Mekong River Commission.

As we enter into 2013, a new year with new challenges, both man-made and natural, I feel optimistic that as long as we work together we can address these challenges and help our nations thrive along this great river we share, the Mekong.

Sincerely,

H.E Mr. Lim Kean Hor,
Minister of Water Resources and Meteorology
Chairperson of Cambodia National Mekong Committee
Member of the MRC Council for Cambodia
Chairperson of the MRC Council for 2011-2012

Sending a message: Mekong2Rio

In May 2012 in Phuket, Thailand, the MRC convened an international conference on how transboundary rivers could best meet the water, food and energy needs of their populations while at the same time minimise any negative effects.

The conference, entitled Mekong2Rio, and hosted by the Royal Thai Government, brought over 350 participants from around the globe to address the transboundary dimension of the link between water use, energy and food security with an emphasis on the challenges that rapid human-made developments and environmental change pose to the sustainable management of transboundary river basins.

Major players at river basin organisations, together with water and environment ministers, government officials, policy-makers, development agencies, international and non-governmental organisations, the private sector and other stakeholders shared experiences and discussed the particular challenges of the transboundary use of shared water resources. 14 major river basin organisations, 16 international organisations and two intergovernmental bodies were represented at Mekong2Rio.

The conference offered attendees the opportunity to build networking opportunities, broaden their perspectives and improve their expertise.

With increased and rapid development around the world, especially in the Mekong Region, more pressure is being put on precious water resources. When this demand is multiplied by the increasing requirements for energy and food, new integrated approaches must be taken.
This nexus of water, food and energy security was discussed earlier in Germany at the Bonn2011 Nexus Conference.

Both the Mekong2Rio and the Bonn Conferences were precursors to the Rio+20 Conference, the United Nations Conference on Sustainable Development, held in June 2012 in Rio de Janeiro, Brazil.

The Mekong2Rio conference also sent a message to the Rio+20 Conference to raise awareness of the particular issues of transboundary river basin management.

The nexus approach looks at the links between water, energy and food in management, analysis, planning and implementation functions. Working with this unified approach ensures that cross-sector impacts can be avoided and, most importantly, that by working together as one, resources are used more beneficially to achieve the same goal.

The conference considered the transboundary aspects of this approach. Decision-makers and planners must analyse the connections between the sectors to make sure that choices in one area don't have negative impacts on another. The advantage of dealing with a transboundary approach is that the solutions can be shared and there can be a synergy amongst the different players.

At the conference there were plenary, technical and dialogue sessions with a focus on challenges and problems the Mekong and other river basins were facing.

New ideas were promoted, new solutions shared, new technologies were shown all with the goal of protecting peoples' livelihoods and the environment.

After the completion of the conference a book was produced that recorded the discussions and highlights of the event with the aim of providing a reference to showcase the latest thinking and at the same time inspire new ideas about the water, food and energy nexus in a transboundary context to a wider audience around the world.

The book was launched at the World Water Week in Stockholm later in the year.

Taking Charge:
Decentralisation of Core River Basin Management Functions

Every year, in the time leading up to the boat racing festival, teams of male and female rowers compete for bragging rights to see who is fastest on the Mekong River.

Local villagers who have been plying the waterways for years pass down their knowledge by instructing novice rowers on simple things, from how to hold the paddle and stroke it to pull the boat through the water, and later on teach them more advanced techniques.

Gradually the crew members learn enough from their experienced guides that they are able to take control of their teams and boats and take them across the finish line to victory.

This transfer of knowledge, passing the torch to a different group, is a lot like the plans in store for the Mekong River Commission.

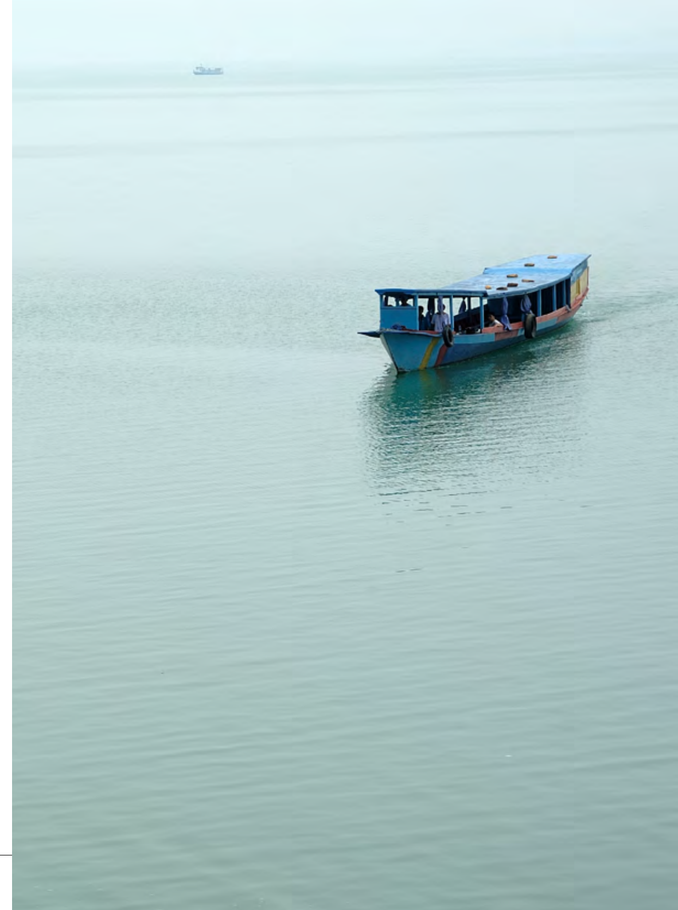
The 'crew' of the MRC may not all come from the same country or speak the same language, but they all have a common goal; to maintain long-term goals of managing water and related resources in an effective, equitable and sustainable manner.

