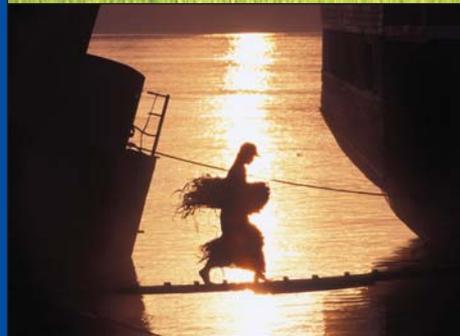




Mekong River Commission

MRC Work Programme 2007



FOREWORD

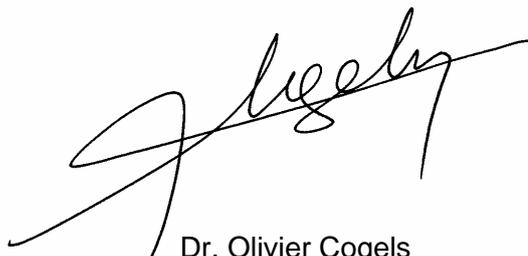
On behalf of the Mekong River Commission (MRC), I have the pleasure to present the MRC Work Programme for the year 2007 to our Member Countries, donors, partner agencies, and friends of the Mekong River Commission.

The structure of the programme is based on the Strategic Plan 2006-2010. All MRC activities and programmes support the Regional Cooperation Programme for Sustainable Development of Water and Related Resources in the Mekong River Basin, the Mekong Programme, owned by the Mekong Countries. The MRC Work Programme 2007 describes the supporting outputs MRC will produce in the cause of the year to further the Mekong Programme. In this regard, we have developed concepts, proposals and fundraising activities for three new programmes namely the Information and Knowledge Management Programme; the Hydropower Programme and the Drought Management Programme.

The Information and Knowledge Management Programme document was approved at the Thirteenth Meeting of the MRC Council and is set to start its implementation phase during the first quarter of 2007. The formulation of the Hydropower Programme is ongoing and subject to the availability of further funding. A Drought Management Programme concept and proposal were formulated upon request of the Twelfth Meeting of the MRC Council where Council Members had expressed great concerns effects of drought on life and prosperity of the Mekong people. The Navigation Programme and the Flood Management and Mitigation Programme have gone through the start up phase and are now fully operational.

As in previous Work Programmes, the Work Programme 2007 provides a general introduction to the MRC. The second part of the Work Programme presents the MRC Integrated Programme, with an overview of the programmes and their active agreements and funding sources. The third part provides the reader with succinct information on a given programme such as what a given programme is aiming to achieve and what structure supports it; progress of programme implementation in 2006 with a chart on budget status and graphs on output achievements; it also sets out planned outputs and activities per programme for the year 2007. In the annex, the reader will also find the short-list of projects identified by the Basin Development Plan Programme and agreed by the MRC Joint Committee.

The Work Programme 2007 cannot be successfully implemented without participation of the international donor community and the continued contributions from the MRC Member States. I should therefore like to take the opportunity of the publication of the MRC Work Programme 2007 to express our sincere gratitude to our donors, partners and friends for the sustained active participation in MRC's work aiming at poverty reduction and sustainable development of the Mekong River Basin.



Dr. Olivier Cogels
Chief Executive Officer

PREFACE

The Work Programme 2007 contains brief descriptions of MRC programmes and explains how they are contributing to the MRC Strategic Plan 2006-2010. It also includes an activity plan for 2007 including a list of the active projects and their budget, as well as status of activities carried out in 2006 including graphic presentations of output achievement indicators. As defined in the new Strategic Plan 2006-2010, the integrated programme structure of the MRC is composed of the following programmes:

- Basin Development Plan;
- Environment;
- Information and Knowledge Management;
- Integrated Capacity Building;
- Water Utilisation;
- Flood Management and Mitigation;
- Drought Management;
- Agriculture, Irrigation and Forestry;
- Navigation;
- Hydropower;
- Fisheries;
- Tourism.

The MRC Work Programme is built around the concept of Integrated Water Resources Management (IWRM), defined as a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

Compared to the Work Programme 2006, new programme developments have been included. A summary overview of the programmes is given below:

Basin Development Plan

The Basin Development Plan Phase 1 has been completed at the end of July in 2006. The Phase 2 (2006-2010) of the Basin Development Plan started in January 2007 focusing on long-term modelling and scenario analysis.

Environment Programme

Milestones were developed for the period 2004-2008 to allow for a better monitoring of the programme by the Joint Committee. Although there has been some delay in achieving the milestones there has been steady progress. The Joint Committee in its Twenty-fourth Meeting agreed to the proposal of changing scope and renaming the Indicative Mekong River Basin Report Card on Environmental Conditions to the Indicative Mekong River Report Card on Water Quality. The draft Framework for the Guideline for a Transboundary Environmental

Assessment System (2005 milestone) was agreed to in a regional meeting in mid-2006, however at the 24th Meeting of the Joint Committee one member country expressed concern over the text may be perceived as binding which is not in line with the intention of the guideline. The working group were advised to further work on this before it is considered by the Joint Committee.

The Programme support to the management of transboundary wetlands resulted agreed action points signed by the vice-governors of the provinces Champassak (Lao PDR) and Stung Treng (Cambodia). The findings from the special water quality monitoring of the Sesan River was presented to concerned stakeholders (governments, NGOs and local residents) resulting in commitments for cooperation with important NGO groups. During the Programme Retreat in 2006 it was proposed that the Programme develops a Strategic Plan for 2006-2010 and establishes a steering committee to oversee the Programme.

Information and Knowledge Management Programme

This programme has been introduced in the Work Programme 2005 following the request of the Joint Committee at its Eighteenth Meeting in 2003 to take action regarding the sustainability of the MRC-Information System (MRC-IS), and prepare a proposal on allocation of funds for the development, implementation and maintenance of the MRC-IS for submission to donors. The Joint Committee at its Twentieth Meeting has also highlighted the needs for hydrological data collection.

Integrated Capacity Building Programme

The gender Mainstreaming Project will continue its activities in 2007. The Secretariat will continue to seek funding for all other components of Integrated Capacity Building Programme (ICBP), giving priority to the Junior Riparian Professionals (JRP) Project.

Water Utilisation Programme

Significant progress has been made in 2006 with regard to each component of the WUP. The MRC Council approved an extension of WUP for the year 2007. The Procedure for the Maintenance of Flows on the Mainstreams was approved by the MRC Council in June 2006. The Procedures for Water Quality was also presented at the Thirteenth Council Meeting for approval.

Flood Management and Mitigation Programme

The FMMP has gone through the preparatory phase of implementation in 2005. Key management staff was recruited and additional expert and support staff was recruited. Since 2006 the FMMP has successfully functioned as planned. The fourth Annual Flood Forum (AFF) was successfully organized and implemented in May 2006 under the theme Improving the Flood Forecasting and

Warning System in the Lower Mekong River Basin. The second phase of the Capacity Building for Preparedness, Planning and Response through the Use of Flood Information Products in the Lower Mekong Basin project has been completed successfully in three countries (Vietnam, Lao PDR and Cambodia).

Drought Management Programme

A proposal was prepared in 2006 within the WUP and in cooperation with other divisions. Funding is being sought to start the Programme.

Agriculture, Irrigation and Forestry Programme

The first phase of AIFP as per the programme document was completed by the end of 2005. A concept paper for AIFP Phase 2 for 2006 – 2010 has been prepared and a proposal for programme formulation is being developed. Meanwhile there are still four on going projects namely the Watershed Management Project (WSMP); the project on Demonstration of Multi-functionality of Paddy Fields (DMPF) and the project on Improvement of Irrigation Efficiency in Paddy Fields (IIEPF) funded by the Government of Japan, and the Challenge Programme for Food and Water.

Navigation Programme

The NAP has gone through a preparatory phase in 2005 and started its full implementation in 2006. The NAP developed a comprehensive legal study of the current regime on the Mekong River between Cambodia and Viet Nam. The Programme submitted a New Revised Protocol for the implementation of the Hanoi Navigation Agreement consisting of amendment and implementation provisions to Cambodia and Viet Nam for consideration.

Hydropower Programme

The MRC Council at its Eleventh Meeting in 2004 has approved the Secretariat's proposal to change the name of Water Resources Management Programme to Hydropower Programme, and to include the Hydrology component into the Information and Knowledge Management Programme. The Hydropower Programme is under formulation at the MRCS, and will support MRC role in the regional hydropower development.

Fisheries Programme

The Fisheries Programme Phase 2 started directly after completion of phase 1 since the beginning of 2006. The components of Phase 2 are: (i) Programme management and communication; (ii) Fisheries management and governance; (iii) Fisheries ecology, valuation and mitigation; (iv) Aquaculture of indigenous fish species.

Tourism Programme

Initial activities with regard to waterborne tourism have been included in the Navigation Programme. A baseline study on tourism is also undertaken under the Environment Programme.

Contact Details

The Work Programme 2007 is made available to interested agencies upon request. It is also possible to provide copies of detailed comprehensive programme proposals upon request. For this purpose, kindly contact the MRC Secretariat's International Cooperation and Communication Section, at the following address:

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

Tel: +856 21 26 32 63

Fax: +856 21 26 32 64

E-mail: mrcs@mrcmekong.org

Interested readers are invited to visit the MRC home page at
<http://www.mrcmekong.org>

Acronyms and Abbreviations

| | |
|---------------|--|
| ADB | Asian Development Bank |
| AFD | Agence Française du Développement (French Agency for Development) |
| AIFP | Agriculture, Irrigation and Forestry Programme |
| AusAID | Australian Agency for International Development |
| BDP | Basin Development Plan – Basin Development Plan Programme |
| CNMC | Cambodia National Mekong Committee |
| CPWF | Challenge Programme on Water and Food |
| DMP | Drought Management Programme |
| DSIMP | Decision Support and Information Management Programme |
| DSF | Decision Support Framework |
| EIA | Environmental Impact Assessment |
| EP | Environment Programme |
| FAS | Finance and Administration Section |
| FP | Fisheries Programme |
| FMMP | Flood Management and Mitigation Programme |
| GEF | Global Environment Facility |
| GMS | Greater Mekong Sub-Region |
| GTZ | Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation) |
| HP | Hydropower Programme |
| IBFM | Integrated Basin Flow Management |
| IWQM | Integrated water Quality Management |
| ICBP | Integrated Capacity Building Programme |
| ICCS | International Cooperation and Communication Section |
| ICLARM | International Centre for Living Aquatic Resources Management |
| IKMP | Information and Knowledge Management Programme |
| JRP | Junior Riparian Professional |
| LMB | Lower Mekong Basin |
| LNMC | Lao National Mekong Committee |
| MDBC | Murray-Darling Basin Commission |
| MRB | Mekong River Basin |
| MRC | Mekong River Commission |

| | |
|--------------|--|
| MRCS | Mekong River Commission Secretariat |
| NAP | Navigation Programme |
| NMC | National Mekong Committee |
| PDIES | Procedures for Data and Information Exchange and Sharing |
| PMFM | Procedures for Maintenance of Flows in the Mainstream |
| PNPCA | Procedures for Notification, Prior Consultation, and Agreement |
| PWUM | Procedures for Water Use Monitoring |
| PWQ | Procedures for Water Quality |
| RBO | River Basin Organization |
| RC | Research Coordination |
| SEA | Strategic Environmental Assessment |
| TACT | Technical Assistance and Coordination Team |
| TP | Tourism Programme |
| TNMC | Thai National Mekong Committee |
| UNDP | United Nations Development Programme |
| USAID | United States Agency for International Development |
| VNMC | Viet Nam National Mekong Committee |
| WG | Working Group |
| WMT | WUP Management Team |
| WUP | Water Utilisation Programme |

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1 Introduction to the Mekong River Commission

1.1 Background

On the 5th of April 1995, Cambodia, the Lao PDR, Thailand and Viet Nam, signed the "Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin". This agreement formed the Mekong River Commission (MRC) which replaced the Committee for Coordination of Investigation of the Lower Mekong Basin (the Mekong Committee) and the Interim Mekong Committee, which were established in 1957 and 1978; respectively. The MRC also holds an official dialogue with the two other states of the Mekong River Basin, China and Myanmar, which are not signatories of the 1995 Agreement.

The purpose of the 1995 Agreement is to optimize the multiple-use and mutual benefits of all riparians and to minimize the harmful effects that might result from natural occurrences and man-made activities.

1.2 Areas of Cooperation

Article 1 in the 1995 Agreement obliges the signatories "To cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin..."

Article 2 stipulates the promotion of sustainable development of the full potential and prevention of wasteful uses of the Mekong River Basins waters for the benefit of all riparian states.

Article 3 charges the signatories with protection of the environment, ecological balance and natural resources from harmful effects from the development of the basin's water and related resources.

These three articles set the scope for the work of the Commission.

1.3 Structure

The MRC enjoys the status of an international body. It has signed several agreements and holds obligations with the donors and the international community. The MRC consists of three permanent bodies: Council, Joint Committee and Secretariat (see Figure 1). Acting as focal points for the Commission in each of the member countries are the National Mekong Committees (NMCs).

The MRC Secretariat as the technical and administrative arm of the MRC works closely with the NMCs of the MRC member countries. The structure of the Secretariat is presented in the diagram below (see Figure 2). The structure was introduced in December 2005 to align it with the MRC Strategic Plan for 2006 - 2010. The budget of the Commission consists of contributions from its members

and the donor community. Formal consultation with the donor community is undertaken through the annual Donor Consultative Group meeting. The Commission has formal agreements for cooperation with a range of regional and international organisations.

Figure 1: MRC Organisational Structure

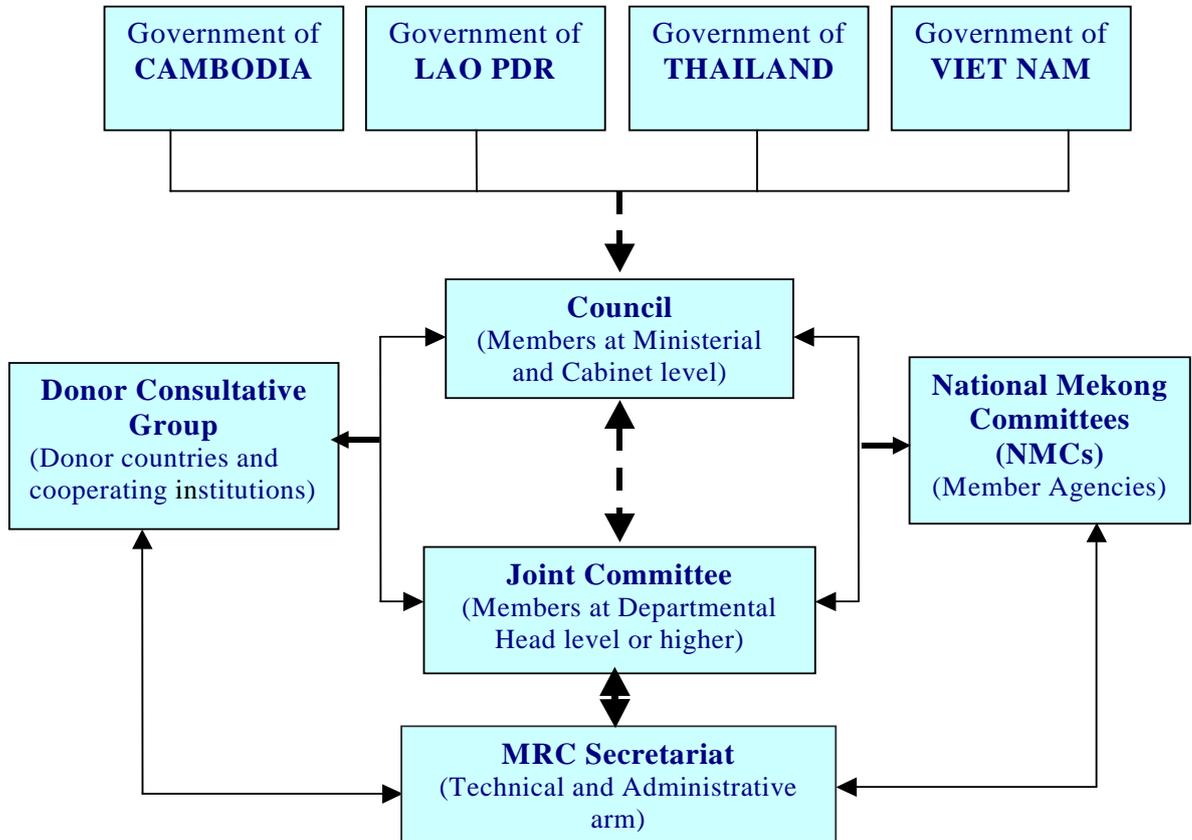
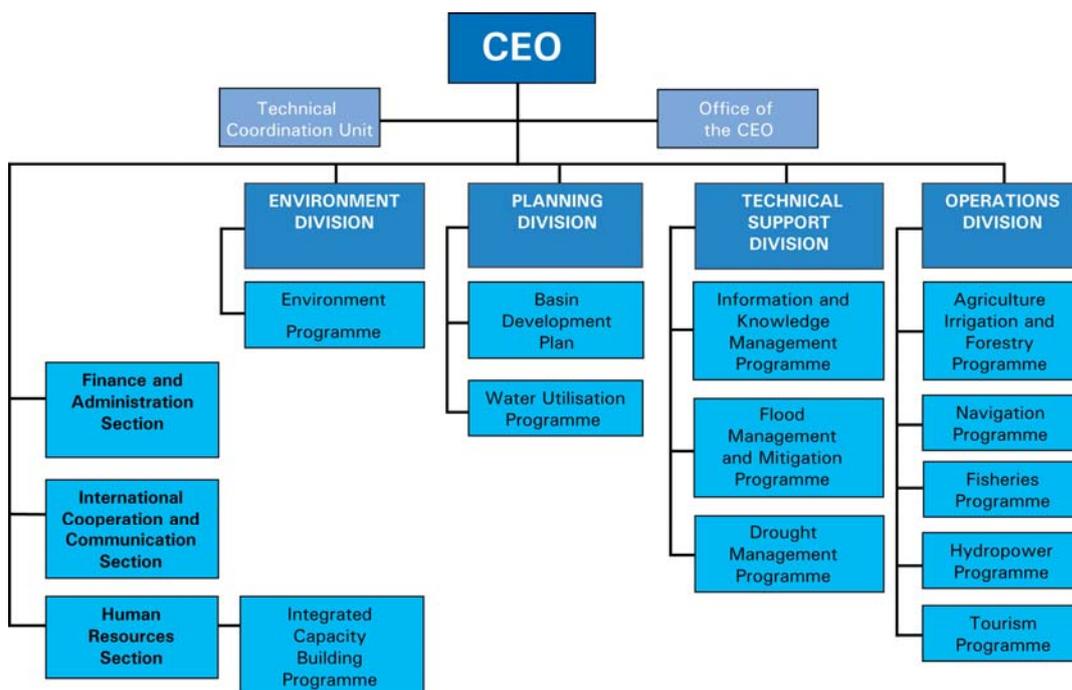


Figure 2: MRC Secretariat Organisational Structure



1.4 Development Opportunities and Challenges

Tens of millions of people in the Mekong Basin rely on traditional uses of the water of the river system to provide them with their primary source of nutrition and income for their livelihood. Yet, as population numbers increase, these traditional uses and benefits are being threatened. With a relatively low level of development the natural capacity of the river system to supply goods and services may be pushed beyond acceptable limits, as often experienced at the local level. As a consequence and in addition to the traditional livelihoods, there is a need to look for economic development opportunities and options. So, developing the economic potential of the Mekong system for domestic use, for hydropower, for navigation, for irrigation and drought management is the key to fighting poverty and increasing people's welfare. Today this development is still in its early stages and the Mekong offers a high potential for balanced and sustainable socio-economic development. However development must carefully take account of environmental impacts and planning must take place jointly, as planning based on regional cooperation will yield better results than independent planning. The challenge is not only to attract significant investments, but also in ensuring that development avoids the risks of environmental degradation, social inequity and international disagreement.