At the Mekong Summit in 2010, Prime Ministers from the four MRC countries decided the organisation needed to be financially self-sufficient by 2030 and thus become less reliant on external funding, which currently amounts to 90% of the Commission's budget, and examine the feasibility of sustaining the Commission's operation through greater national level implementation and financing. This process is called "decentralisation of the MRC's core river basin management functions". Presently the Member Countries contribute about 10 per cent of the budget of between US$16-20 million, which is used for corporate and governance functions.

Along with this, the organisation's present programme-based system would change to one centred round the core river basin management functions. This is to make it leaner and more efficient.

To bring about this change, the organisation produced a roadmap to guide it through these reforms.

Since 1995 the MRC has implemented the Mekong Agreement with different projects and programmes through its Secretariat and each country's National Mekong Committees. Development Partners provide



most of the funding for these activities while the Member Countries cover the cost of administration, management and governance functions.

As part of the reform, the funding will eventually be taken on by the countries. Along with changes in the funding, costs will eventually be reduced as the result of streamlining as well as an anticipated reduction in staff at the Secretariat. The first part of the roadmap analyses the core functions of the MRC and looks at the implications of decentralisation and self-financing of each of the functions.

The MRC's core functions can be defined by the shared interest of the countries in jointly managing the Mekong River for the sustainable future of the basin's people and generations to come.

The central role of the Secretariat is to carry out administration, management, communication and governance functions.

The Core River Basin Management Functions are central to the MRC's mandate as defined in the 1995 Mekong Agreement. They include such services as data acquisition, exchange and monitoring, modelling, assessment, basin planning, flood forecasting and emergency warning and response, and implementing MRC's Procedures.

The implementation of many of these functions will be decentralised to the national level, while the regional level of coordination will still be provided by the Secretariat.

Capacity building needs to be strengthened during the next 5-10 years to support the organisational reforms, and in the longterm will be phased out as those responsibilities are taken over by the countries, and as Member Country capacity reaches international standards. This is a short/ medium- term function targeted at building sufficient capacity at the national level to take over selected core river basin management functions.

The provision of the consulting and advisory services will remain with the Secretariat.

Decentralisation is an ongoing process.

Some activities will be decentralised within 2013-2015, which will gradually be increased within 2016-2020, while a lesser number will be implemented within 2021-2030.

This gradual phasing in will give the MRC enough time to adjust to these reforms and to achieve the goal of self-financing. This will also give it time to look at unexpected issues that may arise.

It is not so much a radical change but a smooth ongoing shift of the implementation and financing of the MRC to the countries, which will also claim a common ownership.

Many of the functions are already being carried out by the countries and the changes are more about shifting roles and responsibilities.

With almost 20 years of regional cooperation, the Member Countries have been increasing their capacity and experience in implementing joint dealings. Although the period from now until 2030 will be one of rapid change for the MRC, the re-organisation will be gradual and will help contribute to a better MRC.

And like the racing boats that power their way up the Mekong every year, the MRC will be stronger, leaner and more efficient as it pursues the continued goal of sustainable development in the Lower Mekong Basin.

Setting the plan:
The Basin Development Plan (BDP)

2012 was important for the Basin Development Plan (BDP) and for the first time, based on the Council approved IWRM-based Basin Development Strategy, the MRC countries worked together on the Regional Action Plan (RAP), to be implemented by Programmes, and National Indicative Plans (NIPs), one for each country.

The MRC Programmes initiated about half of the RAP projects while a fair number of the NIPs have been implemented by the national agencies. The preparation of the NIPs by the different line agencies along with the River Basin Committees (RBCs) overseen by the National Mekong Committees, has proven to be a practical way to build capacity on Integrated Water Resources Management issues (IWRM).

The NIPs seek to incorporate the Basin Development Strategy's basin perspectives into national planning, decision-making and governance processes, integrating, to the extent possible, with the five-year socio-economic and sector planning, and annual work planning of relevant national agencies. The greatest emphasis is on strengthening basin management and national level IWRM processes, addressing knowledge gaps, studies and guidelines, together with addressing food security and poverty alleviation.

The Regional Action Plan guides the existing and future activities of the MRC's Programmes to line up with the Basin Development Strategy ensuring the priorities of the strategy match those at the regional levels. The Programmes line up their activities to match up with the milestones of the Strategic Plan.

At the end of 2012 the BDP made an initial assessment to increase the capacity of the Member Countries for the decentralisation of Core River Basin Management Functions.

The Programme will describe the different planning systems and regulatory processes governing the development of public and private sector projects, to seize opportunities to harmonise regional and national planning.

The BDP works to facilitate collaboration between the MRC's Member Countries and stakeholders in their basin development planning.

The planning process includes access to information and the engagement of a wide variety of stakeholders. By assessing current and alternative development scenarios, it uses a scientific and evidenced based approach to produce information that can be used for development and management of the Mekong basin through the five-yearly updating and implementation of the Basin Development Strategy. In the future the National Indicative Plans will provide the link to the national planning systems and will be part of the wider process to decentralise some of basin planning activities now being carried out by the MRC.

Managing and meeting all challenges:
The Environment Programme

The environment of the Lower Mekong Basin (LMB) is facing many daunting challenges. Mainstream hydropower developments, increased waterway transport and irrigation, economic and infrastructure development combined with the effects of climate change are putting increased pressure on the aquatic systems, biodiversity and livelihoods of the people who depend on them.

The MRC's Environment Programme (EP) is working along with the Member Countries to ensure that the environment remains healthy and livelihoods are protected.

The EP helps to improve environmental policies by working with different agencies and organisations. The programme made its work more wide reaching and extensive by teaming up with numerous external partners in activities over the past year. In 2012, the EP and the International Water Management Institute (IWMI) worked together on the Social Impact Monitoring and Vulnerability Assessment baseline survey. The programme also worked with the WWF, the World Fish Center and SEASTART in a pilot study on wetlands and climate vulnerability. This study was to assess climate change impact and vulnerability of wetlands in the LMB and provide recommendations for effective adaptation.

To achieve this, solid scientific evidence was used along using spatial methods when assessing the vulnerability of natural systems. There was also work with IUCN in a wetlands inventory methodology development and with the US Geological Survey on a training session on tools for assessment of the impacts of land use on water quality. Working with these different organisations strengthens the MRC and facilitates knowledge-sharing within the region similar organisations.

The governments of the LMB countries wish to develop their water resources for irrigation, hydropower and other uses to benefit the impoverished populations in their rural areas. At the same time they realise that this must be balanced with the existing needs of subsistence farmers who supplement their crops by fishing and gathering food and other materials from forests and wetlands. These are difficult challenges but not impossible to overcome. They can be overturned by developing a strong Integrated Water Resources Management (IWRM) understanding and capability across the entire LMB.

This must include a comprehensive understanding and knowledge of the basin's environment as well as the ability to use environmental management tools to keep abreast of the status and trends of environmental quality, ecosystem productivity and biodiversity, and the ability to sustain the sources of income of the people and alleviate their poverty. Environmental monitoring and management must be able to adequately address transboundary and basin-wide environmental concerns and support regional collaboration.

To make this possible, EP supplies information and tools to the LMB governments so they can make informed decisions about development projects that consider the effects on the environment and those who depend on it. The EP uses environmental and socioeconomic data to assess the state of the basin and uses that data to work to mitigate any risks or impacts that will hurt the sustainability of the basin.

Because the Mekong's environmental issues are transboundary, the EP focuses on disseminating data and knowledge that covers all regions. With this kind of approach the Programme hopes to promote dialogue with all the countries of the Basin.

The Mekong River Commission has been monitoring water quality since the mid 1980s, providing an ongoing record of the state of the river, its major tributaries, and the Mekong Delta.

While the main tasks of the Member Countries are to implement the national level activities, the MRCS is responsible for coordination, guidance, technical assistance, regional synthesis and capacity building. The regional organisations support knowledge production, development of new methodologies and tools and capacity building. Any major decision-making is based on the agreed use of these tools.

During 2012 the EP prepared two regional synthesis reports on water quality and ecological health after the Member Countries conducted water quality monitoring.

A baseline study on Social Impact Monitoring and Vulnerability Assessment (SIMVA) was also finalised and also contributed to this outcome by providing a basis for measurement of future impacts of developments.

Water quality is extremely important to the environmental health of the entire Mekong Basin and though in general river quality is good in areas with high population density, aquaculture and agriculture, there are signs that the environment is becoming somewhat degraded.

Keeping cool on rising temperatures:
Climate Change and Adaptation Initiative (CCAI)

Climate change is now a widely recognised major environmental problem facing the world and the Lower Mekong Basin (LMB) is not immune to its effects. In fact, the consequences of climate change in the LMB can be devastating.

Variations in temperature, rainfall and wind and extreme weather events occur more often. Water shortages, droughts and floods and seawater intrusion have also become more commonplace.

Because the rising population of the LMB depend so much on natural resources for their income these effects can have highly damaging consequences and in 2012 the MRC's Climate Change and Adaptation Initiative (CCAI) continued its work to help prepare the region to take action collectively.

Demonstration activities in these areas are one of the key projects of the CCAI aiming at building capacities by involving local communities and local wisdom.

The local demonstration projects in 2012 were an excellent exercise for climate change adaptation planning and implementation and their results were well received by community governments in their respective provinces: Prey Veng in Cambodia, Savannakhet in Lao PDR, Roi Et and Kalasin in Thailand and Kien Giang in Viet Nam.

Through these smaller, localised demonstration projects those directly affected can share their knowledge about their most common and pressing problems and also impart their solutions. These can then be disseminated region-wide and can help increase overall knowledge; knowledge that all basin residents will be able to take advantage of.

The Climate Change and Adaptation Initiative (CCAI) was created in 2008-2009 to help those most vulnerable to the effects of climate change. It is a long-term, regional project that will operate until 2025,

This regionally targeted, cross-cutting programme was implemented to help those in the region help themselves by improving local pre-existing tools and methods.

Through the different countries of the LMB; Cambodia, Lao PDR, Thailand and Viet Nam, the CCAI works with a wide variety of stakeholders to develop individual adaptation plans and strategies for each country.