In this respect, development opportunities and challenges for the MRC are:

Poverty:

Most of the Lower Mekong River Basin's population of 56.6 million live in rural areas. They are subsistence farmers who supplement what they grow with the fish they catch and the food and other materials they gather from forests and wetlands. Nearly 40 percent of the people in Cambodia and Lao PDR, the two countries that lie mainly in the basin, have incomes below the poverty line. In addition, poverty rates are also high in the parts of Thailand and Viet Nam that lie within the Basin.

Population Growth:

The projected annual growth rates of 2-2.5 percent for Cambodia and Lao PDR is likely to result in a 50-55 percent increase in the population over the next 20 years. Although the populations of Thailand and Viet Nam will grow more slowly, each country has a large pool of young people who will start their own families. This and increased longevity mean that overall population growth will remain high in the Basin.

Drought and Irrigation:

Drought and irrigation management are critical issues for the people of the Basin as nearly 75 percent of the region's population is employed in agriculture, fisheries and forestry. In macroeconomic terms, agricultural production is a significant contributor to and driver of economic growth in the riparian countries. Water is an essential input into the production process. Availability of water however varies greatly both spatially and over time due to the natural long dry season, unnatural droughts, and lack of irrigation systems.

Hydropower:

The Lower Mekong River Basin has an estimated potential for hydropower development of 30,000 MW; but only a small part of this potential has currently been developed. However, hydropower development in the Mekong is accelerating fast. This will require Basin-wide coordination to ensure sound assessments of efficiency, financial viability and social and environmental outcomes of hydropower projects and to facilitate and promote investments in hydropower.

Navigation:

River transportation provides an efficient means for the people of the basin to access different areas of the basin, to move goods from production, and to link with regional and global markets. The last ten years have seen a tremendous rise in trade in the region. However infrastructure, capacities and standardized procedures and legislation for navigational use of the Mekong are lacking.

Flooding:

In 2000, more than 800 people lost their lives due to excessive flood, and the economic damage caused by the flood was assessed at more than US\$ 400 million. In 2001, more than 300 people lost their lives, and the economic damage from the flood was assessed at more than US\$ 100 million. In 2002, large floods have again caused loss of life and property in all the four riparian countries. In each of these years, between one and eight million people were affected by floods, either by a need of evacuation, or by loss of crops and livestock, or by being prevented from going to work or to school. Efficient flood management and mitigation is an important precondition for poverty alleviation in the Lower Mekong Basin. Floods, however, are also important to replenish the wealth of the aquatic ecosystems.

Water Supply and Sanitation:

Less than 40 percent of the population in Cambodia and Lao PDR has access to safe water, and less than 30 percent in rural areas. In Thailand and Viet Nam, access to safe water supplies is generally more widespread, in both urban and rural areas. The Millennium Development Goals target a reduction by half in the proportion of people without access to safe water by 2015.

Fisheries:

The Mekong River has one of the most abundant fisheries in the world. About 40 million people are engaged in the Mekong's Fishery at least part time. It has been estimated that the value of the Mekong's annual fish harvest is worth about US\$ 1.4 billion at point of first sale. There is no doubt that the Mekong Fishery is important to both the livelihoods of the Basin's people – in particular the poorest segments of societies - and the broader economic growth. Fish is the most important source of animal protein for the people in the region. Together with rice, it forms the basis of the food security. However, increasing population pressure

and economic development are increasingly threatening the sustainability of the Mekong Fishery.

Water quality:

The water quality of the lower Mekong River generally is of a good standard. The composition of the river waters shows no deviation from similar international rivers. However, at a localized level there appear to be three commonly identified water quality issues: sediment in the water, salinity, especially in Northeast Thailand and the delta in Viet Nam and eutrophication.

Land and Water Management:

Preservation of the environment requires a holistic approach to water and land management. One example of land degradation is the increased salinity of water and land resource in the Mekong River and its delta area, floodplains and tributaries. A further reduction in flow resulting from upstream activity is likely to affect salinity levels of land and water resource and consequently impact on the productivity of land. Increased storage capacity through hydropower projects, however, bears the potential to mitigate this effect. Watershed management allows planning and development to “specialize” on the unique characteristics of sub-catchments. This allows for greater and more effective public participation and more realistic options and is crucial to prevent from land degradation.

Tonle Sap:

The Tonle Sap Lake in Cambodia is the largest freshwater water body in SE Asia. Its flow reversal system makes it a unique at the global scale. Its submerged area changes seasonally from 2,500 km² during the dry season to a maximum of up to 14,500 km² during the wet season. Concerns about accelerated sediment filling of the Tonle Sap due to increased erosion rates remained unproven.

Biodiversity:

The biodiversity of the Mekong River Basin is of global significance, surpassed only by the Amazon and Congo systems. The diverse ecosystems of the Mekong Basin are exceptional in their productivity, and the benefits its people derives from this. The maintenance of high biodiversity represents not only the biological integrity of the ecosystems but also the range of natural resources and products available to both urban and rural populations; and is therefore of high priority.

Wetlands:

The biodiversity and productivity of the Mekong Basin is in large part represented by its wetlands. The wetland area of the LMB is itself highly seasonally variable with large areas of Thailand, Cambodia and the Vietnamese Delta flooded annually. Wetlands are home to common species of plants and animals, and to rare and globally threatened species including Irrawaddy Dolphin, Siamese Crocodile, Giant Catfish, Giant Ibis and Sarus Crane. A small change in water level in a wetland at a critical time may have wide ranging impacts on both the ecosystem and the human use and value. Finally, the transboundary nature of

wetlands of the LMB poses a major challenge for good governance and sustainable development of the Mekong River Basin.

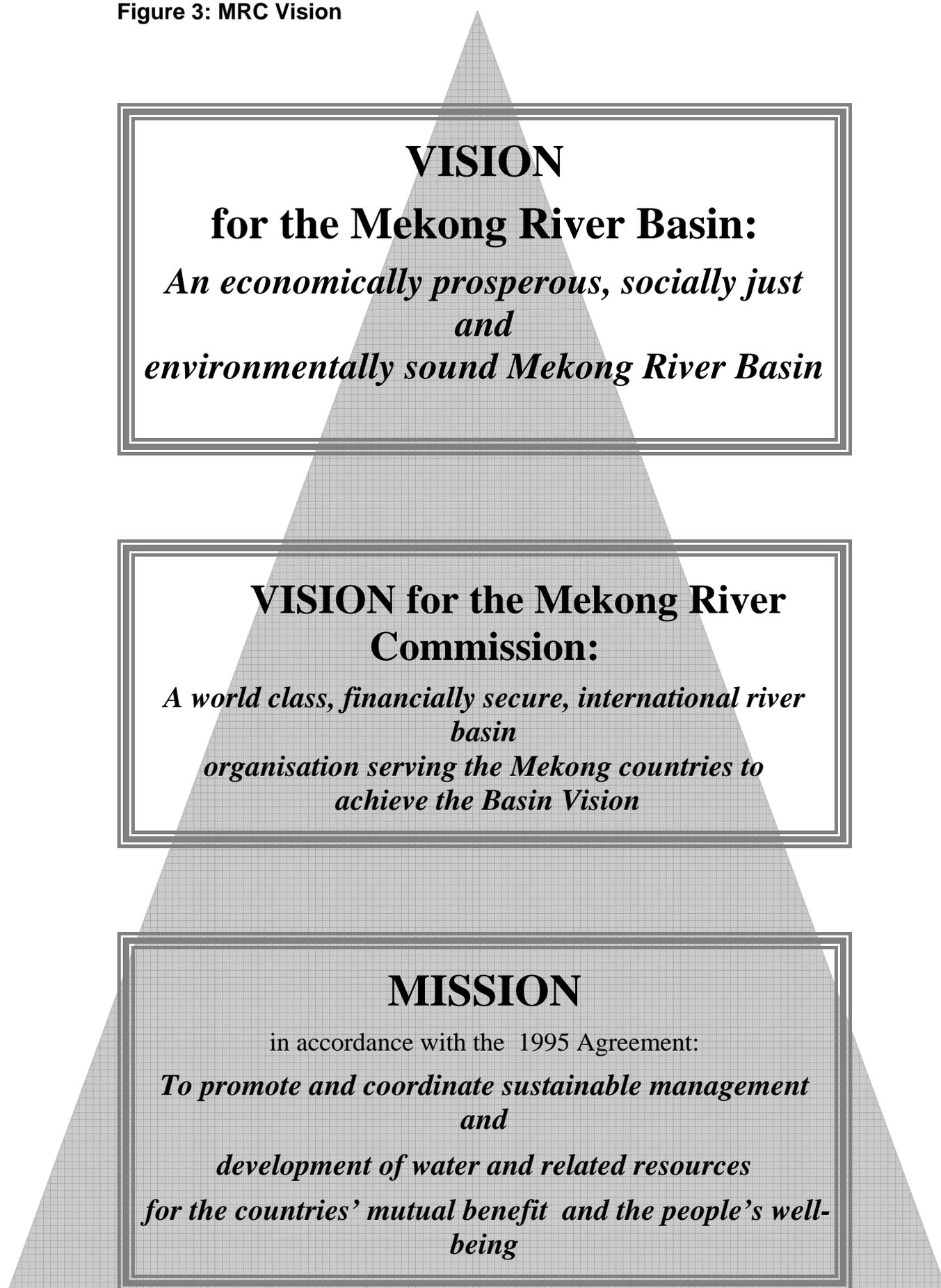
The use of water and related resources in one country can have negative effects for other countries, for example in terms of adverse effects on navigation, fisheries, scarcity of irrigation water, and seawater intrusion. Prevention and resolution of potential conflicts arising from the increasing pressure on the natural resources in the Basin is therefore a key task of the Mekong River Commission.

1.5 The MRC Strategic Planning Process

In order to better fulfil its role, MRC developed a first Strategic Plan for the period 1999-2003. Although considerable progress had already been made, many areas of MRC's work still needed improvement. Consequently, the first Strategic Plan was reviewed in a participatory process in late 2000 and a new Strategic Plan for 2001-2005 was formulated. The programme approach launched with the Work Programme for 2001 meant that the objectives of the four core programmes, five sector programmes, and one support programme needed to be better reflected in the Strategic Plan. Consequently the Strategic Goals, supported by the objectives, required updating.

With this Work Programme 2007, the MRC has started with the new five-year cycle in its strategic planning. Within the Strategic Plan 2006 – 2010, the fundamental strategic direction of MRC, its vision statement remained. The Strategic Plan, however, provides for an updated programme structure in a sector and cross-cutting programmes matrix, underpinned by a basin development planning process. This will allow the MRC to address the development opportunities of the Mekong Basin in a more balanced and sustainable manner.

Figure 3: MRC Vision



1.6 Goals and Objectives¹

The overall Five Year goal of the MRC will be: “More Effective Use of the Mekong’s Water and Related Resources to Alleviate Poverty While Protecting the Environment”

Four Goals have been identified that MRC should strive to achieve progressively from 2006 to 2010. The four goals established for MRC for 2006 to 2010 are shown below:

Goal 1

To promote and support coordinated, sustainable, and pro-poor development

Objectives

- 1.1 To establish a system for analysing water demand, water supply and water use in the basin to support the basin development planning process;
- 1.2 To establish processes and mechanisms enabling the balancing of trade-offs between economic and political net benefits of different sectors, areas, and regions; and benefits from environmental and social protection;
- 1.3 To produce a regularly updated rolling plan applying the planning process for identification, categorization and prioritization of projects and programmes;
- 1.4 To screen, formulate and promote wise development options at the transboundary and basin levels for preparation and implementation by other appropriate development agencies. This objective is supported by sector-specific sub-objectives as follows:²
 - 1.4.1 To support sustainable land and water development through more effective and integrated utilization of agricultural, irrigation, drought, and watershed management systems;
 - 1.4.2 To assist in the development of the basin’s hydropower potential to ensure safeguarding of the environment and social interests while meeting the Basin’s increasing need for energy;
 - 1.4.3 To achieve more active and efficient river transportation through increased freedom of navigation to increase social development, international trade and tourism opportunities;
 - 1.4.4 To build regional flood and drought management capacity for prevention, minimization or mitigation of people’s suffering and economic losses due to floods and droughts;

¹ MRC Strategic Plan 2006-2010, approved in principle by the MRC Council at its Twelfth Meeting

² Explicit reference is made to the existing and approved MRC strategies including hydropower, navigation, public participation and human resource development.

- 1.4.5 To maintain productive Mekong fisheries and enhance aquaculture of indigenous species for increased food security and economic output;
- 1.4.6 To develop the tourism potential of the Mekong benefiting local economies
- 1.4.7 To assess domestic water supply and sanitation options to ensure adequate protection and improvement of peoples' lives and the environment

Goal 2

To enhance effective regional cooperation

Objectives

- 2.1 To increase MRC's function as a transparent and effective cooperation mechanism among Member States and develop and demonstrate enhanced linkages, compatibility and complementarities of partnerships with other regional organisations and initiatives such as GMS, the World Bank's MWRAP, ACMECS, ASEAN, etc., including sub-basin organizations;
- 2.2 To complete, adopt and make applicable mechanisms, procedures and guidelines as required under the 1995 Mekong Agreement;
- 2.3 To identify potential transboundary issues for negotiation, mediation and conflict prevention; and develop mediation and conflict management capacity;
- 2.4 To promote and improve dialogue and collaboration with China and Myanmar.

Goal 3

To strengthen basin-wide environmental monitoring and impact assessment

Objectives

- 3.1 To improve monitoring of the environmental condition of the Mekong River basin, focusing on water quantity and quality, ecological health and social impact;
- 3.2 To regularly report on the environmental condition of the Mekong River basin and disseminate this information widely;
- 3.3 To raise awareness of MRC, NMCs, and Line Agencies on transboundary and basin-wide environmental issues and to increase the capacity to address them;
- 3.4 To ensure that development initiatives are planned and implemented with a view to minimize negative environmental impacts;
- 3.5 To ensure that social, economic and environmental concerns are

incorporated into basin-wide water resources development strategies.

Goal 4

To strengthen the Integrated Water Resources Management capacity and knowledge base of the MRC bodies, NMCs, Line Agencies, and other stakeholders

Objectives

- 4.1 To improve management systems to allow MRC to operate as a highly effective, transparent and innovative International River Basin Organisation;
- 4.2 To establish a technical coordination capacity for preparing and coordinating the implementation of MRC's Work Programme applying IWRM principles;
- 4.3 To enhance and maintain a common GIS-based information and knowledge management and dissemination system to support all MRC activities;
- 4.4 To maintain partnerships with leading organizations, universities and civil society stakeholders for programme-focussed collaboration of common interest;
- 4.5 To strengthen the human resources capacities of the MRC, NMCs and the Line Agencies;
- 4.6 To develop and update as new knowledge becomes available regional assessment tools (EIA, SEA, DSF, TB-EIA, RAM, SIA etc.) for all development projects to be implemented in the lower Mekong River Basin.

The listed strategic outputs and activities have been assigned an indicative priority classification along with an indication of funding status. These priority classifications and the associated funding status are indicative only and will require regular updating. The main purpose of the classifications is to assist the Member Countries and donors in identifying important areas with funding gaps. A low priority does not mean that the output is unimportant but rather that it is less urgent in terms of funding. The prioritization process and update would also be dependent on funds made available by donors.

1.7 Criteria for Prioritising MRC Activities

All MRC programme activities should contribute centrally to the goals and strategic objectives of the MRC Strategic Plan. They should also, as far as possible, incorporate crosscutting themes of environment, gender, poverty, employment and people-centred development generally.