The CCAI supports National Expert teams in each of the basin countries and prepares reports that document the current level of knowledge of potential impacts and adaptation and policy response measures.

To communicate key messages related to climate change, the Initiative has also produced reader-friendly posters, cartoons, and grassroots comics in riparian languages, and used them as awareness raising tools during educational campaigns in the basin.

With its emphasis on a basin-wide approach, the Initiative makes sure that climate change adaptation has effective strategies and plans at various levels and is applied at priority locations throughout the basin.

Although the Programme stresses local approaches in much of its work, it uses contacts with other river basin experts, such as those in Europe and elsewhere,

to introduce international practices and strategic directions when addressing transboundary climate change impacts. Information gained from these international exchanges is a valuable part of the Programme's work in increasing capacity and building knowledge.

In 2012 work also continued on the MRC's Climate Change Database, which uses modelling to predict temperature and rainfall changes in the basin. The Database includes datasets of methods of impact assessment and adaptation planning.

With the continued work of the CCAI and the cooperation of stakeholders, it can be possible to attain an economically prosperous, socially just and environmentally sound Mekong River Basin responsive and adapting to the continuing and constantly evolving challenges induced by climate change.

Making floodwaters count:
The Flood Management and Mitigation Programme (FMMP)

RFMMC Mission: *People's suffering and economic losses due to floods are prevented, minimised or mitigated, while preserving the environmental benefits of floods to contribute to the Basin Vision.*

Floods can be both beneficial and detrimental. Nourishing floodwaters can help people reap the harvest of nature's rich bounty while on the other hand they can also wreak havoc and destruction on those unsuspecting.

The goal of the MRC's Flood Management and Mitigation Programme (FMMP) is to keep flood risk management and mitigation practices up-to-date to reduce the negative effects of these floods while conversely taking advantage of their environmental benefits.

Flood preparedness and emergency management in the MRC Member Countries was also strengthened in 2012 through targeted capacity building and training programmes at national, provincial, district and community levels. Flood preparedness plans, which are updated yearly, have also been installed in provincial and district administrative systems and best practices have been documented and shared among MRC Member Countries.

During the year the programme recorded timely and accurate data for flood forecasting and warnings at stations throughout the four Mekong countries and relayed back to the Regional Flood Management and Mitigation Centre (RFMMC) in Phnom Penh.

The RFMMC is one of the most critical components of the FMMP programme. It takes the information from over 120 stations throughout the region and disseminates it where it's most needed. The RFMMC gives advance warnings of rising water levels to government agencies and communities in Cambodia and Lao PDR.

During the year significant progress was made in improving the overall functions and performance of the FMMP. With the looming future of possible climate change effects the FMMP in cooperation with BMU-GIZ strengthened flood forecasting and modelling capabilities.

The programme made good progress in the preparation of the annual flood reports for 2011 and 2012. They expect to complete them sometime in mid-year 2013. These reports add to the knowledge base of the FMMP, and it is information that can be used to identify factors that aid in flood risk management.

Three other major reports were put out in 2012 to help strengthen the reliability of the services already in place: the 2012 Flood Forecasting Performance Evaluation Report, the 2012 Data Collection Performance Evaluation Report and the 2012 Flash Flood Guidance Performance Evaluation Report.

Finding their way:
The Navigation Programme (NAP)

The Mekong's waters run long and run deep. This historical and natural trail, which cuts through the heart of the basin, has been used for centuries by the peoples of the Lower Mekong for transport and trade.
Nowadays the mighty river has become even more navigable and waterborne transport has proven cheaper, safer and more environmentally friendly and thus traffic has increased exponentially. However, along with this increased traffic come heightened risks and challenges and a regional approach to address these concerns is needed.

The Navigation Programme of the Mekong River Commission (MRC) was initially put in place to establish navigational rules and regulations while at the same time increase the opportunities for international river trade for the MRC Member Countries.

With rapid economic development in the region there has also been a growing trade in oil, gas and petroleum products in the last few years. Trade between Viet Nam and Cambodia in oil products in the lower part of the Mekong Basin recent years has also grown significantly.

Petroleum terminals now dot the riverbanks of the Mekong, Tonle Sap and Bassac Rivers in between Cambodia and Viet Nam.

Many of these facilities have developed standardised systems for operating procedures, including bunkering and fuel transfer; and emergency operations such as fire fighting. However, some have few contingency plans or emergency equipment is sorely lacking. More investment and capacity building in these systems is urgently needed.

The Navigation Programme has a balanced approach that promotes development of the infrastructure, operations and maintenance.

While the lower portion of the Mekong Basin has seen increases in shipping and development the upper part of the river has also seen broad development.

For example, oil products are shipped extensively between China, Myanmar and Thailand in the upper reaches. A planned tank farm in Chiang Saen, Thailand will store and handle petrol products being sent to China on a much larger scale.

Ferries crossing the river carry items such as oil, gas and fertilisers and other dangerous goods that need standardised practices of loading, unloading and carriage to avoid spills or pollution.

There are numerous hazards and negative scenarios that could result from accidents, spills and unsafe practices. These could endanger human life and threaten the environment and economies in the region. In order to protect the river, the Navigation Programme conducted a Risk Analysis and the preliminary results were published in 2012.

The first phase examined the risks associated with the storage, handling and carriage of dangerous cargo at certain ports and petroleum terminals along the Mekong.

Working groups were set up in each Member Country to collect the data, do risk assessments and oversee their national issues of the project.

As a result of this ambitious project, Volume 1 – Risk Analysis and Volume 2 – Recommendations of the

Risk Analysis of the Storage, Carriage and Handling of Dangerous Goods were published and will become a valuable tool to base a set of standards that will ensure a balance between the inland water transport and environmental protection.

This Risk Analysis will be of great use for not only the MRC, but also for national line agencies, development partners and the private sector.

With mainstream dam development on the horizon Navigation on the river will face a new set of challenges. The MRC will begin a study called: Standard Specifications for Design, Construction, Operation and Coordination of Navigation Locks on the Proposed Mekong Mainstream Dams. One of the aims is to take into consideration all the different hydropower scenarios for the region to determine a uniform size of locks for ships to navigate in the NAP.

Over 2012 much work was completed by the NAP including legal frameworks, navigational safety and efficiency and environmental sound legal framework for cross-border navigation. The programme also worked on enhancing conditions of the waterway, modernising fleets and port infrastructure, capacity building in the sector while protecting the environment.

Keeping the rice bowl full:
The Agriculture and Irrigation Programme (AIP)

The importance of agriculture in the Lower Mekong Basin cannot be overstated.

The river and land have become a 'natural' rice bowl that feeds sixty million people in the basin. More than two-thirds of them make a living by working the land and they can improve their lives if they know how to make the best use of the water for their agricultural activities.

Keeping track of that water and how it is used is one of the major responsibilities of the Mekong River Commission's Agriculture and Irrigation Programme (AIP). The AIP aims to raise people's standards of living by sustainably managing water resources in agriculture. The goal of AIP is to have a "regionally balanced and sustainable agricultural development supported through integration of national agricultural planning processes with basin-wide perspectives".

During 2012 AIP conducted institutional mapping, or a development directory, identifying available resources, concerned agencies and contacts to develop effective and efficient work plans of individual activities whose general plans have been approved as the AIP Programme Implementation Plan of 2011-2015 (AIP PIP2011-2015). Together with the record of national consultations on the AIP PIP 2011-2015, a report on "institutional mapping" was produced.

As the biggest activity in the AIP PIP 2011-2015 and part of MRC's core functions, AIP started preparing for updating and upgrading the MRC Irrigation Database. Two regional workshops were held to discuss a detailed proposal to update and upgrade the geo-spatial database, and the countries agreed on the details of the data fields. Upon agreement on the database design, AIP conducted a technical training on GIS with technical support from IKMP staff.

Another major progress was the organisation of a regional mini-symposium, Basin-wide collaboration in the agriculture and irrigation sub sectors towards the development and food security of the LMB. In this event, key policy-makers in agriculture and irrigation sub-sectors in the region gathered to review the findings of the Basin Development Plan 2 (BDP2) process as well as remaining knowledge gaps in the sectors so that

momentum for collaboration could be strengthened amongst key stakeholders. The participants included staff from the MRC programmes and International Water Management Institute (IWMI), International Rice Research Institute (IRRI), JICA, University of Canterbury, and University of Western Australia.

A workshop series for technical harmonisation in irrigation was also launched. The workshop series intends to offer capacity building and networking opportunities to young irrigation professionals. The first workshop focused on exchanging information on the work circumstances and engineering practices of national irrigation agencies.

AIP also prepared for launching rapid assessment of agricultural groundwater use by drafting proposals, visiting concerned authorities in the region and holding a regional consultation meeting, where the countries agreed on the general scope and modality of the activity.

Using water wisely is a key element in the Programme's plan as is improving irrigation efficiency. As more farmers start tapping groundwater, which is often linked to surface water bodies and used for domestic purposes, integrated planning and management is the key for their sustainable use.

With the support of the AIP, the MRC Member Countries can work jointly to overcome some of the most pressing challenges to agriculture such as the expansion and maintenance of irrigation areas, prevention of droughts, salinisation and soil degradation, and climate change adaptation.

Improved irrigation and land management will help farmers to use land and water resources more efficiently, which can ensure an increase in food supplies and decrease poverty in rural areas.

Netting the benefits:
The Fisheries Programme (FP)

The inland fishery of the Lower Mekong Basin (LMB) is one of the world's largest inland fisheries. It is an important source of protein not only for the region but also for the world. More than three-and-a-half million tonnes of fish are harvested every year with over a million of those tonnes being exported.

Most of the population in the LMB is involved in fishing. Two out of three people in the Lower Mekong Basin are tied up in fishing in one way or another, either using it as a primary source of food or selling it to generate income. It is an important resource for the riparian countries' economic growth and their efforts to reduce poverty.