The MRC Work Programme is built around the concept of Integrated Water Resources Management. Moving toward an integrated approach for developing and managing water and related resources will require changes impacting institutions, policies, technology, infrastructure, and financial mechanisms.

Moreover, the very nature of an integrated approach will call for the active and coordinated participation of almost all of the countries' resource management agencies.

The IWRM Strategic Directions respond to the main challenges and opportunities identified at the basin level, and are defined in order to inform actors on principles and key priority areas for integrated water resource management in the Lower Mekong River basin. A holistic IWRM approach also includes China and Myanmar, with the Strategic Direction being applied as appropriate and relevant.

Strategic directions for IWRM at the basin scale³

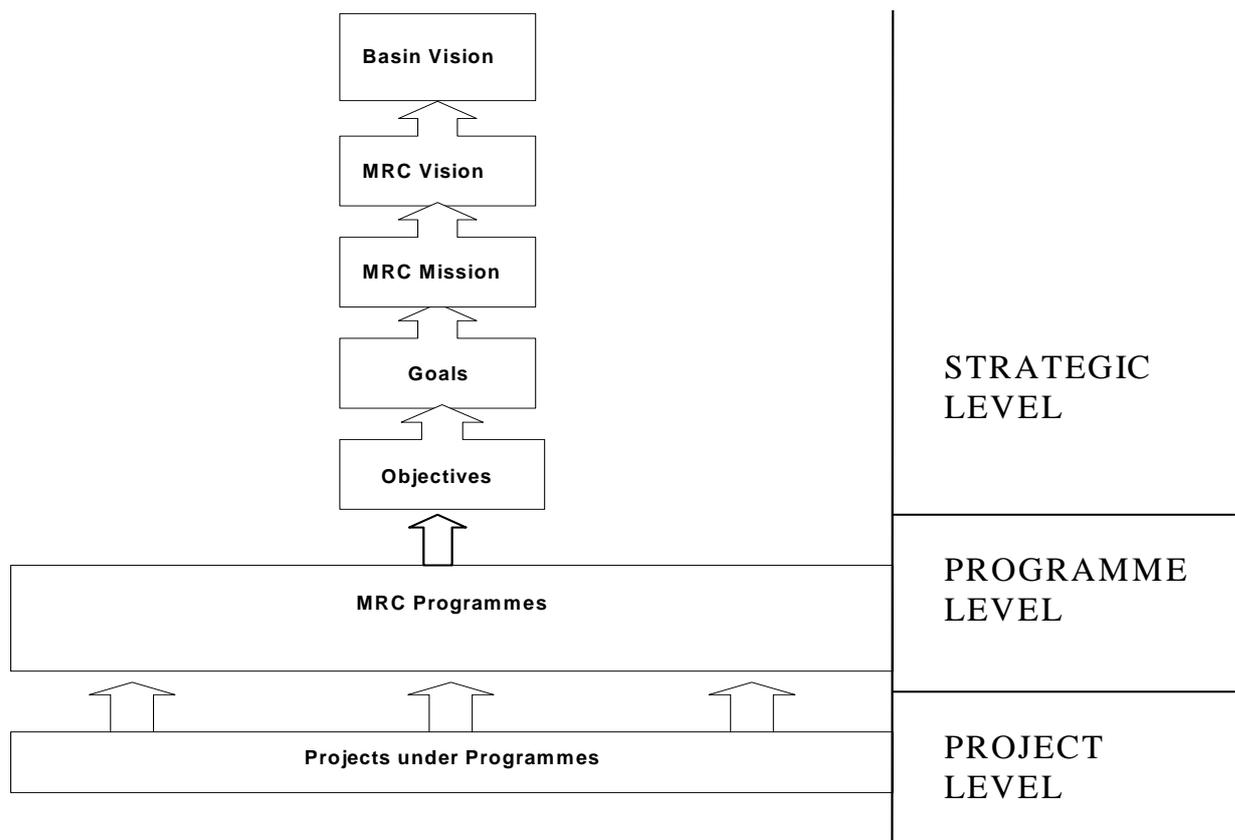
- Economic development and poverty alleviation: To promote economic growth through use and development of joint water resources in a manner that significantly alleviates poverty.
- Environmental protection: To protect the environment, natural resources, aquatic life and conditions and ecological balance of the MRB from harmful effects of development (1995 Mekong Agreement).
- Social development and equity: To ensure equity in all allocation of water resources and services across different economic and social groups to reduce conflict and promote socially sustainable development.
- Dealing with climate variability: To prevent, mitigate or minimize People's suffering and economic loss due to climate variability.
- Integration through basin planning: To implement a participatory, multi-sectoral basin planning process which integrates economic, social and environmental concerns across the LMB.
- Information based management: To ensure that water resource management decisions are based on best available information.
- Regional Cooperation: To integrate and coordinate water resource development and management between countries to optimize benefits from the joint resource and to minimize the risk of water related conflicts.
- Governance: To further and implement open, transparent and accountable institutions and regulatory frameworks that will promote IWRM at all levels.

1.8 Implementation of the Strategic Plan

The relationships between the visions, objectives, programmes, projects and activities in the implementation of the MRC Strategic Plan 2006-2010 are illustrated below.

³ The "Strategic Directions for Integrated Water Resources Management in the Lower Mekong Basin" adopted at the Twelfth MRC Council Meeting held on 30 November – 1 December, 2005.

Figure 4: Links between the Basin Vision, MRC Vision and Programmes Development



Progress towards the achievement of the goals is accomplished through achieving the objectives. Progress towards the objectives is monitored through indicators, which measure achievements made through various activities.

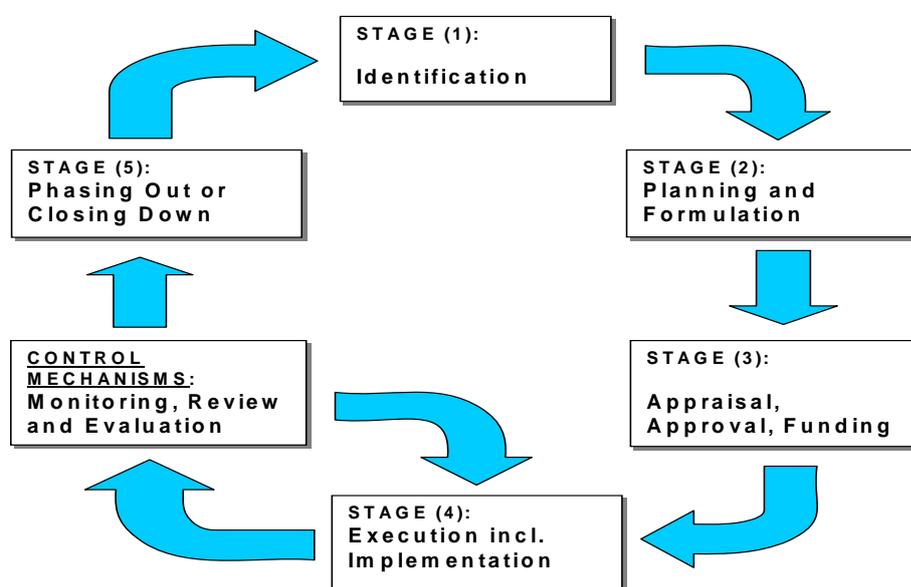
Each MRC programme is composed of a portfolio of projects which normally correspond to an agreement with a donor. All projects contribute to the main goal of the programme. These sets of linkages will ensure that activities undertaken under the various projects of the MRC programmes are contributing measurably towards the achievement of the objectives in the Strategic Plan, which in turn will ensure that the MRC is progressively working towards the achievement of the four goals, fulfilling its organisational Mission and Vision and contributing significantly to the Basin Vision.

In addition, water resources related projects identified under the MRC basin development planning and grouped under the BDP Projects Database would also be supported by MRC programmes in a manner to contribute to the achievements of the MRC goals and objectives. These projects will be executed and implemented through close coordination and support of the funding agencies, NMCs/line agencies, and the MRC Secretariat.

Projects under MRC programmes are developed and implemented by the MRC Secretariat throughout the programme cycle (figure 6) in close cooperation with NMCs and other national or international partners. For projects of the BDP

Projects Database, the role of the MRC is more limited. However, MRC can provide a valuable support to NMCs/Line Agencies in cooperation with donors, investment banks and other stakeholders. During the identification stage, MRC can conduct impact screening and assessments of trade-off and screen and formulate suites of projects. During the preparation phase, MRC can support line agencies through the NMCs, on special request, for pre-feasibility studies focusing on environmental, social and hydrological impact assessments. During the appraisal stage, the role of MRC is very limited; appraisals would be carried out only on a special request. During the implementation stage, for infrastructure projects, MRC has no role, while for development projects, MRC may act as the implementer or co-implementer. During the evaluation stage, MRC can conduct post-project impact monitoring.

Figure 5: MRC Programme Management Cycle



Within the Strategic Plan 2006-2010, the MRCS aims to provide more 'output-orientation' to the MRC programmes. The purpose of this approach is to be able to measure and present the impact of MRC's programmes on the basin resources and on the basin's population. Based on the logical framework approach of MRC's programmes, a first and practical means to confirm that MRC is on the right way to achieve the overall objective is to measure the achievement of the outputs expected from each MRC programme. Within a logical framework approach, in order to measure the achievement outputs, the degree of completion of the activities related to each output can be measured.

An application of this 'output-oriented' approach is provided in this document within the reporting section for 2006, which includes for each programme two graphs on achieved outputs for the year 2006 and for the whole programme duration, respectively. For some programmes, the outputs selected in these graphs as 'main outputs' are different for the overall programme duration and for the reporting year 2006. This is due to the fact that these programmes focused on

specific achievements in 2006. The graphs are useful to provide an overview of programme achievements; however, all the outputs set out in the programmes' documents are important and necessary to achieve the objectives of the Programmes. This list of main outputs of each programme is also provided in the section for planned outputs and activities for 2007.

The Work Programme is being prepared as a monitoring tool with an annual perspective to present the outputs derived from the logical framework of the MRC programmes. All these programmes contribute to the achievement of the MRC Strategic Plan 2006-2010. In addition to the programme outputs presented in section 3 and 4, the strategic level outputs are therefore presented in the MRC Strategic Plan log frame in Annex 1.

2 The MRC Integrated Programme

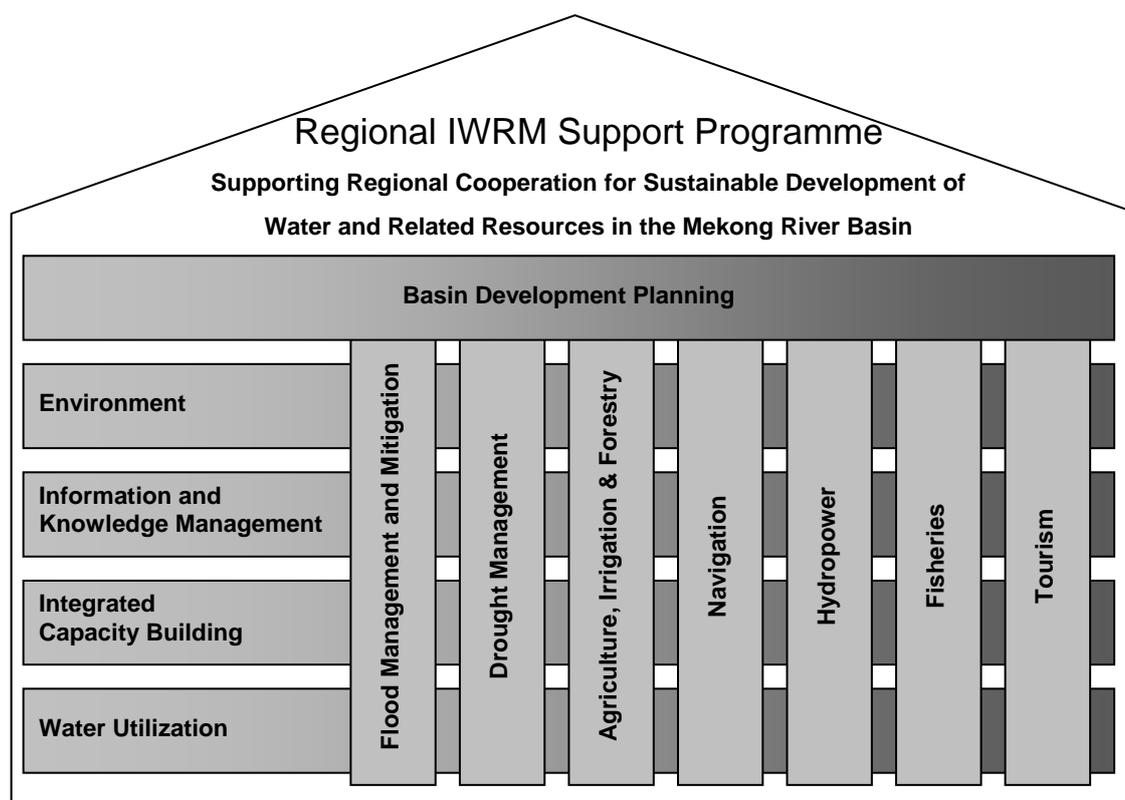
2.1 Introduction

The programme approach considers MRC activities as part of comprehensive programmes supporting basin-wide strategies of the MRC member countries. An essential element of implementing a programme approach is the focus on outputs.

Through adopting this approach the MRC is able to remain focused on what it is aiming to achieve and undertake activities to do so in the most appropriate and efficient way. This is in line with the Strategic Plan 2006-2010 and will develop the MRC's capacity to meet the challenges in a rapidly changing political, social and development environment. This approach will be strongly reflected in this Work Programme 2007, in which all MRC Programmes are presented.

The totality of programmes supports the Mekong Programme – A Regional Cooperation Programme for Sustainable Development of Water and Related Resources in the Mekong River Basin.

Figure 6: MRC Programme Structure⁴



The Basin Development Plan is central to the purpose of the MRC to act as a key player in the development of water and related resources in the Lower Mekong

⁴ Details of MRC Programmes are developed through national and regional consultations with NMCs, and approved by the Council

Basin. It is addressing central issues in the 1995 Agreement in line with the MRC Strategic Plan 2006-2010 directly addressing Goal 1. The integrated programme structure of the MRC links the BDP Programme with the following programmes: Flood Management and Mitigation; Drought Management; Agriculture, Irrigation and Forestry; Navigation; Hydropower; Fisheries and Tourism into a cohesive programme set. These programmes will be cross-cut by four programmes: Environment Management, Information & Knowledge Management, Integrated Capacity Building and Water Utilisation. These programmes address goal 1 to goal 4 of the Strategic Plan.

2.2 Overview of Programme Costs and Funding

The Work Programme for 2007 provides a table on MRC programmes costs and funding. Compared with previous Work Programmes, the presentation covers **the total budget, funding needs and funded agreement/funding pledged under each programme**. Therefore, programmes which are currently being developed, such as the Drought Management Programme, the Hydropower Programme, the Tourism Programme do not yet indicate funded/pledged amounts.

Table 1 presents an overview of the programmes and their active agreements/projects and funding source. It provides the agreed budget and balance for each agreement/project as well as the total budget and balance for each programme.

The multi-year total budget for MRC Programmes amounts to US\$ 169.25 million. The total funding signed and committed amounts stands at US\$ 103.98 million. The total funding needs thus are US\$ 65.27 million.

¹⁰ MRC Programmes are Basin Development Plan; Environment; Information and Knowledge Management ; Integrated Capacity Building;, Water Utilisation; Flood Management and Mitigation; Drought Management; Agriculture, Irrigation and Forestry; Navigation; Hydropower; Fisheries and Tourism.

MRC Programmes, Programme Costs and Funding - Multi-Year

| Programme | Programme Components | Total Budget* | Funding Needs | Funded/Committed* |
|---|---|----------------|---------------|-------------------|
| | | (US\$ 1,000) | (US\$ 1,000) | (US\$ 1,000) |
| | | 1 | (2 = 1-3) | 3 |
| Basin Development Plan | BDP Phase 1 (2001-July 2006) | 6,612 | 0 | 6,612 |
| | Interim Phase (Aug – Dec 2006) | 115 | 0 | 115 |
| | BDP Phase 2 (2006-2010) | 11,044 | 1,060 | 9,984 |
| | IWRM based Basin Development Plan | 5,715 | 566 | 5,149 |
| | Knowledge Base and Assessment Tools | 2,904 | 494 | 2,410 |
| | Capacity Building | 2,425 | 0 | 2,425 |
| Environment Programme | Five Years (2004-2008) | 19,225 | 4,018 | 15,207 |
| | Environmental Monitoring and Assessment | 4,267 | 973 | 3,294 |
| | Environmental Decision Support | 4,096 | 128 | 3,968 |
| | People and Aquatic Ecosystems | 4,273 | 1,239 | 3,034 |
| | Environmental Knowledge | 2,490 | 1,050 | 1,440 |
| | Environmental Flow Management | 4,099 | 628 | 3,471 |
| Information and Knowledge Management Programme | Five Years (to be developed 2006-2010) | 26,591 | 14,081 | 12,510 |
| | Preparation Phase | 200 | 200 | 0 |
| | Programme Management | 1,905 | 1,271 | 635 |
| | Hydro-meteorological Data | 6,096 | 1,696 | 4,400 |
| | GIS and Database | 7,774 | 5,644 | 2,130 |
| | Modelling | 7,389 | 2,987 | 4,402 |
| | Communication and Knowledge Management | 3,427 | 2,484 | 943 |
| Integrated Capacity Building Programme | Five Years (to be developed: 2006-2010) | 6,200 | 5,900 | 300 |
| | Integrated Training Programme (Management) | 3,700 | 3,700 | 0 |
| | Junior Riparian Professional Scheme | 1700 | 1,700 | 0 |
| | Gender Mainstreaming in IWRM | 800 | 500 | 300 |
| Water Utilization Programme | Seven Years (2000-2007) | 17,700 | 0 | 17,700 |
| | Basin Modelling and Knowledge Base | 8,800 | 0 | 8,800 |
| | Environmental & Transboundary Impact Analysis | 2,300 | 0 | 2,300 |
| | Rules for Water Utilization | 1,600 | 0 | 1,600 |
| | Management and Institutional Strengthening | 5,000 | 0 | 5,000 |
| Flood Management and Mitigation Programme | Six Years (2004-2010) | 22,430 | 0 | 22,430 |
| | Regional FMM Centre | 11,690 | 0 | 11,690 |
| | Structural Measures & Flood Proofing | 4,020 | 0 | 4,020 |
| | Transboundary Flood Issues | 3,160 | 0 | 3,160 |
| | Flood Emergency Management and Strengthening | 1,100 | 0 | 1,100 |
| | Land Management | 2,460 | 0 | 2,460 |
| Drought Management Agriculture, Irrigation and | Five Years (2006-2010) | 7,000 | 7,000 | 0 |
| Navigation Programme | Forestry Programme, Five Years (2006-2010) | 6,500 | 1,400 | 5,100 |
| Hydropower Programme | Six Years (2006-2010) | 22,612 | 15,774 | 6,141 |
| | Socio-economic Analysis and Planning | 4,230 | 3,743 | 348 |
| | Legal Framework for Cross-Border Navigation | 1,631 | 1,178 | 413 |
| | Traffic Safety and Environmental Sustainability | 6,813 | 3,884 | 2,833 |
| | Information, Promotion and Coordination | 3,983 | 3,603 | 246 |
| | Institutional Development | 5,955 | 3,366 | 2,301 |
| Fisheries Programme | Five Years (2006-2010) | 2,500 | 2,500 | 0 |
| | Five Years (2006-2010) | 14,729 | 7,799 | 7,682 |
| | Programme management and communication | 4,063 | 1,103 | 2,663 |
| | Fisheries management and governance | 2,994 | 1,242 | 1,608 |
| | Fisheries ecology, valuation and mitigation | 5,515 | 2,577 | 2,722 |
| Aquaculture of indigenous Mekong fish species | 2,157 | 1,278 | 689 | |
| Tourism Programme | Five Years (2006-2010) | 3,000 | 3,000 | 0 |
| MRC Trust Fund | Five Years (2006-2010) | 3,000 | 2,800 | 200 |
| TOTAL | | 169,258 | 65,277 | 103,981 |

*) includes in-kind contribution from Member States which in general is around 10% of the budget based on Programme documents.

Source: MRCS-ICCS

3. The MRC Programmes

This section provides a brief account of each programme on the progress of the activities in 2006 and the work plan activities in 2007. A comprehensive progress report for each programme can be found in the individual programme's periodical full progress reports. To be consistent with the Work Programme for 2006, the structure adopted in this section follows the structure of the Work Programme for 2006, and therefore programmes are presented in an integrated programme structure. The planned activities reported under this section can be found within the individual programme work plan for 2007 available for each programme. This section provides for each programme the following information:

1. Programme Overview

- Purpose: information on the development opportunities and challenges addressed by the programme; and reflected through its Development Objective.
- Approach: information on how the programme contributes to the implementation of an IWRM approach in the Mekong Basin, within its Immediate Objective.
- Strategy: information on the overall strategy of the programme.
- Structure: description of the components of the programme.
- Implementation arrangements: brief description of international partners, and main national partner network.
- Main outputs: main outputs expected from the programme.
- List of projects: active projects and projects in preparation under the programme.

2. Progress for 2006

- Funding status graph, providing the reader with funding and expenditures information;
- Achievements graphs, presenting the progress made in achievement of the main outputs as selected by programmes for the year 2006 and for the programmes implementation periods;
- Planned outputs and achieved outputs for 2006;
- Significant problems encountered and corrective actions taken;
- Donor review or appraisals carried out in 2006;
- Relevant JC and Council decisions taken in 2006.

3. Workplan for 2007

- Planned outputs and activities for 2007: including the prerequisites and risks for output achievement; and the projects in preparation.
- Planned donor reviews or appraisals in 2007

3.1 Basin Development Plan (BDP)

3.1.1 Programme Overview

Purpose

Over the next 20 years, the Mekong Basin will undergo great social, economic and environmental change. Demands for food, water supply and energy will increase even more quickly, as a result of economic growth, industrialization and urbanization. MRC's role is to ensure that the development of water and related resources contributes to sustainable economic development in the basin. At the same time, poverty alleviation remains the main goal of water resources development in the Mekong basin. In this perspective, poverty reduction national strategies and water-related poverty alleviation measures need to be effectively supported and promoted under a regional basin planning process.

The overall programme objective has been derived from the 1995 Mekong Agreement and supports the MRC vision of 'an economically prosperous, socially just and environmentally sound Mekong River Basin', in line with the MRC 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'. The BDP Phase 2 programme objective is stated as "The water resources of the Mekong River Basin managed and developed in an integrated, sustainable and equitable manner for the mutual benefit of the riparians".

Approach

Optimal and equitable development of the Mekong's water resources require collaborative planning and joint identification of investment priorities, referring to basin-wide strategies in each water-related sector. This may also be usefully supported by multi-sectoral analysis and the simulation of various development scenarios and their effect on the river flow regime.

Three Immediate Objectives have been defined to reflect the manner in which MRC conceptualizes basin planning. The Immediate Objectives are:

1. A rolling IWRM based Basin Development Plan produced in support of sustainable development in the Mekong River Basin;
2. Knowledge base and assessment tools further developed and utilized effectively in MRC and NMCs;
3. Capacity built at MRC and NMC levels for IWRM planning and for facilitation/mediation in areas where trade-off management is required.

Strategy

The BDP has established a planning network in the LMB built on a range of BDP planning tools and features. In this approach will be improved by incorporation of experience gained from actual implementation of various priority development initiatives, as well as requirements imposed by new opportunities and demands. Thus, the planning process will be taken from exploration and innovation into response and adaptation.

Structure (BDP Phase 2)

A detailed BDP 2 programme document was approved by the Council in December 2005. The document describes three components:

Component 1: A rolling IWRM based Basin Development Plan produced in support of sustainable development in the Mekong River Basin

Component 2: Knowledge base and assessment tools further developed and utilized effectively in MRC and NMCs

Component 3: Capacity built at MRC and NMC levels for IWRM planning and for facilitation / mediation in areas where trade-off management is required.

The content of the project document has been discussed with potential BDP phase 2 donors.

Implementation arrangements

National BDP Units have been established in each Member State under the National Mekong Committees. In the near future, the collaboration between the BDP team at the MRCS, the BDP units in NMCs and other Programmes in MRC will be strengthened. Strong links will be maintained with regional initiatives of external agencies, such as ADB's Greater Mekong Subregion (GMS) programme, UN ESCAP, ASEAN, and SEATAC of GWP. There will also be scope for coordination with the upstream riparian countries.

Main Outputs (BDP Phase 1)

BDP Phase 1 has 13 separate outputs that can be summarized or grouped to five operational achievements. These achievements will be further strengthened in the BDP Phase 2.

1. A basin planning process established and ongoing;
2. A data system implemented and functional;
3. Capacity built and training provided within MRCS, NMCs and national organizations;
4. Sub-area and basin-wide scenarios and strategies formulated;
5. A Projects Database (long-list) set-up and projects prioritized (short-list)

Additionally, the project document for BDP phase 2 is regarded as a main output of BDP Phase 1.

The project's Logical Framework Matrix – as well as the project reports – provides more information on each specific BDP Output.

List of agreements/projects

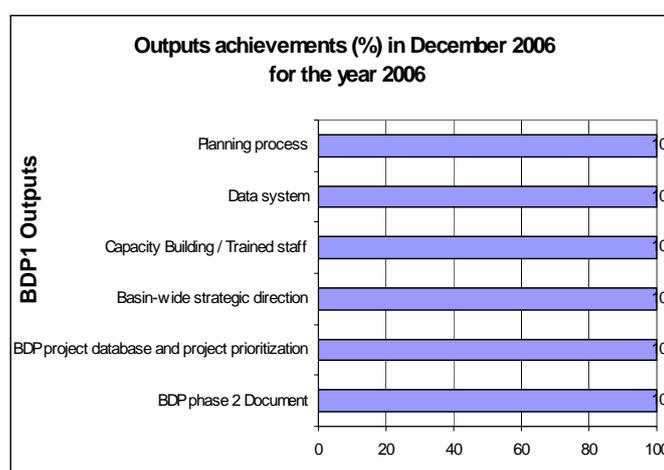
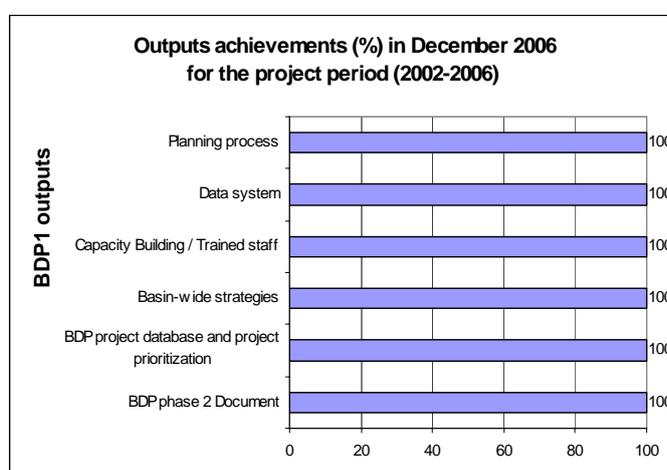
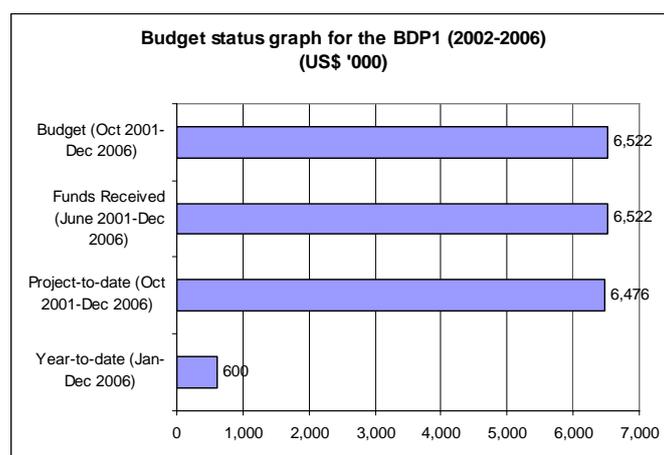
| Project title | Start date | End date | Budget (US\$ 1,000) | Balance at the end of 2006 (*) (US\$ 1,000) | Donor(s) |
|---|------------|---------------------------------|--|---|--|
| Active projects | | | | | |
| Multi-donor contribution to the Basin Development Plan –BDP 1 | 01/10/2001 | 31/07/06 (no-cost extension) | 6,406 | 10 | Denmark; Switzerland; Sweden; Australia |
| Japan contribution to the Basin Planning | | | In kind JICA contribution and seconded experts | | Japan |
| SIDA contribution to the Interim Phase of BDP1 | 08/2006 | 12/2006 | 115 | 36 | |
| Danish contribution to the Basin Development Plan (2006-2010) | 01/2007 | 12/2010 | 7,700 | 7,700 | Denmark |
| Japan contribution to the Basin Planning | | | In kind from Japan Water Agency -JWA, dispatched an expert | | Japan |

(*) Source: Solomon - December 2006

3.1.2 Progress of Basin Development Plan for 2006

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2006, respectively.

The basic approach and methodology for the two outputs achievement graphs is set out in the introduction of the Work Programme.



Planned and achieved outputs for 2006

Phase 1 of the BDP started in October 2001. It was a three year programme (2002-2004) that has been extended without provision of additional funds until July 2006. A further no-cost extension provided a bridging arrangement up to the start up of the second phase, planned for January 2007. BDP Phase 1 has 13 separate outputs that can be summarized or grouped to five main achievements: (1) A basin planning process established and ongoing; (2) Data systems implemented and functional; (3) Capacity built and training provided within MRCS, NMCs and national organizations; (4) Sub-area and basin-wide scenarios and strategies formulated; and (5) A Projects Database (long-list) set-up and projects prioritized (short-list).

In addition, the project document for BDP phase 2 is regarded as a main output of BDP Phase 1.

Significant problems encountered and corrective actions taken

Major problems encountered have been the delay in project implementation; the budget constraints due to no-cost extension of BDP 1 until the end of July 2006 and staff reduction. Special attention had been paid to outline and implement an exit strategy for BDP 1, including smooth down-scaling of operations by March 2006, and gradual hand-over of selected project features to NMCs, line agencies and other potential clients.

Donor reviews or appraisals

The joint donor appraisal mission (Danida, Sida, AusAid) on BDP Phase 2 in the period (9 – 20 January 2006) with the participation from AusAID Vientiane, Canberra, the ADB, the World Bank and Agence Francaise de Development was conducted. The appraisal reviewed the progress and degree of completion of BDP1 and the project document for BDP2. Particular attention was paid to the BDP2 within of the MRC Strategic Plan (2006 – 2010) process.

General assessment of BDP1 (quoted from Appraisal Report, page 11):

“Establishment of a basin – wide participatory planning process based on internationally recognized IWRM principles is in itself a major achievement. In particular, the sub – area workshops and fora with their substantial public participation represented a significant step forward as compared with past procedures in most of the basin. Furthermore, the basin – wide scenarios illustrated for the first time the usefulness of state-of-the-art methodologies and assessment tools. Altogether BDP1 has produced substantial outputs of great potential use for MRC and the region”

General assessment of BDP 2 (quoted from Appraisal Report, page 25):

The BDP2 proposal has relevant strengths in its inclusion of basin-wide scenarios, a rolling basin-wide planning process based on IWRM, enhancement of MRC’s knowledge base, and capacity building.

After the joint donor appraisal mission, Danida funded a consultant to discuss the revision of BDP 2 programme document with MRCS and NMCs. The revised BDP Phase 2 Programme Document was approved by the Twenty-fourth Meeting of the Joint Committee in August 2006.

On the 6th December 2006, the Agreement between the Mekong River Commission and the Government of the Kingdom of Denmark on support to the BDP Phase 2 was signed at the MRC Secretariat in Vientiane.

Relevant JC and Council decisions

Since the Twenty-Second Meeting of the MRC Joint Committee, more than 400 projects had been put into the BDP Projects Database. The draft of Second batch of short-listed projects had been prepared by applying the BDP screening process. The BDP Core Library and Sub – area Planning Atlas had been produced. The IWRM Strategic direction for LMB and the BDP Phase 2 programme document had been approved by the Council at its Twelfth Meeting in December 2005.

The Twenty-third Meeting of the MRC Joint Committee took note of the progress of the BDP Phase 1 and of the 2nd batch of projects to be placed into the BDP shortlist. The Meeting indicated that a revision of the BDP Phase 2 could be considered in line with the finalization process for the MRC Strategic Plan (2006 – 2010). It was expected that all outputs of the BDP Phase 1 would be completed by July 2006.

The Twenty-fourth Meeting of the MRC Joint Committee approved the Completion Report of BDP Phase 1, the extension of Phase 1 and the revised BDP Phase 2 programme document subject to inclusion of comments made by the Joint Committee.

The Thirteen Meeting of the MRC Council in December 2006 took note of the progress of the Basin Development Plan, Phase 2

3.1.3 Workplan for 2007

At the end of the extension of BDP Phase 1 by July 2006 the project has established a planning network in the LMB built on a range of BDP planning tools and features. This includes the Strategic Directions for IWRM in the LMB, together with a portfolio of projects and programmes to support it (the MRC-BDP Projects Database). Also, a substantial volume of knowledge, personal skills, and institutional capacity has been generated in the field of integrated river basin development.

The BDP project phase 2 is planned to start in January in 2007 after consultation with the donors in 2006. The required staff will be recruited and an Inception Report of BDP project phase 2 will be prepared in consultation with the member countries and the donors for subsequent implementation. The Regional Launching Workshop for Phase 2 will be conducted in January 2007 and some outputs will be implemented in 2007 such as scenarios formulation and impacts analysis, stakeholder involvement including linkages with national planning,

upgrade assessment tools and modelling procedures.

Donor reviews or appraisals planned in 2007

The first joint donor review will be carried out at the end of the year 2007 in order to assess the overall progress of the BDP Phase 2 Programme with regard to activities and outputs; and assess and analyse the major concerns, risks and assumptions for the success of the BDP Phase 2 Programme.

3.2 Environment Programme (EP)

3.2.1 Programme Overview

Purpose

The productivity and quality of the living natural resources are vital to the livelihoods of the Basin's people. Environmental degradation induces lasting changes in the basin resources, and represents a major threat for the basin's people who rely on the river for their food and water. Adopting a holistic approach to manage the Basin's water and related natural resources and ensuring that development does not cause unacceptable deterioration in the region is therefore of the highest importance.

The development objective of the Environment Programme is "An environmentally sound, economically prosperous and socially just Mekong River Basin." (MRC Vision for the Mekong basin).

Approach

The Lower Mekong Basin is in a fortunate position compared with similar river basins. Both the water quality and the environmental conditions are still relatively good and the current development of the Mekong River is still very limited compared to most other large international rivers. With generally low levels of industrial activity in the basin at present, the two immediate concerns regarding water quality are diffuse pollution due to poor catchment land management, and the potential for water quality emergencies arising from spillages or shipping accidents. Also in the Mekong Delta nutrient levels in the water are high and rising, presumably due to intensive agriculture and aquaculture and the wastewater produced by areas of high population density.