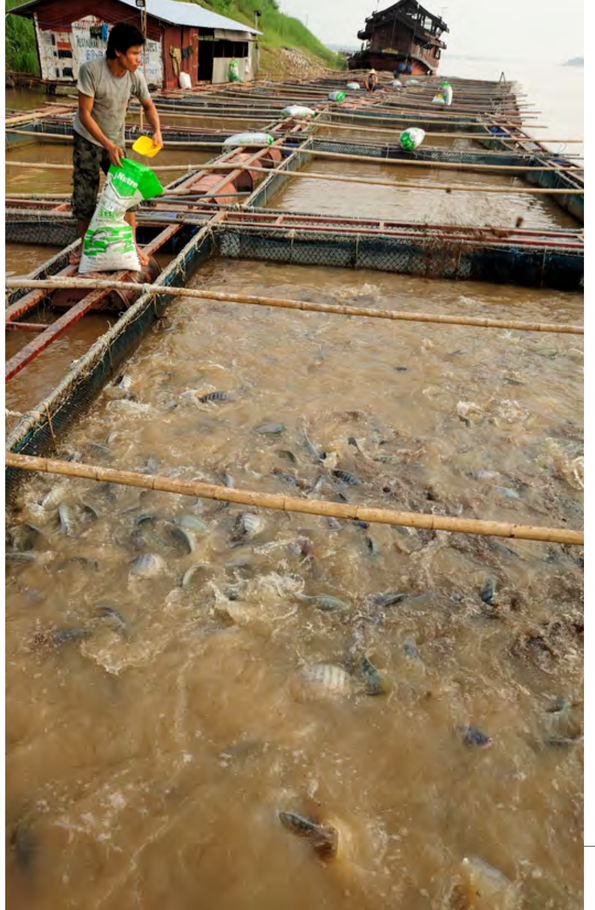
With the region's population growing and estimated to be well over 100 million by the year 2025, this sector's importance is paramount to the well-being in the region its protection and utilisation is of utmost concern.

During 2012 the MRC's Fisheries Programme monitored the abundance and diversity of different fisheries from 29 monitoring stations in the four LMB countries to identify status and trends. Results from this activity help the programme disseminate science-based knowledge to decision-makers in the MRC Member Countries.

To help protect the aquaculture industry, in 2012 the Fisheries Programme formulated a concept note and plans to promote the use of indigenous Mekong fish species in the region.

The information-base for stakeholders was also improved with the approval of the publication of four technical papers and one development series along with the production and distribution of the popular Catch and Culture newsletter.

Water is the key element for the fish to survive and there is often competition from agriculture, industry and hydropower for this important lifeline. Therefore, part of the FP work centres around improving the basin-wide management of the regions' fisheries to protect the resource and ensure good levels of productivity. Good understanding and adequate consideration of gender dimensions is key to fisheries management and development planning.



The programme works hand-in-hand with Member Countries by sharing technical knowledge and raising awareness on the importance of the fisheries for the people of the Lower Mekong Basin.

The FP also stands alongside partner agencies to identify existing and new challenges to the sector such as the construction of hydropower dams, the expansion of irrigated agriculture and infrastructure development, which often negatively affect fisheries.

In 2012 the FP carried out pilot projects in transboundary fisheries management between Cambodia and Viet Nam and between Lao PDR and Thailand. Follow-up projects have also been proposed and are being developed.

Networking with regional and international partner agencies, such as the Southeast Asian Fisheries Development Center (SEAFDEC), the Network of Aquaculture Centres in Asia Pacific (NACA), the Food and Agriculture Organisation of the UN, (FAO), The World Fish Centre (WFC), and The International Water Management Institute (IWMI) continued during the year while the FP provided contributions to international conferences and symposia, including the Mekong2Rio conference.

Knowledge is the key:
The Information and Knowledge Management Programme (IKMP)

For the Mekong River Commission's (MRC) Information Knowledge Management Programme (IKMP) data is key.

With pressure from an increasing population and escalating development in the Lower Mekong Basin, there is an urgent need for a better understanding of river basin conditions, how development should be managed and ensuring that sound social environmental, and economic methods are used in that development.

In 2012 one of the major achievements of the programme was the handover of the Hydrological Cycle Observing System (HYCOS) network to the Member Countries.

This network collects rainfall and water level data from 49 stations on the mainstream and tributaries and two tide-measuring stations in the Delta.

This information is disseminated to the Member Countries and used to gauge and get an overall picture of the Mekong system's water levels including the mainstream and tributaries.

With this information, countries can do everything from predicting floods to improving the efficiency of their modelling, fish catches and safer navigation.

The IKMP was very busy in 2012 as it also made significant progress in its monitoring networks: the MRCS Portal, MekongInfo (an interactive system for sharing information and knowledge about participatory natural resource management) and the MRCS Community website. IKMP also examined creating a new Digital Elevation Model (DEM) for the Lower Mekong Basin.

Continued efforts were also made to facilitate the implementation of the Procedures for Data and Information Exchange and Sharing (PIDIES) and for Water Use Monitoring (PWUM).

The programme carried on its decentralisation process for IKMP-managed activities prioritising 3 out of 13 activities.

This cross cutting programme of the MRC continued to provide information and knowledge services to other programmes as well as to National Mekong Committees and line agencies. The programme was put together with the goal of building a solid foundation of data, information and knowledge products, systems and services that supports the goals of the MRC.

The IKMP also functions as a service provider to external clients offering hydrological data for commercial and non-commercial uses.

Proposed developments powering fruitful debate:
The Initiative on Sustainable Hydropower (ISH)

The Lower Mekong Basin (LMB) is emerging as one the most active places in the world for hydropower development. This massive energy potential remains largely unharnessed and can boost economic growth, alleviating poverty and providing socio-economic opportunities.

Harnessing this huge capability is a key driver in economic and social development.

Planned projects on the Mekong mainstream have brought sustainable hydropower to the forefront meeting the concerns raised by stakeholders and others.