The immediate objective of the programme is "The riparian Governments have the capacity to secure a balance between economic development and protection of the environment to ensure a healthy Mekong River Basin capable of supporting the natural resource diversity and productivity which are central to the livelihoods of the people".

Strategy

The Environment Programme has a two-pronged approach in that it is aiming to assist the countries in fulfilling the articles in the 1995 Agreement related to the

protection of the environment and maintaining the ecological balance of the basin. It is also supporting the other programmes through provision of environmental data and development of tools for environmental planning and management. Assessment and monitoring of water quality and ecosystem health form an important basis for data provision. The programme also aims to improve environmental policy and management through advice to and promotion of cooperation among environmental agencies, directly supporting the BDP process. Through compilation of existing knowledge and facilitation of research activities it also promotes a better understanding of the environmental and ecological aspects of the Basin. The MRC Environment Programme is comprehensive, flexible, and builds on improved mechanisms for co-ordination provided by the new organisational structure of MRC Secretariat. In contrast to previous and more technically oriented environmental projects, the central focus of the programme is people.

Structure

The programme has five components, each with its own logical framework matrix.

Component 1: Environmental Monitoring & Assessment.

This component focuses on ensuring that monitoring data on water quality, ecological health and the socio-economic conditions of rural basin households is collected, analyzed and reported on.

Component 2: Environmental Decision Support.

This component provides processes, approaches and tools for better policy development, planning and management of development of the basin's resources. Information required to use the tools and techniques is provided by the other components of the Programme as well as from other sources within and from outside the MRC.

Component 3: People and Aquatic Ecosystems.

To support the basin planning activities, information on the basin's ecosystem and users of its products and services is needed; this component will provide such information to be used by the BDP and other regional (such as ADB-GMS) and national planning agencies.

Component 4: Environmental Knowledge.

An inadequate understanding of how the different parts of the basin are linked and dependent on each other can lead to that certain development initiatives will have unforeseen negative consequences. To minimize this risk, this component will identify the knowledge gaps and promote research to fill these gaps, as well as provide the information in a suitable format for planners and decision makers.

Component 5: Environmental Flow Management.

River basin development worldwide has pointed to the risks of sector based development, leading to long-term changes in the basin's assets due to water withdrawals at critical times for the basin's environment. Environmental flows assessment together with development and management plans developed based on such an assessment will ensure that longer term impacts are anticipated and a proper trade-offs analysis is performed contributing to sustainable development under the Mekong cooperation.

Implementation arrangements

The Environment Programme will ensure the progressive incorporation of information, gathering assessment and exchange activities between the national line agencies, the NMCs and the MRC Secretariat as an integral part of national processes and strategies retaining only the most central aspects as core functions of the Programme. Each NMC has a national environment coordinator (EPC) who is the focal point for communication and coordination. An Environment Programme Management Group (EPMG) composed of the national EPC and line agencies representatives meets regularly to review, adjust and modify the workplan as required. The implementation strategy involves national and regional research institutes as well as local and international NGOs. The EPMG was proposed to be replaced by a Steering Committee, comprising senior representatives of the NMCs. The Committee will have six monthly meetings to monitor progress and provide direction to the Programme.

Main Outputs

The main outputs of the Environment Programme are the following:

1. An improved capacity of the MRC Secretariat, NMCs, line agencies and partners to undertake analyses of environmental monitoring and socio-economic information of the Mekong River Basin and network/communicate the results. (Component 1)
2. Improved Environmental and Social Impact Assessment, including Cumulative Impact Assessment processes, focusing on transboundary impacts. (Component 2)
3. A realistic valuation of aquatic ecosystems and natural resources and human interactions in the Mekong River Basin. (Component 3)
4. Scientific data and information on the basin's ecosystem communicated to planners, managers, policy/decision makers and relevant stakeholders in an appropriate format. (Component 4)
5. A methodology for Environmental Flows assessment in the Mekong River basin developed and assessment undertaken. (Component 5)

The project's Logical Framework Matrix – as well as the project reports – provides more information on each specific output. These selected outputs provide an overview of the expected programme's outputs.

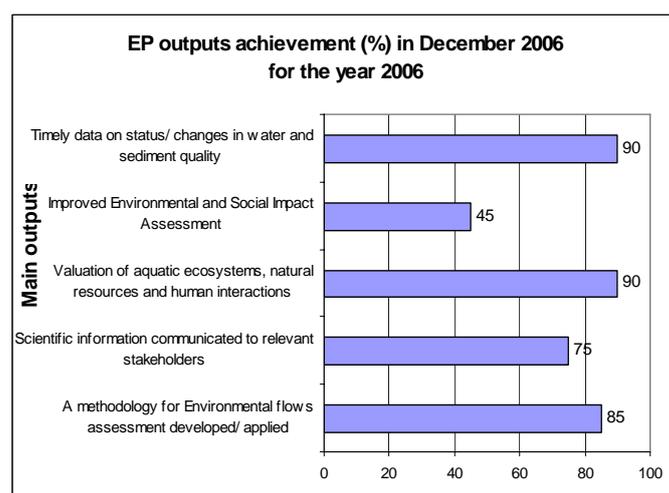
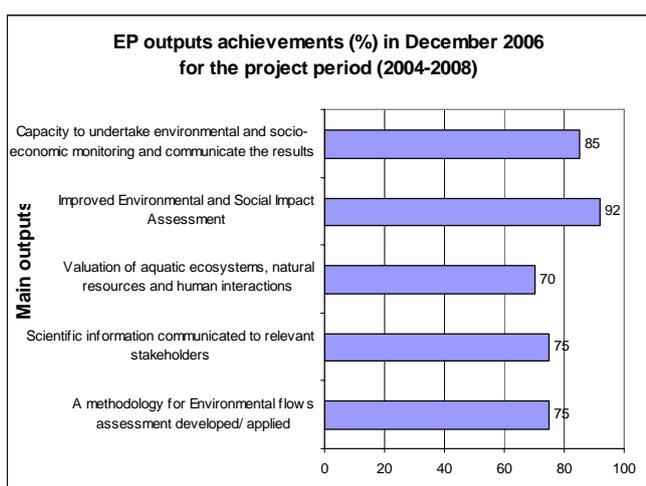
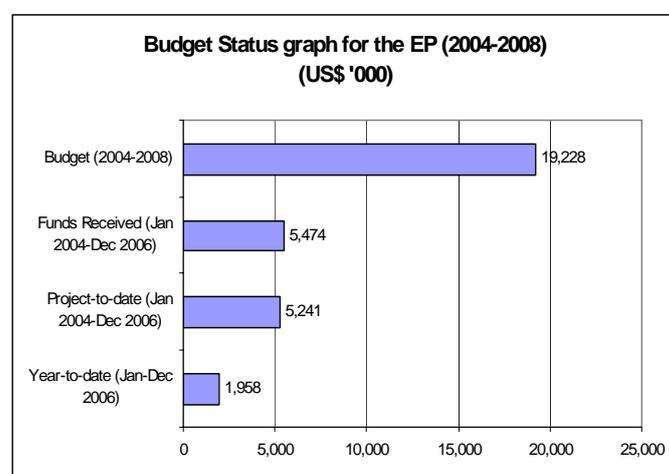
List of agreements/projects

| Project title | Start date | End date | Budget (US\$ 1,000) | Balance (US\$ 1,000) | Donors |
|--|------------|---------------------------|------------------------|-------------------------|-------------|
| Active projects | | | | | |
| Danish contribution to EP 2002-2004 | 2002 | 2004 extended 31/07/06 | 2,375 | 0 | Denmark |
| Danish contribution to EP 2007-2010 | 2007 | 31/12/10 | 1,300 | 1,300 | Denmark |
| Swedish contribution to EP | 01/01/04 | 31/12/06 | 3,264 | 640 | Sweden |
| Participation in UNDP- Mekong Wetland Biodiversity Programme | 19/07/04 | 31/03/07 | 81 | 79 | UNDP |
| Dutch support to Mekong Wetland Biodiversity Programme | 01/10/04 | 31/03/07 | 744 | 127 | Netherlands |

3.2.2 Progress of Environment Programme for 2006

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2006, respectively.

The basic approach and methodology for the two outputs achievement graphs is set out in the introduction of the Work Programme.



Notes: exact title of the outputs as set out in the EP logical framework:

- Output 1. "Timely data and/or information on status and changes in water and sediment quality of the Mekong River Basin provided." (component 1)
- Output 2. "Improved Environmental and Social Impact Assessment, including Cumulative Impact Assessment processes, focusing on transboundary impacts" (component 2)
- Output 3. "Realistic valuation of aquatic ecosystems and natural resources and human interactions in the Mekong River Basin." (component 3)
- Output 4. "Scientific data and information on the basin's ecosystem communicated to planners, managers, policy/decision makers and relevant stakeholders in an appropriate format." (comp.4)
- Output 5. "A methodology for Environmental Flows Assessment in the Mekong River basin developed and assessment undertaken." (comp. 5)

Planned and achieved outputs for 2006

Implementation of activities followed the Annual Work Plan for 2006, which is based on the prioritized component outputs developed by the Environment Programme Management Group (EPMG) and agreed to by the four NMCs.

Component 1: Environmental Monitoring and Assessment

Development of a water quality index based on water quality monitoring network data is under way. The QA/QC programme continued in 2006 testing the laboratories analytical accuracy. Ecological health monitoring completed the second part of the three year rotation covering the flood plains of Cambodia and the delta. The design of the field based studies for the social impact monitoring system was completed.

Component 2: Environmental Decision Support

The framework of the guideline transboundary EIA (TbEIA) was essentially completed (with one outstanding issue on the language used), work on guidance and institutional support continues. Ecological Risk Assessments was undertaken for Chiang Rai/Bokeo area and for Takeo/Chao Duc area. The risk assessment focuses on transboundary concerns on water quality and the results will be finalised in early 2007. The Programme took the lead in coordinating awareness raising and capacity development in conflict management and mitigation. A transboundary impact diagnostic study was initiated for Sesan, Sre Pok and Sekong sub-basins.

Component 3: People and Aquatic ecosystems

Information on values has been collected and added to the wetland map as a tool for BDP Phase 2. Assessment of people vulnerable to changes in aquatic resources was initiated aimed to provide a spatial description of vulnerability. Work on environmental impact of tourism was initiated.

Component 4: Environmental Knowledge

The Environment Programme Annual Technical Meeting, held in January 2007, reported on water quality, ecological health, wetland valuation and IBFM. A report on the status and trends of water quality in the Mekong River Basin was completed.

Component 5: Environmental Flow Management,

Based on identified knowledge gaps IBFM work in 2006 focused on improving hydrological modelling, sediment and geomorphology as well as fisheries, development of a database driven expert tool was initiated.

Significant problems encountered, Corrective action taken

The programme is still affected by the slow recruitment process of national consultants; where there is difficulty in identify suitable applicants. There are also

difficulties with slow deliveries and delays of outputs from engaged consultants. To deal with this the programme spends a lot of time following up delayed work. The issue was discussed at the Programme retreat and the Programme and the NMCs will work closer to improve the situation.

Donor reviews or appraisals

Sida has pledged support for the Programme although the specific amount is not determined.

3.2.3 Workplan for 2007

Implementation in 2007 will follow the revised programme including work initiated in 2006 as well as a number of new activities.

Component 1: Environmental Monitoring and Assessment

The first part of the social impact monitoring, completed 2006, is being complemented by field work in 2007. Water Quality and Ecosystem health monitoring will continue according to annual plans, including a draft of the Basin Report Card on ecosystem health.

Component 2: Environmental Decision Support

In 2006 the MRCS initiated capacity building in conflict management, which in 2007 the Programme will build on to develop mechanisms for addressing environmental conflicts. The guidelines for transboundary EIA are to be confirmed.

Component 3: People and Aquatic Ecosystems

Vulnerability assessment continues focussing on spatial aspects of dependence on aquatic resources. Wetland maps are to be combined with the wetland valuation data.

Component 4: Environmental Knowledge

No specific activities are planned due to uncertainty in budgetary support in 2007.

Component 5: Environmental Flow Management,

The work on environmental flows, Integrated Basin Flow Management (IBFM) continues with field investigations guided by feedback from stakeholder consultations, which are undertaken in parallel to the research programme. The database driven expert tool and other models are to be further developed.

The prerequisite for output achievement will be the active and continuous cooperation with the NMCs. The most immediate risk for the programme is not having been able to attract new funding. The funding secured for 2007 will not allow the programme to operate at the past level and drastic reduction in staffing and activities are needed.

Donor reviews or appraisals planned in 2007

A new agreement with Sida covering 2007-2009 is expected although the details have not yet been finalised. Discussions with the Dutch Embassy are ongoing for support to the programme by late 2007 or early 2008.

3.3 Information and Knowledge Management Programme (IKMP)

3.3.1 Programme Overview

Activities related to information and knowledge management were carried out in 2006 under the Technical Support Division (TSD) of the MRCS. Given the importance of these issues, MRC is currently in the process of formulating the IKMP programme document in a consultation process. The programme document has been approved in principle by the MRC Council at its Thirteenth Meeting in December 2006; therefore information provided in the profile below may still be modified as an outcome of this formulation process.

Purpose

Information and knowledge have undoubtedly become a key factor shaping the development and determining the success of organizations, economies and even nations. As the Mekong Basin will undergo great social, economic and environmental changes over the next years, the need for information will arise at all levels, from that of senior decision makers at the national and international levels to the grass-roots and individual levels.

The development objective of the Information and Knowledge Management Programme is “to build a solid foundation of data, information and knowledge products, systems and services that supports the goals of the Mekong River Commission”.

Approach

Integrated Water Resources Management and Development needs to be supported by databases and Geographical Information Systems (GIS) in order to store, analyse, and distribute hydro-meteorological data, land use data, socio-economic data, administrative data, infrastructure data, etc. Planning and decision-making require mathematical simulation models and Decision Support Systems (DSS). During the past six years, the MRC Secretariat has developed rich databases and powerful mathematical tools, such as the Decision Support Framework (DSF) which need further maintenance and updating, based on an effective international data management and exchange policy.

The immediate objectives of the programme are defined under the programme document formulation process. It reflects the need to develop and maintain the databases and tools, information and knowledge available at the MRC to support planning, monitoring, policy and decision-making.

Strategy

While improving information content is critical, improved content can only lead to better decision making if it is disseminated and delivered in the right form to the right people. This requires designing appropriate information flows and developing systems, standards, procedures and practices that enhance the availability of information. These crucial tasks would guide the strategy of the programme.

Structure

Component 1: Programme Management.

This component will ensure that demand-driven and client-oriented information and knowledge systems, services and products are integrated throughout the MRC's programmes and enhance regional cooperation. The activities of the component cover the IKMP management structure in place and in operation at basic services as central functions to support all MRC programmes, the preparation and monitoring of IKMP evaluation indicators and information and Knowledge processes operation.

Component 2: Hydro-Meteorological Data

This component will ensure a coordinated monitoring data system that meets the needs of the users and that rapidly, accurately and systematically acquires and disseminates data and information.

Component 3: GIS and Databases.

This component will develop a geographic information system that comprehensively integrates MRCS data and information holdings and provides access, support services, and value added products.

Component 4: Modelling.

This component will provide the MRC, riparian countries and other clients with decision support tools, services and capacity for planning, forecasting and impact assessment.

Component 5: Communications and Knowledge

This component will ensure that data, information and knowledge are easily exchanged and shared with a wide network of decision makers and other stakeholders.

Implementation arrangements

For the past years, information and knowledge activities were carried out within the framework of the TSD (A. Database/GIS Team; B. Documentation Centre; C. Hydrology Team; D. Modelling Team). The TSD will collaborate with all MRC programmes, and the four Member Countries (e.g. through the Technical Assistance and Coordination Team, TACT) to further develop and implement the

MRC-Information System (MRC-IS).

Main outputs

As set out in the concept paper, the programme is executed in two phases: the Preparation Phase (May – December 2006) and the Implementation Phase (planned to start in early 2007).

The outputs from the preparation phase are:

1. IKMP Concept Paper;
2. MRC IKM Policy;
3. Framework for MRC an IKMP Implementation Plan;
4. Programme Document, including components and overall programme design.

The expected outputs during programme implementation are:

1. Programme and components establishment;
2. Information and Knowledge Business Processes implemented;
3. Design, development and maintenance of information and knowledge products and services;
4. Procedures, guidelines, standards and technical support systems;
5. Strengthening of regional institutional capacity for efficient data, information and knowledge exchange, sharing and management.

List of agreements/projects

| Project title | Start date | End date | Budget (US\$ 1,000) | Balance (US\$ 1,000) | Donor(s) |
|---|---------------|----------------|------------------------|-------------------------|-----------|
| Active Projects | | | | | |
| Australian contribution to AHNIP Extension | 1 Apr 2006 | 31 August 2007 | 469 | 105 | Australia |
| AFD support to Mekong Hycos –Project Management Unit | 13 Jan 2006 | 12 Jan 2012 | 600 | 588 | France |
| –Others | 10 May 2006 | 09 May 2012 | 3,000 | 2,204 | France |
| Finnish contribution to the Formulation of IKMP | 26 April 2006 | 31 Dec 2006 | 207 | 40 | Finland |
| Finnish contribution to the IKMP implementation phase | 1 Jan 07 | 31 Dec 2010 | 8,746 | 8,746 | Finland |
| Projects in preparation | | | | | |
| Support to Exploitation of the MRC-Information System Portal on the Internet (EMISPI) | N/A | N/A | N/A | N/A | N/A |

The Information and Knowledge Management Programme is yet in its initial stage, and donor support for programme implementation is sought.

3.3.2 Progress of the Information and Knowledge Management Programme for 2006

The main outputs of the IKMP are the following:

Component 1: Programme Management.

The Initial Draft of IKM Programme Proposal was drafted in June 2006 and then modified in the form of a Programme Work Breakdown Structure in September 2006. This is served as an input for national consultation meetings with all MRC Member Countries organized in October 2006. The outcomes of these meetings were incorporated into the new draft IKM Programme document to be discussed at the regional consultation meeting on 20-21 November 2006. All comments received from regional meeting were incorporated into the updated programme document which was approved in principle by the MRC Council at its 13th Meeting in December 2006.

There were changes in staffing and limited financial resources for the IKMP. However, activities related to the programme had progressed well. The staffing issue now resolved with the recruitment of programme staff including the programme coordinator.

Component 2: Hydro-meteorological Data.

The hydro-meteorological data collected from Member Countries of up to 2004 are being processed. The Hydrological Yearbook for 2001-2002 in electronic version was disseminated to the Member Countries in December 2005. The Hydrological Yearbook for 2003 will be published in 2006 while that for 2004 is under consideration due to missing the data provision of the tributaries from Thailand.

The Appropriate Hydrological Network Improvement Project (AHNIP) was extended to August 2007 with funding from the Australian Government. The new activities of AHNIP are (1) interim replacement of field equipment and support of AHNIP objectives; (2) development of policy and strategy framework for the IKMP; and (3) formulation of the project design document for upgrade of the AHNIP Network and integration with the Mekong-HYCOS Network.

The equipment selection process for interim equipment replacement was finalised in July 2006. The new water sensor produced by OTT Hydrometric was selected and is being replaced the current unreliable sensor at some field stations from October 2006.

The first draft policy and strategy framework for the IKMP was developed and will be incorporated with the results of national and regional consultations in October and November 2006 and February 2007. This framework will be used to request for further assistance from the Australian Government in improving the MRC Hydro-meteorological Network.

The MOU for management and operation of the AHNIP Network for the period of 1 April 2006 to 31 December 2006 was renewed. The MOU outlines in detail the roles and responsibilities of the MRCS, NMCs and concerned line agencies, and the provision of funds to the line agencies for operation and maintenance of the

AHNIP network. The MOU for Thailand is signed in November 2006 while the MOU for other Member States were signed in May 2006. With the effective implementation of the MOU, the operation of AHNIP network has been improved. Accurate and reliable data from more than 10 AHNIP stations are now being sent to the MRC Secretariat and delivered to the users every morning. It is expected that after replacing the sensor, all AHNIP stations will operate properly.

The Mekong-HYCOS project was approved and funded and an MOU with the collaborating partner WMO has been concluded. The recruitment of project staff was recruited and the procurement of international consulting firm is now in the process. The project implementation started in September 2006. The Mekong-HYCOS project activities in 2007 will focus on two phases; inception phase and construction and installation phase.

The technical cooperation with China under the Agreement on the provision of Hydrological Information of Lancang / Mekong River in the flood Season had progressed well. The information provided under the Agreement is reliable for the timely flood forecasting operations of the MRC Secretariat. The present Agreement is now under consideration for the renewed Agreement in 2007.

Component 3: GIS and Databases

A new TSD archive repository has been set up to house our valuable archive materials such as aerial photographs, black & white aerographic negatives, backups of various computer workstations, transparency and ink surveys/ maps. The collection and supply of improved quality, quantity and timely hydro-meteorological information to all programmes, forecasting, monitoring, strengthening and consolidation of the network and capacity involved is continuing in 2007.

Component 4: Modelling

The Decision Support Framework (DSF) has been extensively used in the MRC programmes/activities, notably the Basin Development Plan (BDP), the Integrated Basin Flow Management (IBFM), and the Flood Management and Mitigation (FMM) with intensive support of the (TSD) Modelling Team. In parallel, other activities relating to the DSF enhancement and modelling capacity building were also carried-out by the Team. Decision Support Framework modelling and knowledge base enhancements has been realised. More details were reported under WUP.

Component 5: Communications and Knowledge Management

MRC-IS Portal was completed in December 2005 and launched in-house at MRCS in January 2006. The portal includes key information services such as interactive maps, and a geographically enabled metadata explorer with metadata for spatial datasets. The Document Management System (DMS) is a part of MRC-IS Portal. It is designed to improve sharing of and access to documents and provide fully controlled access to wide range of documents. The proposal of the MRC-IS Portal for external access is prepared and fund are being sought. A suitable library automation system, the Electronic Library on Web (ELIB)

provided by the Book Promotion and Service Co., Ltd. has been implemented at the Documentation Centre. All bibliographical data records have been successfully migrated from MRC MS Access format to a new format. ELIB provides data entry work form for certain type of materials, e.g. Book, CDs, article, map, computer file, audio visual material, and mixed formats. The database can be accessed by both internal and external users through WEB gateway embedded in MRC's portal, enhancing various ELIB searching facilities for the database.

3.3.3 Workplan for 2007

It is expected that the IKM Programme will start its implementation phase during the first quarter of 2007. Information and knowledge management activities currently carried out under the Technical Support Division will continue in 2007. These are reported here, under the five expected components of the programme.

Component 1: Programme Management

Emphasis will be put on establishing the IKMP team and resources. Communication, cooperation and coordination with IK clients and partners are effective. Emphasis will also put on facilitating the implementation of the comprehensive framework of procedures, guidelines etc developed in the last three years, including agreed national data custodianship, management and operating agreements, through technical support and assistance to the countries and other stakeholders. The implementation of the Procedures for Data and Information Exchange and Sharing and Procedures for Water Use Monitoring will continue in the countries as per national work plans, with support from the MRC Secretariat.

Component 2: Hydro-meteorological Data

Collection and supply of improved quality, quantity and timely hydro-meteorological information to all programmes, forecasting, monitoring, strengthening and consolidation of the network and capacity involved will continue in 2007. One of the main projects within the IKMP will be the Mekong-HYCOS. The project implementation started in 2006 with funding support from AFD and the French GEF. The Mekong-HYCOS Project activities in 2007 will focus on two phases; inception phase and construction and installation phase. The objectives of the inception phase in 2007 are to finalise the list of hydro-meteorological stations to be upgraded and the equipment per station to be procured, to design the civil work required per station, to carry out the tendering and contracting of the sub-contractors for civil work construction and of equipment supplier for provision and installation of the station equipment, as well as to reach an agreement with the MRC member countries and other project partners on the ownership and the responsibility for the operation and maintenance of the project network. The construction and installation phase will concentrate on a construction of the civil works, installation, set-up, testing, commissioning of the hydro-meteorological stations, and all training.

The AHNIP was extended to August 2007 with the funding support from Australia. The main activity during AHNIP extension period is to replace unreliable parts of

field equipment to those of other manufacturers and to maintain the capacity in operation and management of the AHNIP network.

There are several factors which may cause delay in progress or unsatisfactory outputs. Those factors are financial constraints (lack of funds to fully implement all planned activities); personnel constraints (insufficient number of qualified staff to perform all tasks); and insufficient efforts and commitment provided from concerned parties.

Component 3: GIS and Database

Assistance and provision of technical services to the MRC programmes will continue. Important outputs will be 3.1. Setting up of operational databases at the Regional FMM Centre in Phnom Penh; 3.2. Integration of real-time or near real-time hydro meteorological data to the MRC Information System; 3.3. Finalization of a basin-wide hydropower dams dataset; and 3.4. Improved spatial datasets for land use and wetlands. Other potential projects for 2006 in the field of databases could emerge from the BDP database or list of projects, promoted by the MRC; 3.5. Formulating potential projects for fundraising.

Component 4: Modelling

Technical services and training for the DSF will be continuously provided to MRC Programmes and other users. Additional data for improved DSF impact assessments will be acquired and integrated into the Knowledge Base, and further improvements of the tools made.

Component 5: Communications and Knowledge Management

Improvements of the MRC-IS Portal web service, a gateway to data and information on the Mekong Basin including powerful tools to search, view and download data and information, will continue. Specific components of the Portal, e.g. the Document Management System and the Metadata Catalogue, are planned to be opened for external access. Due to the nature of services provided through the MRC-IS Portal, opening of components for external access is dependant on availability of high bandwidth Internet connection. The cost of this may however be prohibitively expensive, in which case alternative approaches will need to be investigated.

The risks with highest impact on the programme, or related activities to be carried out by the TSD, are the absence or lack of funds. A basic level of services can be provided through MRC Programme support, as was the case in 2006, but donor funds are required for IKMP preparation and implementation.

Donor reviews or appraisals planned for 2007

The IKMP itself is in its early stage and donor support for programme implementation still sought; one donor appraisal mission from the Government of Finland is planned in February 2007.

3.4 Integrated Capacity Building Programme (ICBP)

3.4.1 Programme Overview

Purpose

With the signing of the Mekong Agreement in 1995 the role of MRC was significantly broadened compared to that of its predecessor organisations. Rather than limiting its involvement to exploring and investigating the basin, MRC was charged with ensuring the sustainable development, utilization, conservation and management of the Mekong River Basin water and related resources. In focussing the organisation on this approach, there is a need to ensure availability of expertise at regional and national levels as well as the capability of MRC to carry out activities in advocacy and communication with stakeholders.

The overall objective of the programme is to improve the capacity of the MRC to implement its Mission, and play a leading role in coordinating the development and use of the basin's water resources. Stakeholder expectations should be met through availability of sufficient expertise in integrated river basin management and appropriate communication and stakeholder participation in MRC activities.

Approach

In the Mekong region, there is a strong need to develop the technical, institutional and legal water resources management capacity and expertise at local, national, and regional levels.

There is a need to better define the immediate objective in a comprehensive programme document. The immediate objective will reflect the need to strengthen the capacity of the MRC, the National Mekong Committees and the line agencies in all fields leading to more effective integrated water resources development and river basin management.

Strategy

The ICBP is guided by the principle that the level of competence in river basin management among the MRC staff and staff in the riparian governments is to be raised through a systematic, modular training programme. The future pool of expertise available within the region is to be broadened through on-the-job training of young professionals to work at the MRC Secretariat. The ability of MRC to carry out communication, public participation and partnership activities is to be ensured through expert services. Capacity and resources of MRC to respond to priority needs and changing conditions is to be strengthened through a facility to draw on external support on an ad hoc basis.

Structure

Component 1: Integrated Training Component.

The objectives of this component are (i) to raise the level of competence among MRC staff and staff in the riparian Governments in integrated river basin planning (IRBP), and (ii) to consolidate MRC's training activities and allow for both specific and cross programme training in issues of identified priority for integrated river

basin management in the Mekong Region.

Component 2: Junior Riparian Professional Project (Phase 2).

The objective of this component is to provide training and hands-on experience to young riparian professionals in the areas of Integrated Water Resources Management (IWRM). Project involves the training of forty-eight promising young professionals.

Component 3: Gender Mainstreaming in Water and Related Resources Development in the Lower Mekong Basin.

The project facilitates the institutionalization and effective implementation of MRC Gender Policy and Strategy. It will specifically implement all six components of the MRC Gender Strategy: (1) Application of gender sensitive policies, (2) obtaining commitment and support of top level MRC officials and managers, (3) creation of gender awareness in organizational culture, (4) capacity building in gender and development, (5) institutionalization of gender responsive organizational structures and procedures and (6) provision of necessary tools for implementing gender responsive development practices.

Implementation arrangements

The ICBP is designed to support capacity building at national levels and will be implemented through a network of regional and national institutions. It was realized to enhance MRC capacity in various fields of integrated water resources management. Programme activities are expected to be developed. To ensure the sustainability and the effectiveness of its implementation, it is necessary to review the collaboration between the MRC and other institutions, organizations in terms of the capacity development i.e. the UNESCO-IHE, Asian Institute of Technology, and other institutions within the regional and international educational networks.

Main Outputs

1. MRC staff and staff in the riparian Governments are trained for expertise in integrated river basin management at regional and national levels (Component 1).
2. Skills in international integrated river basin management among young Riparian Professionals are improved (Component 2).
3. All the MRC development programmes benefit men and women equally, according to their different needs, and with the input and equal participation of men and women at all levels (Component 3).

List of agreements/projects

| Project title | Start date | End date | Budget (US\$ 1,000) | Balance (US\$ 1,000) | Donor(s) |
|---|------------|----------|------------------------|-------------------------|-------------|
| Projects signed | | | | | |
| UNDP contribution to Capacity Building on Water Utilization | 20/04/01 | 31/12/05 | 100 | 0 | UNDP |
| Sweden contribution to Junior Riparian Professional Project | 01/01/04 | 31/12/06 | 217 | 0 | Sweden |
| New Zealand contribution to Gender Mainstreaming Project | 01/12/04 | 31/12/08 | 280 | 180 | New Zealand |
| Projects in preparation | | | | | |
| New Junior Riparian Professional Scheme (JRP Project phase 2) | 01/01/07 | 31/12/10 | 1,793 | N/A | N/A |

3.4.2 Progress of Integrated Capacity Building Programme for 2006

Component 1: Integrated Training Component.

The implementation of the training programme for the Lao support staff funded by UNDP under the staff relocation training project in collaboration with LNMC was extended and ended in mid-2006. The programme implemented training activities for the MRC staff within the Secretariat as well as at local and regional training institutions. The pilot training course on integrated river basin planning (IRBP) was conducted in late 2005 and the training package has been developed and finalized in 2006.

Component 2: Junior Riparian Professional Programme

The implementation of the Junior Riparian Professional (JRP) Project phase 1 (2002-2006) has completed its activities in June 2006 while the agreement officially ended in December 2006. The project was funded by the Swedish International Development Cooperation Agency (SIDA) and the United Nations Development Programme (UNDP). A new project document for JRPs project phase 2 was formulated in early 2006 and sent to the donor community for fund raising purposes.

Component 3: Gender mainstreaming in water and related resources development in the LMB

The funds for implementation have been secured, and the MRC has started the implementation of the project. In coordination with Gender Mainstreaming Project Phase II, which is funded by the NZAID for a three years period (2004-2007), the ICBP assisted in facilitation of Capacity Building in Gender and Development in MRC and the Line Agencies. Activities of the Gender Mainstreaming Project so far include an in-house survey and analysis of the sex-disaggregated data, revision of MRC Gender Milestone, re-activation of the gender network in four riparian countries, and revision of the project work plan. In 2006, the project carried out the national workshops in four MRC member countries on Gender Mainstreaming in Water and Related Resources Development in the Lower Mekong Basin.

Significant problems encountered, Corrective action taken

Components grouped under the ICBP contribute to an overall objective of building capacity in the region, but are managed independently. Coordination of the programme could be strengthened. There is a need for a programme coordinator to be recruited and for a comprehensive programme documentation to be formulated.

Donor reviews or appraisals

There has been no donor review or appraisal undertaken under the ICBP.

Relevant JC and Council decisions

Joint Committee Members have been regularly informed of the progress of the Integrated Capacity Building Programme.

3.4.3 Workplan for 2007

Component 1: Integrated Training Component

MRC will continue its efforts to find interested donors to fund this programme.

Component 2: Junior riparian Professional Project

The JRP phase 2 project proposal document was finalized in early 2006. New funding needs to be sought for continuation of activities under JRP Project phase 2 for the period of 2007 to 2011.

Component 3: the Gender Mainstreaming Project (Phase 2)

The project in Water and Related Resources Development in the Lower Mekong Basin will: 3.1. Conduct gender sensitive training and provide data and information to personnel of NMCs, line agencies and MRC Secretariat; 3.2. Improve MRC capacity in planning, executing, monitoring and evaluating gender responsive water and related resources development programmes; 3.3. Provide necessary tools for implementing gender responsive development practices; and 3.4. Conduct gender training activities in each riparian country as well as the regional gender training activities at the MRC Secretariat.

In a longer term, the main prerequisite for the achievement of the outputs of the programme is to secure funding, notably under the component 1 and 2. It will also be necessary to coordinate the different components and to formulate comprehensive programme documentation.

Donor reviews or appraisals planned in 2007

At this stage, no donor appraisal mission is planned

3.5 Water Utilisation Programme (WUP)

3.5.1 Programme Overview

Description of the programme is based on the current WUP, which is originally scheduled to end in 2006 and has now been extended through 2007. Development of a possible new phase of GEF support as a follow up to WUP (GEF2) is being undertaken through national and regional consultations following advice of the MRC Joint Committee and Council.

Purpose

The 56.6 million inhabitants of the Lower Mekong Basin depend to a great extent on the natural resources of the Basin for their livelihood. The Basin has, in the last decade, experienced lower economic growth than surrounding regions. Therefore, there is a need to assist MRC Member Countries in promoting socio-economic development and improving sustainable water management while protecting the ecological balance of the Basin. The 1995 Agreement provides the legal framework enabling cooperation for sustainable development within the Mekong Basin. Joint management of water resources requires additional administrative procedures and technical tools, to be used both for development planning and for operational management of infrastructure.

The development objective is: *“To establish effective mechanisms to improve water resources management for the economic and social development of the Mekong Basin in an environmentally sustainable manner (including reasonable and equitable water utilization by the countries of the Basin; protection of environment, aquatic life and the ecological balance of the Basin)”*.

Approach

The prospect of increased water diversions and constructions represent competing water uses that threaten the basin’s natural habitat and aquatic ecosystem. Therefore, equitable and reasonable use of the water resources and sustainable development of the natural resources are major issues in the Basin. Procedures for water utilization need to be negotiated and implemented with the support of strong analytical tools, knowledge bases, technical and institutional capacities.

There is no immediate objective defined in the WUP programme document. The immediate objective would need to reflect the needs (1) to develop a computerized package of hydrological simulation modelling, knowledge base and analytical tools to serve as the technical basis for basin development planning and management; and (2) to develop procedures for water use and management.