This has become a hot topic because the environment, fisheries and people's livelihoods are all at risk from the proposed and existing hydropower schemes. The MRC's Initiative for Sustainable Hydropower (ISH) has been front-and-centre in these key debates. It has opened dialogue with NGOs and stakeholders to understand sustainable hydropower in respect of international best practice and the current level of development in the Basin.

The ISH looks at the sustainable options of hydropower development to address potential transboundary effects. Sustainable hydropower development isn't just about installing infrastructure as a way to satisfy the growing demand for power, but instead looks at the overall effectiveness of these projects from a basin-wide perspective.

The Initiative for Sustainable Hydropower supports the MRC's Integrated Water Resource Management (IWRM) strategy in two different ways.

First, it applies IWRM principles to any decisions concerning management and development of hydropower projects in the LMB. Then it works in cooperation with key MRC stakeholders to bring sustainable hydropower considerations into the planning systems and regulatory frameworks of Member Countries from planning stages to operations.

In 2012 some key areas of work for the ISH included examining the benefit sharing options of tributary hydropower and further development of the Rapid Basin-wide Hydropower Sustainability Assessment Tool (RSAT).

The ISH continued to engage stakeholders and to improve the RSAT. The tool was first introduced in 2011 and is designed to point out the key basin-wide sustainability issues and helps facilitate the dialogue between the key players.

There are several topics and criteria to measure the sustainability of hydropower. The RSAT emphasises the key topics that are necessary for the basin wide approach to hydropower development. It also recognises the different capacity building needs throughout the basin. In the long term it will complete sustainability assessments for the existing, planned and proposed hydropower projects in the LMB.

Another highlight of the ISH's work in 2012 was the implementation of benefit sharing for tributary projects.

Benefit sharing can be simply defined as a way to spread the benefits of a development project amongst designated participants over the long-term. Large projects like hydropower dams affect different stakeholders with diverse perceptions and expectations of benefits.

There are two main types of benefit sharing: national-to-local and transboundary benefit sharing. Non-monetary forms of benefit sharing on the national to local level include development of local infrastructure (e.g. roads), job creation and revenue sharing. Monetary forms of benefit sharing are amongst the most common types on a local level and range from revenue sharing and royalties to taxes, equity sharing and the reduction of electricity tariffs.

While national-to-local benefit sharing is best handled by different levels of governments, which set out legislation and rules, transboundary benefit sharing is usually the result of negotiations or agreements. There are no set rules on what has to be shared and with whom, and it varies with each case. Different countries also have different mechanisms in place and working groups have been set up in each country to study them.

Rules and regulations are important to make sure that a consistent approach is followed and it is important that this process is taken care of by governments as they will be able understand the different benefits and mechanisms for sharing them.

Other types of benefit sharing are equitable sharing of project services, which usually means that settlements close to the project are amongst the first to receive improvements to electrical services.

The ISH has consulted with the Member Countries and designed studies that address concerns about the tradeoffs between development and environmental impacts. As a result of these careful consultations and deliberations, more than a dozen studies have been prepared and the countries of the LMB; Cambodia, Lao PDR, Thailand and Viet Nam believe that these will fill existing knowledge gaps by building capacity, adding to the knowledge base and ensuring a more balanced hydropower development in the basin.

The Xayaburi hydropower project construction has been in the spotlight over the past year as the first mainstream dam on the Mekong. As a result, the ISH has continued development of its Preliminary Design Guidelines (PDG) for mainstream dams. These will become the standard to evaluate whether mainstream projects 'avoid, minimise or mitigate' any impacts of such developments. The guidelines will be updated regularly. There has also been a growing knowledge of international hydropower experiences that may be useful in the planning and development of projects in the Mekong.

Charging up Capability:
Integrated Capacity Building Programme (ICBP)

One of the key tasks of the MRC's Integrated Capacity Building Programme (ICBP) is educating different government agencies and others involved about Integrated Water Resources Management (IWRM) principles.

It is actually even more than just educating people about these concepts as it is infusing a culture of IWRM at different levels and areas of the organisation and line agencies in the Member Countries.

The programme, which was first implemented in 2008, has been designed to tackle capacity needs through individual, institutional and network-level approaches and utilises a regional process with capacity building plans tailor-made to fit the needs of the Secretariat, the National Mekong Committees and the line agencies in the four MRC Member Countries.

One effective way of educating those who live and work in the Lower Mekong Basin is through the MRC's Junior Riparian Programme (JRP).

In 2012 two dozen young professionals attended training classes and then took up various positions in different programmes of the Secretariat in both Vientiane and Phnom Penh. Their programmes lasted from 6-12 months and included recruits from the Member Countries and Dialogue Partners China and Myanmar. Besides helping their own careers, JRPs also shared responsibilities in programmes from Fisheries to the Environment.

Afterwards they returned to their home countries armed with invaluable knowledge and experiences.

It is considered one of the single most effective and practical methods to build capacity among Member Countries. It also bodes well for the future of the organisation as many graduates of the programme return to work at the Secretariat.

The MRC believes that this is a worthwhile long-term investment that will eventually pay off in the future benefiting all in the basin.

The ICBP builds on foundations within the MRC and existing networks and partnerships with institutions to take advantage of ongoing capacity building expertise and efforts where they are already in place or under development.

And as the MRC transitions to an organisation fully-owned and operated by the Member Countries over the next few years, the increase in capacity building becomes even more crucial.