Strategy

The overriding principle governing the WUP process is that the Member States own it, with the Secretariat acting as a facilitator. The WUP will assist the MRC Member States to implement key elements of the 1995 Mekong Agreement (Articles 5, 6 and 26) and contribute to addressing the issues of equitable and reasonable use of water resources. Equally important the WUP will provide the analytical tools and knowledge base required to support negotiation of procedures for water utilization and their implementation. It will provide the technical and

institutional capacities required for longer-term cooperation to manage the basin's water and ecological resources in a sustainable manner.

Structure

Four components were identified after the mid-term World Bank review in December 2003:

Component 1: Basin Modelling and Knowledge Base.

This component will provide a functional and acceptable package of basin simulation modelling and analytical tools supported by improved databases; collectively known as the Decision Support Framework (DSF). A modelling project is also carried out under a Finish funding.

Component 2: Environmental and Trans-boundary Analysis.

This component will develop environmental, economic and social trans-boundary analysis tools and assessment to support development of the technical input to development of the "technical rules"; including an Integrated basin Flow Management (IBFM) sub-component and an Integrated Water Quality Management (IWQM) sub-component carried out in collaboration with the Environment Management Programme, to provide technical inputs for the formulation of procedures for water quantity and quality.

Component 3: Procedures for Water Utilization.

This component will produce a set of recommended procedures for water utilization.

Component 4: Management and Institutional Strengthening.

This component will enhance project and basin management capacity.

Implementation arrangements

The MRCS is the implementing agency of the WUP. A WUP Management Team (WMT) was created to lead and coordinate the WUP. Each NMC has established a permanent national WUP unit, responsible for coordination of national participation and WUP implementation at the national level. The WMT organizes and supervises three Working Groups: (WG1) Basin modelling and knowledge base; (WG2) Environmental and transboundary analysis; and (WG3) Procedures formulation, as well as overall WUP management.

Main Outputs

The main outputs selected by the WUP for the programme duration are the following:

1. A Basin Modelling and Knowledge Base developed (Component 1)
2. Transboundary studies (Component 2)
 - Integrated Basin Flow Management (IBFM): technical inputs for the Procedures for the Maintenance of Flows on the Mainstream

- Integrated Water Quality Management (IWQM): technical inputs for the Rules for Water Quality
3. A set of agreed procedures / rules for water utilization (component 3)
 - Procedures for Data and Information Exchange & Sharing
 - Procedures for Notification, Prior Consultation and Agreement
 - Procedures for Water Use Monitoring
 - Procedures for the Maintenance of Flows on the Main Stream
 - Rules for Water Quality
 4. DSF maintenance, enhancement and capacity building (Component 4)

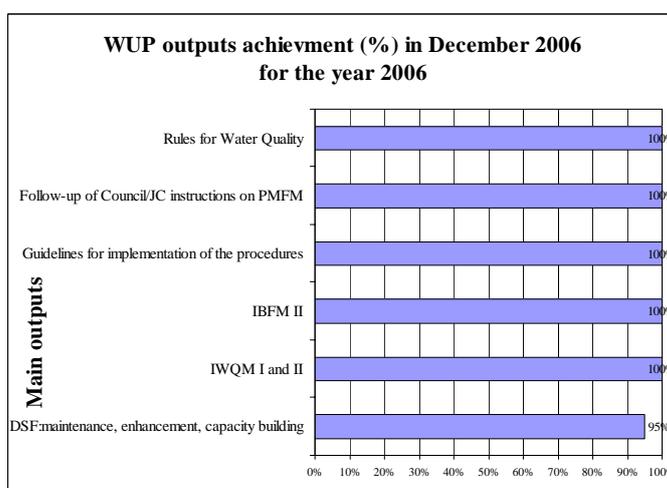
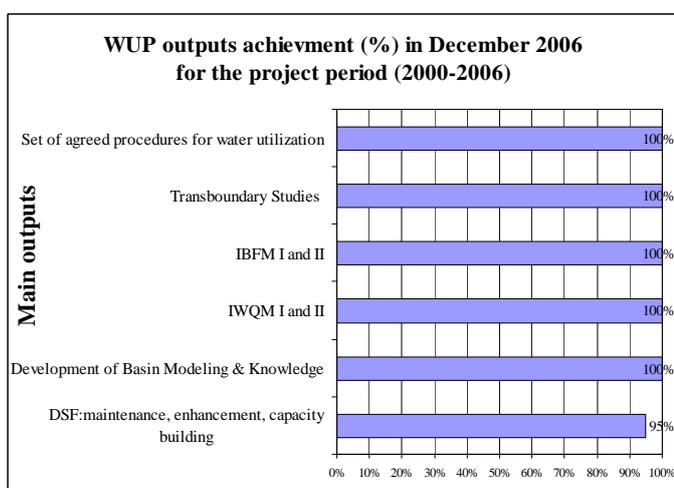
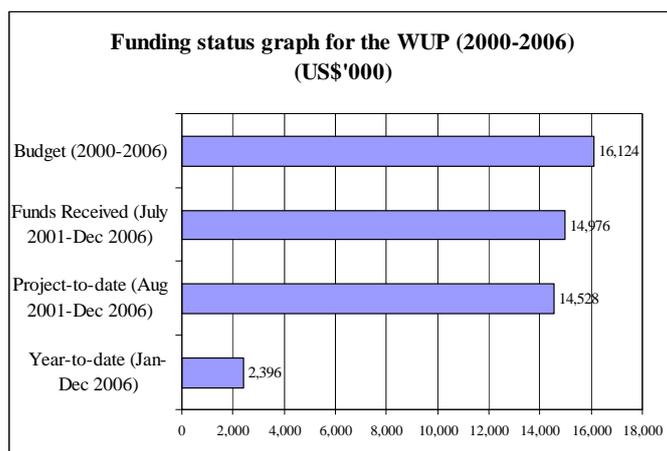
List of agreements/projects

| Project title | Start date | End date | Budget (US\$ 1,000) | Balance (US\$ 1,000) | Donors |
|--|-------------------|-----------------|-------------------------------|--------------------------------|---------------|
| Active projects | | | | | |
| GEF World Bank contribution to the Water Utilisation Programme | Jan2000 | Dec 2007 | 11,000 | 1,203 | GEF |
| Finland contribution to the Water Utilization Programme | Jun 2001 | Jan 2007 | 3,620 | 0 | Finland |
| Support to position of senior modelling advisor | 14/03/05 | 13/03/08 | 597 | 281 | Finland |
| Projects in preparation | | | | | |
| GEF-World Bank contribution to the Water Utilisation Programme – follow up | N/A | N/A | N/A | N/A | WB/GEF |

3.5.2 Progress of Water Utilisation Programme for 2006

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2006, respectively.

The basic approach and methodology for the two outputs achievement graphs is set out in the introduction of the Work Programme.



Planned and achieved outputs for 2006

Component 1: Basin Modelling and Knowledge Base

Preparation of Technical Guidelines for Implementation of the PMFM: The DSF modelling team is actively supporting the preparation of the revised Technical Guidelines for Implementation of the PMFM based on 1) the newly calibrated models, 2) the proposals to simplify and improve the presentation based on experiences/understanding of the requirements gained during the past year, and 3) the insights gained under IBFM Phase 2.

DSF Maintenance/Enhancement Contracts: New contracts for continued improvements with the ISIS and SWAT were signed. Two DSF maintenance contracts were approved, thus enabling urgent bug-fixing and other maintenance activities to be carried out. The IQQM maintenance contract is now also under implementation.

National Case Studies: Progress was made in moving forward with the selection and implementation of case studies (two from each NMC) providing an opportunity for the modelling team to apply the DSF and other models to real water resource management issues in the member countries.

DSF Modelling Training: A Programme of DSF modelling training has been

developed in association with experts from the National Institute for Rural Engineering of Japan and the World Bank Institute. This Programme was executed in May and June directed mainly at the LNMC and CNMC and with the support of the modeling team, and due to its success, and continued funding available through the WBI, will likely be continued in 2006/2007.

WUP-Fin: The WUP-Fin team continues the Phase 2 model set-ups, calibration, validation and application. In addition, a more active participation in the EP-driven IBFM Phase 3 activities is being planned.

Component 2: Environmental and Trans-boundary Analysis

Integrated Basin Flow Management: The results of the Flow Regime Impacts Workshop (7-11 November 2005) were synthesized by the IBFM Team with IBFM Report No. 8 finalized and issued on 1 February 2006. This report represents an important milestone in IBFM 2 activities. An overview of the conclusions was presented to the Members of the Joint Committee during the Preparatory Meeting for the Twenty-Third Meeting (April 2006). WUP is now proceeding with further national consultations and TRG meetings including preparation of revised Technical Guidelines for Implementation of the PMFM, planned for August 2006 – which will constitute completion of IBFM Phase 2 activities. EP is moving forward with their detailed research and stakeholder consultation under IBFM Phase 3.

Drought Management Programme: The formulation of the MRC Drought Management Programme was started in May and is expected to conclude in October when a full-fledged Drought Management Programme may be available for consideration by the Joint Committee and Council as a basis to solicit donor funding.

Component 3: Rules for Water Utilization

Procedures for Maintenance of Flows on the Mainstream: These procedures were signed by the Members of the MRC Council on 22 June 2006, in Ho Chi Minh City, Viet Nam.

Rules for Water Quality (RWQ): Drafting of the RWQ was completed and is now awaiting signature pending Cabinet approval of one Member State.

Component 4: Management and Institutional Strengthening

MRCS Organization – WUP within the Planning Division: The Joint Committee, at their 23rd Meeting in April 2006 agreed to include the WUP with the BDP under the new Planning Division. This re-organization was endorsed by the World Bank during the May 2006 supervision mission.

GEF2 Scoping Mission: The WUP supported execution of a scoping mission by two international consultants during the month of May 2006 to assess whether or not the member countries see a need to move to a new phase of GEF support (GEF2) as a follow-up to the WUP as it nears completion in 2006. The study concluded that a second project could be justified, but that the Joint Committee must first determine whether it wants a new GEF-funded initiative and how

“country driven-ness” will be demonstrated in the way a second project is designed and prepared.

Mekong Water Resources Partnership Programme (MWARP) Studies: WUP Unit members have participated in review and comment on the formulation of three regional studies being promoted under the MWARP by the World Bank and the ADB.

Relevant JC and Council decisions

Approval of the Procedures for Maintenance of Flows on the Mainstream, by the MRC Council in June 2006.

3.5.3 Workplan for 2007

The GEF-funded, World Bank-implemented, Start-up Project for the Water Utilization Program of the Mekong River Commission commenced in late 1999 with a planned duration of seven years from 2000 to 2006. During the May 2006 World Bank supervision mission, the WUP Management Team (WMT) requested consideration of an extension of the GEF grant closing date so that the project objectives would be entirely achieved. The supervision mission advised the MRCS and the WMT to develop a detailed workplan, budget estimate and a revised implementation schedule together with strong justification for the proposed extension for review by the World Bank.

The workplan puts forward the related activities, budgets and human resources to achieve the present project objectives through a 10-month period of extension which through careful management is proposed to be carried out within the existing GEF and MRCS funding. The GEF Trust Fund completion is proposed to 31 December 2007 while the closing date is planned for 30 June 2008.

Eventually, the World Bank approved the extension of WUP activities until 31 October 2007, the most important activities will be:

1. Continued strengthening, enhancement and application of the DSF and related modelling and knowledge base tools and personnel (MRCS and NMCs) developed under the Project.
2. Continued to assist the countries to formulate the Technical Guidelines for Implementation of Procedures for Maintenance of Flows on the Mainstream (PMFM) and Technical Guidelines for Implementation of Procedures for Water Quality (PWQ) by adopting the step-wise or learning-by-doing approaches
3. A program of capacity building and dissemination to ensure that the outputs of the Project are more widely understood and effectively implemented within and outside of the MRC networks.
4. Supporting and further strengthening, to ensure sustainability, the institutional arrangements established under the WUP, the TRGs (flow and water quality) and the TCG.
5. Continued project management and institutional strengthening provided by

the full WUP Management Team (i.e. the MRCS WUP Unit, supported by the NMC WUP Coordinators).

Donor reviews or appraisals planned in 2007

Regular six-monthly World Bank supervision missions are conducted under the programme to review progress.

3.6 Flood Management and Mitigation Programme (FMMP)

3.6.1 Programme Overview

Purpose

In 2000, more than 800 people lost their lives due to excessive flood, and the economic damage caused by the flood was assessed at more than US\$ 400 million. In 2001 and 2002 large floods have again caused loss of life and property in all the four riparian countries. Flash floods have devastated large areas in the MRC member countries. In each of these years, between one and eight million people were affected by floods, either by a need of evacuation, or by loss of crops and livestock, or by being prevented from going to work or to school. People in flood prone areas are used to live with floods but population pressure and increasing severity of floods due to natural and man-made factors have significantly increased the damage risk.

Poor people are the most adversely affected by floods. Efficient flood management, including flood proofing measures, emergency flood management or disaster aid is therefore an important precondition for poverty alleviation in the Lower Mekong Basin.

Approach

Flood management is cross-sectoral in essence. Floodwaters can disrupt road transportation, affect farmer's crops etc. Development of levees to protect crops and infrastructure as well as construction of elevated roads has the potential to unintentionally exacerbate flooding elsewhere in the floodplain, and can also block fish migration routes. Therefore flood management needs to be coordinated in an IWRM approach at a basin-wide scale. Improved flood management and mitigation remain indispensable and will in the future be more in demand than ever. The complex flood problems of the Lower Mekong Basin not only require an integrated floodplain management (holistic) approach but also significant attention to trans-boundary and regional issues. The large floods of the Mekong are regional in character, and MRC is in a unique position to contribute effectively to improved flood management at the regional level.

Immediate objectives are defined for each of the programme components. The immediate objectives of the programme include: (1) To establish a regional FMM Centre in Phnom Penh; (2) To reduce vulnerability of society to floods; and to establish a management capacity for development and refinement of the implementation plan; (3) To enhance mediation and coordination capacity of the MRC in issues of non-compliance in flood management (4) To strengthen

competence in flood preparedness and flood mitigation at each management level; (5) To improve land use planning integrated into floodplain management and mitigation in the LMB.

Strategy

The overall Flood Management and Mitigation Strategy was formulated in 2001. This dialogue pointed out a list of possible MRC roles: flood forecasting services; Centre of flood data and information; flood analytical services and setting of standards; neutral mediator of transboundary issues; capacity building and technology transfer; coordination of floodplain management of national and MRC programmes; forum on floodplain management and flood preparedness.

Structure

Component 1: Establishment of a Regional FMM Centre in Phnom Penh.

This component will maintain and further improve the (national and regional) availability of important flood-related tools, data, and knowledge; produce accurate regional forecasts with a suitable lead time and a timely and effective dissemination; and provide accurate, well documented and consistent tools for basin-wide flood risk assessment and trans-boundary impact analysis.

Component 2: Structural Measures and Flood Proofing – Implementation Plan.

This component will provide guidelines for structural measures and flood proofing, aimed at reducing the vulnerability of society to floods. The application of these guidelines by authorities at sub-regional level, communities and other stakeholders will in the longer run lead to a reduced vulnerability to flooding and reduced flood damages at family, community and sub-regional levels. Under this component a list of most attractive structural and non-structural flood protection/mitigation interventions will be developed, ranked in terms of most effective or most feasible.

Component 3: Mediation of Trans-boundary Flood Issues.

This component aims at enhancing mediation and coordination capacity of the MRC in issues of non-compliance in transboundary flood management.

Component 4: Flood Emergency Management Strengthening.

This component aims at strengthening competence in flood preparedness and flood mitigation, with communities, emergency managers and civil authorities.

Component 5: Land Management.

This component will make the institutional, land management human resources and technical support available to sustainable land management. It will improve land use planning integrated into floodplain management and mitigation in the LMB.

Implementation arrangements

Within the MRC Secretariat, a Management Team will be established. The management structure of the FMMP includes Programme Management Unit (PMU) at FMMP level, a FMMP Unit in each NMC to coordinate the activities at the national level, a Programme Coordination Committee (at the levels of NMCs and MRC Secretariat) and a Steering Committee (at regional level).

In 2006, the USAID/OFDA has approved the proposals of MRCS and riparian countries for RANET communication and Satellite rainfall estimation. In addition the European Commission's Humanitarian Aid Office (ECHO) is considering funding the third phase of the project on "Support to Implementation of Flood Preparedness Programs at Provincial, District and Commune Levels in the Lower Mekong Basin (Phase III).

Main Outputs

Component 1: Establishment of a Regional FMM Centre in Phnom Penh.

Expected outputs are: (i) An operational Regional FMM Centre established under MRC, interacting with national collaborating centres/focal points, (ii) Basic data, (iii) Improved monitoring, (iv) Improved operational forecasting, (v) Improved warning and dissemination services, (vi) Medium and long term forecasts, (vii) Risk assessment tools, (viii) Flood risk analysis and flood risk mapping, (ix) Related competence, and (x) Annual Flood Forums.

Component 2: Structural Measures and Flood Proofing – Implementation Plan.

Expected outputs are: (i) Identified impacts of reservoirs and other hydraulic structures in the Mekong basin, including those in China, with regard to implications for flooding in the LMB. (ii) An enhanced mechanism of coordination on hydraulic structures development and operation with all the riparian countries in the Mekong Basin, and (iii) Established guidance/guidelines on all aspects of structural measures of flood mitigation in the LMB.

Component 3: Mediation of Trans-boundary Flood Issues.

Expected outputs are: (i) the establishment of the Mediation and Coordination Section; and (ii) the development of formalized procedures, norms and rules for mediation and decision-making regarding non-compliance in and cumulative flood management issues which are submitted to the Joint Committee from member states.

Component 4: Flood Emergency Management Strengthening.

Expected outputs are: (i) Increased flood awareness, (ii) Regional knowledge sharing, (iii) Flood emergency manuals, (iv) Recommendations on trans-boundary emergency assistance; and (v) Related competence.

Component 5: Land Management.