However capacity building is more than just educating others, it is also infusing a culture in order to create an organisation that is constantly learning.

Another way the ICBP builds capacity is through its Gender Strategy.

For the countries of the Lower Mekong Basin it is a priority to ensure the benefits (both economically and socially) are shared equally amongst men, women, boys and girls.

The overall objective of the Policy is to mainstream gender perspectives in all MRC development efforts, ensuring that all MRC development programmes benefit men and women equally,

In 2012 the MRC gender strategy and policy was mainstreamed into the Secretariat in several ways. The strategy was translated into the four riparian languages and Gender Toolkits were revised and will be translated as well. An MRC Gender Working Group was established and a basin-wide workshop for good practices in MRC programmes was held with another workshop planned for early 2013.

Strengthening partnership bonds:
Enhanced Cooperation with Dialogue Partners and Increased Support from Development Partners

The MRC sustained its cooperation with upstream dialogue partners Myanmar and China during 2012.

Technical collaboration continued with the two countries and the MRC in such areas as navigation and hydrological information exchanges.

The MRC's CEO led a delegation to Beijing and the organisation also participated in a Technical Symposium on Environmental Protection on the Lancang-Mekong Basin, in an event that was organised by China's Ecosystem Study Commission for International Rivers (ESCIR).

The MRC also took part in the Greater Mekong Subregion (GMS) Ministerial Conference held in Nanning, China, in December 2012, as a Development Partner.

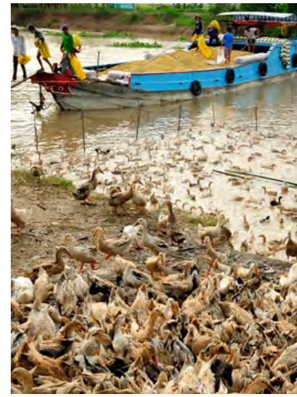
This event paved the way for economic cooperation of GMS countries over the next two decades by working out a series of implementation plans in the areas of energy, transportation and capacity building.

China also reiterated its willingness to heighten its cooperation with the MRC by means of increased hydrological data sharing, hydropower development, flood management, navigation and by continuing personnel exchanges, such as the Junior Riparian Programme (JRP), so that both sides could greatly benefit.

As for the Development Partners, the MRCS continued its engagement with them in 2012 to close its funding gaps.

The Secretariat also sought out new sources of financial support and hosted several missions making sure that Development Partners were well informed on the latest MRC endeavours.

The MRC Secretariat has also been ensuring that technical partnerships are more effective and reaching out to other organisations such as the Mississippi River Commission, the Murray-Darling along with the Asian Development Bank.



By the end of 2012, the MRC had signed a number of agreements worth US$30.5 million with six development partners, bringing the total funding secured until the end of 2015 to about US$86 million or 63 per cent of the total budget required.

As part of the MRC's efforts to expand the current cooperation and partnership, in 2012 the MRC Secretariat cultivated a number of contacts with various groups and River Basin Organisations through the participation in and organisation of several regional and international conferences, in particular the Mekong2Rio Conference in May 2012. To ensure wider public participation and dialogue, the MRC Secretariat is making a concerted effort to better coordinate stakeholder participation across the organisation.

Finance and Human Resources

STATEMENT OF INCOME AND EXPENDITURES 2012

For the year ended 31 December 2012

Currency: USD

INCOME

	2012
Contributions from Riparian Governments	1,827,076
Treasury Management	76,625
Management and Administration Fees	1,636,101
Miscellaneous	3,050
TOTAL INCOME	**3,542,852**

EXPENDITURES

Administrative Expenditures	**2012**
Salaries and Fees	1,635,030
Common Staff Costs	738,512
Training Costs	47,255
Official Travel	92,790
Contractual Services	99,408
General Operating Expenses	283,724
Supplies	40,172
Furniture & Equipment	53,349
Meetings	176,374
Support to NMCs & Programmes	61,407
TOTAL EXPENDITURES	**3,228,020**

Human Resources

As of the end of the year, 179 staff work for the MRC Secretariat: 72 at the Phnom Penh office and 107 at the Vientiane Office.

MRC Workforce	
Riparian Professional Staff	72
International Staff	10
General Support Staff	75
Junior Riparian Professional	18
Associate Modeller	4
Total:	**179**

List of publications in 2012

Please note that these publications are available at **http://www.mrcmekong.org/publications/**

Agriculture and Irrigation

Collaboration in the agriculture and irrigation subsectors towards the development and food security in the Lower Mekong Basin. 14 November 2012

Basin Development Planning

Transboundary River Basin Management: Addressing Water, Energy and Food Security Nexus. 27 August 2012
Completion Report for Phase 2, 2007-2011, Basin Development Plan. 26 November 2012

Climate Change

The Impact & Management of Floods & Droughts in the Lower Mekong Basin & the Implications of Possible Climate Change, Working Paper (2011-2015). 31 March 2012

Navigation

Carriage, Handling and Storage of Dangerous Goods Along the Mekong River: Risk Analysis Volume I. 1 October 2012

Carriage, Handling and Storage of Dangerous Goods Along the Mekong River: Recommendations Volume II. 1 October 2012

MRC Reports

Work Programme 2012. 2 January 2012

Training and Tools

Manual for Training Trainers in Integrated Water Resources Management in the Mekong Basin. 1 January 2012

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Mekong
River Commission