Expected outputs are (i) Harmonized land use management; (ii) Land use concepts and land management systems; (iii) Case studies; and (iv) Related competence.

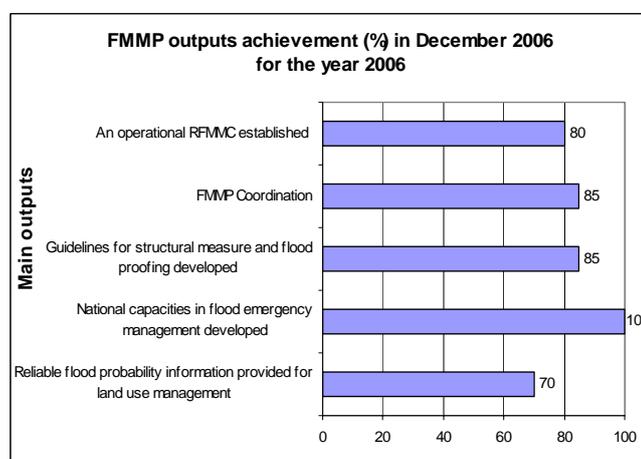
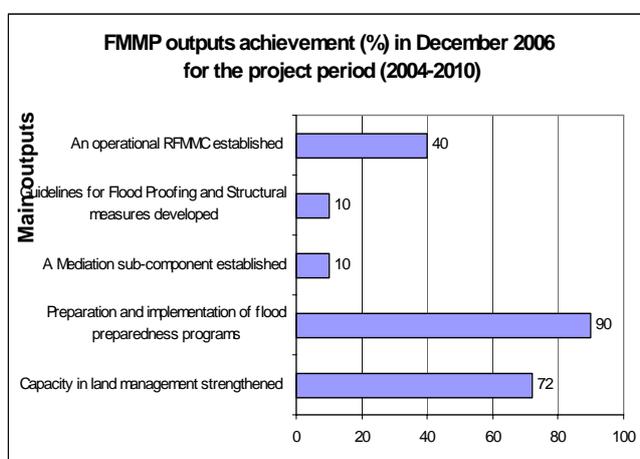
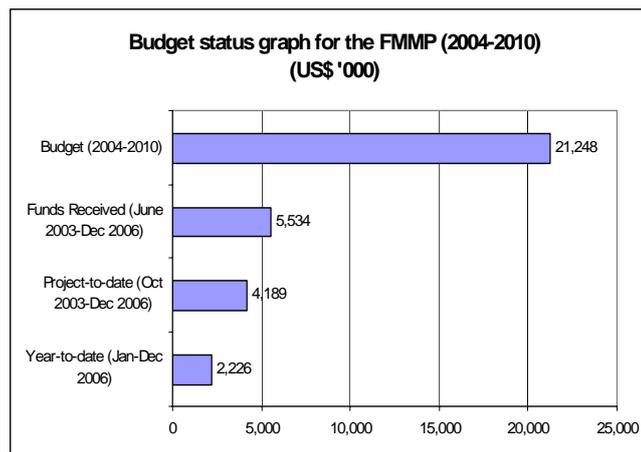
List of agreements/projects

| Project title | Start date | End date | Budget (US\$ 1,000) | Balance (US\$ 1,000) | Donors |
|--|------------|----------|------------------------|-------------------------|-------------|
| Active projects | | | | | |
| Dutch contribution to the RFMMC | 01/06/05 | 31/12/10 | 8,210 | 5,874 | Netherlands |
| Dutch contribution to the FMMP coordination | 01/01/07 | 31/12/10 | 265 | 265 | Netherlands |
| Danish contribution to FMMP coordination | 01/09/04 | 31/08/07 | 816 | 635 | Denmark |
| OFDA funding for provision of Flood Early Warning | 01/01/03 | 31/12/08 | 1,250 | 333 | USA |
| German contribution to the 3 rd Annual Flood Forum | 01/01/05 | 31/12/05 | 18 | 0 | Germany |
| Asia Flood Network contribution to the FMMP | 01/01/05 | 31/12/05 | 74 | 0 | AFN |
| Dutch contribution to design of Flood Proofing Measures | 01/06/05 | 31/12/10 | 2,700 | 2,522 | Netherlands |
| ADB contribution to Flood Proofing Measures | 01/04/05 | 31/12/06 | 1,000 | 1,000 | ADB |
| Dutch support to mediation of flood issues | 01/06/05 | 31/12/10 | 1,564 | 1,518 | Netherlands |
| EC-ECHO contribution for capacity building in flood preparedness | 01/02/05 | 31/03/06 | 208 | 17 | EU |
| EC-ECHO contribution for capacity building in flood preparedness | 01/02/05 | 31/03/06 | 290 | 46 | EU |
| EC-ECHO contribution for support for implementation of the flood preparedness programmes | 01/02/07 | 05/2008 | 353 | 353 | EU |
| Japan contribution to the RFMMC | 27/10/05 | 31/12/10 | 970 | 70 | Japan |
| GTZ project for land use and flood emergency management | 18/08/04 | 31/12/10 | 3,530 | 1,88 | Germany |

3.6.2 Progress of Flood Management and Mitigation Programme for 2006

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2006, respectively.

It is noted that for the first graph the total budget of 21,248 USD expresses the support from all donors, but the rests include the funds managed by FMMP only, i.e., excluding the funds from GTZ and Japan



Notes: Exact outputs titles are:

- *Component 1- Output 1:* An operational Regional FMM Center established under MRC, *Component 1 – Output 11:* FMMP Coordination
- *Component 2 – Output 1.2:* Flood proofing measures
- *Component 2 – Output 1.3:* Potential for structural interventions
- *Component 4- Output 1:* Preparation and implementation of flood preparedness programs
- *Component 4- Output 2:* Developed national capacities
- *Component 5- Output 1:* More reliable flood probability information provided
- *Component 5- Output 2:* Capacity of relevant line agencies in the area of land management strengthened

Achieved Outputs for 2006

A Final Programme Implementation Plan has been approved in June, 2006. This was prepared by the MRC Secretariat with extensive consultations with NMCs and Line agencies.

Component 1: Establishment of a Regional FMM Centre in Phnom Penh.

The construction of the new building for RFMMC supported by the Government of Japan has been started from February 2005 and is expected to be completed by February 2007. The construction of the Center lies within the responsibility of the Ministry of Water Resources and Meteorology of Cambodia (MOWRAM). The

reports on database and data required for the medium term flood forecasts were completed, which provided an intensive plan for development of the operational database within the RFMMC. A pilot project for sub-basin 2T of Thailand has been prepared through a partnership with FinConsult. A final project documentation has been developed and to be entered into implementation through MOU between MRCS-TSD and the Government of Finland. The ToR for implementation of the project “Danida support for FMMP coordination” and four project documents to support for National Flood Units (NFUs) for implementation of the national activities have been developed and approved.

The fourth Annual Flood Forum (AFF) was successfully organized and implemented in May 2006 under the theme Improving the Flood Forecasting and Warning System in the Lower Mekong River Basin, and funded by the Netherlands.

The USAID/OFDA-funded project “Provision of Flood Early Warning to Flood Vulnerable Communities in the Lower Mekong Basin, Phase 1: Cambodia and Lao PDR” has entered its third year.

Component 2: Structural Measures and Flood Proofing – Implementation Plan.

The ToR for implementation of the Component 2 has been developed and approved by the MRCS and donors. With the agreement of ADB, the ToR was restructured such that only one consulting company would be contracted with joint RNE-ADB funding. This in turn would allow manage the funding during implementation more easily.

The proposal on the Delft Cluster-WWF-MRCS project on Roads and Floods in the Mekong Flood Plain of Vietnam and Cambodia has been approved in June, 2006.. Following this, the contracts between MRCS and NMCs (VNMC and CNMC) have been signed to do the pre-flood, flood and post flood surveys. While the reports on pre-flood surveys were submitted and approved by FMMP already, the reports on flood and post flood surveys will be completed and submitted soon.

Component 3: Mediation of Trans-boundary Flood Issues.

A series of the National and Regional consultative meetings with the countries for discussion on the direction of the component 3 to support for mediation of the trans-boundary flood issues has been conducted. The participants recommended that the MRC would play only a role of the facilitator (but not mediator) in resolving the differences between the countries in the trans-boundary flood issues. This leads to the need for the revision of the Component document accordingly, which was planned to be submitted to the JC members for approval in the next 25th JC meeting (March 2007). The ToR for the component implementation was also developed based on the original component documents.

Component 4: Flood Emergency Management Strengthening.

In Cambodia the flood preparedness programmes (FPP) of the two target provinces (Kandal and Prey Veng) and of the four target districts (Lovea Em and Leuk Dek districts of Kandal province and Peam Chor and Sithor Kandal districts

of Prey Veng province) have been finalized by PCDM and DCDM respectively.

In Vietnam it has been recognized that current flood preparedness planning mechanism at provincial and district levels are well in place. There is however further need to strengthen the capacity of PCFSC and DCFSC in the implementation of sub-priority projects identified by PCFSC/DCFSC.

Two National Experiences Sharing Workshops on the Flood Emergency Management Strengthening were successfully organized in Cambodia and Vietnam on October and November 2006, respectively. The objectives of these workshops were (i) to update the national line agencies and other partners on the overall achievements of implementation since the start of the project; (ii) to discuss and share with the national line agencies the experiences gained from the project implementation, particularly in the flood preparedness program development and its ground implementation through priority sub-project during the flood season 2006; and (iii) to seek guidance and suggestions on future activities in the remaining period of FEMS.

The second phase of the project "Capacity Building for Preparedness, Planning and Response through the Use of Flood Information Products in the Lower Mekong Basin (Phase 2) funded by the European Commission Humanitarian Aid Office (ECHO) has been completed successfully in three countries (Vietnam, Lao PDR and Cambodia).

Component 5: Land Management.

Activities on Land Management had officially started on 1 September 2004 and its first phase will come to a close on 31 August 2007. It is financed by the German Government through GTZ and is implemented on behalf of GTZ by GFA Consulting Group (a German consulting company). The component strives to achieve the following three outputs: (1) More reliable flood probability information is provided for land management systems in selected provinces and districts. (2) The capacity of relevant line agencies in selected provinces and districts to prepare and implement improved land use plans is strengthened. (3) Regional sharing of knowledge on improved land management in floodplains is facilitated. Work of the component in 2006 focused on the generation of more reliable flood probability information. While MRC already disposes over a variety of models for flood mapping purposes, none of them possesses a degree of detail suitable for land use planning. Component 5 therefore aims to provide such information. For this purpose it currently acquires large-scale topographic maps covering several districts in Vietnam and conducts a topographic survey in selected areas of Cambodia. The information derived from these exercises will then be digitized and combined with hydrographic data from various sources to produce models showing the probability of flooding for flood prone areas in Cambodia and Vietnam.

Significant problems encountered, Corrective action taken

The FMMP went through a preparatory period and the programme gradually starts up its real/full implementation. The significant problems were (i) the delay of RFMMC's Road map due to the unavailability of the consultants; (ii) the delay of

the component 2 due to the complex negotiation process with ADB on the ToR and modality of the project implementation; and (iii) the delay of component 3 due to the complex discussion within MRCon establishment of a sub-component for trans-boundary mediation. Other delays were related to the OFDA project implementation in Lao PDR and Cambodia, the reason of which was already clearly stated in the previous parts and the delay of PIP approval due to an extensive consultation process with the concerned parties. All these problems, however, have been successfully addressed.

Donor reviews or appraisals

USA carried out the financial audit for the implementation period from 2003-2005 of the OFDA project in August 2006 which was concluded satisfactorily.

Relevant JC and Council decisions

The MRCS has regularly provided information on the progress of FMMP implementation at the JC and Council meeting. At the Twenty-third Meeting of the Joint Committee in April 14-15, 2006 in Savannakhet, Lao PDR, it was suggested the progress of implementation of FMMP could be facilitated through increased cooperation with the National Mekong Committees. Management of the programme and the RFMMC would need to be more carefully considered and clarified. At the Twenty-third Joint Committee Meeting in August 29-30, 2006 in Vientiane, Lao PDR and the Thirteenth Meeting of the MRC Council in December 12-13, 2006 in Ho Chi Minh City, Vietnam, it was also suggested that the FMMP management should be more strengthened to speed up the progress of the programme implementation.

3.6.3 Workplan for 2007

FMMP activities in 2007 will be in full operation.

Component 1: Establishment of a Regional FMM Centre in Phnom Penh.

The development of an operational database for the medium term flood forecasting will be a high priority. The construction of the new building of RFMMC will be finished. The FMMP coordination will be strengthened. An effective networking between stakeholders and communications link between the RFMMC in Phnom Penh and the MRC Secretariat Headquarters will be strengthened. The fifth annual Flood Forum will be organized in 2007. The operational database will be established at the RFMMC and the medium term flood forecasting system will be developed. Flood maps and other relevant and appropriate tools and techniques will be used to the maximum in order to minimize communities' risk to floods.

Component 2: Structural Measures and Flood Proofing – Implementation Plan.

Basin wide guidelines on structural measures and flood proofing will be developed and relevant institutions strengthened. The guidelines for the road designs in the Mekong plains will be also developed.

Component 3: Mediation of Trans-boundary Flood Issues.

The first step in setting up flood mediation mechanism at national and regional levels will be made. Flood mediation will be a crucial element and will promote the flood management and mitigation in the member countries and regional management of flood plain development.

Component 4: Flood Emergency Management Strengthening.

The main activities during the remainder of project implementation will be the implementation of sub-priority projects in Cambodia and Vietnam. Lessons learned and experiences gained from 2006 flood season will be valuable feedback for the update of 2007 Flood Preparedness Programme (FPP).

Starting from the second half of 2006 the activities related to regional knowledge sharing and the facilitation of province-to-province trans-boundary emergency assistance will be initiated.

The component 4 will continue to work together with the other FMMP components, particularly with Component 1 (flood forecasting and early warning system, AFN, data collection and usage of common data and etc. and Component 5 (village flood risk maps, etc.) in order to make full use of resources available under the FMMP.

Component 5: Land Management.

It is expected that the topographic data will be available by September 2006. From there onwards, it will take another four months to combine them with hydrographic data and to generate the envisaged flood probability information. Starting from February 2007, the maps produced from these data will be used as input for the development of training modules for government staff working on issues of land use planning and land management. The component then plans to conduct a series of training courses using these modules during the first half of 2007. It will finally document its experiences before the end of its first phase in August 2007.

MRC and GTZ plan to conduct a joint review mission in November 2006 and will use its outcomes to decide on whether to embark on a second phase for the component.

Donor reviews or appraisals planned in 2006

The financial audit for the rest implementation period of the OFDA project (2006 – 2007) and a MRC-GTZ joint evaluation of the project implementation is planned in March 2007. The mid-term review by Netherlands and EU may be conducted by the end of 2007.

3.7 Drought Management Programme (DMP)

3.7.1 Programme Overview

Purpose

Drought management is a critical issue for the people of the Basin as nearly 75 percent of the region's population is employed in agriculture, fisheries and forestry. In macroeconomic terms, agricultural production is a significant contributor to and driver of economic growth in the riparian countries, and water is an essential input into the production process. Availability of water however varies greatly both spatially and over time due to the natural long dry season, unnatural droughts, and lack of irrigation systems.

The development objective highlights the value-added of the MRC – i.e. enabling a regional approach achieved through cooperation amongst the Member States in the Lower Mekong Basin. The immediate objective of the Programme is to establish effective drought planning and management mechanisms in the LMB supported by best available tools, and know how and facilitating the implementation of high priority programmes and multi-purposes projects.

Approach, Strategy and Structure

The DMP was developed through a process of consultations between international and riparian consultants, MRCS staff, and representatives of the MRC Member States (Cambodia, Lao PDR, Thailand and Viet Nam), during the period May to October 2006.

The DMP sits within the overall context of the MRC Strategic Plan 2006-2010. In this plan a Drought Management Programme (DMP) is proposed in the context of the MRC's Regional IWRM Support Programme.

The DMP comprises four components. Components 1 and 2 "Drought Forecasting" and "Drought Impact Assessment" deals with data, forecasting, assessment and early warning and support the core Component 3 of the programme – "Drought Preparedness and Mitigation Planning". Component 3 is where all activities directed at defining specific and tangible drought mitigation mechanisms and interventions – structural and non-structural – will be carried out. Component 4 "Drought Management Policy" supports the overall management of the programme, and provides the enabling institutional environment for cooperation within relevant agencies and organization within the Member States.

Implementation arrangements

Within the overall MRC programme structure as defined in the MRC Strategic Plan 2006-2010, the drought management function is placed in the context of a cohesive set of programmes including Flood Management and Mitigation; Agriculture, Irrigation, and Forestry; Navigation; Hydropower; Fisheries; and Tourism. It will be crosscut by four programmes in the Environment, Information and Knowledge Management, Integrated Capacity Building and Water Utilization.

It is understood that the strategic output of each programme provides linkages

and areas of close collaboration and team effort. While the level of inter-programme collaboration may vary from programme to programme, it is important to note that the DMP is firmly integrated into the work flow. Critical to the integration will be close interaction with the BDP planning process and the subsequent implementation of priority projects and programmes.

In order to fully exploit existing synergies and linkages, the DMP would greatly benefit from the new technical coordination function which has been established within the MRCS. Thereby it is assumed that cross-fertilisation and strategic alignment of programmes will eventually contribute to the increased integration of efforts.

Main outputs

Component 1 - Drought Forecasting

Expected outputs are: (i) established new and/or strengthened existing hydro-meteorological and other drought-related data acquisition networks; (ii) strengthened regional cooperation mechanisms for sharing drought-related data and information – e.g. MRCS data sharing agreements and mechanisms; (iii) strengthened drought forecasting data analytical capacity for relevant drought-related data; (iv) improved drought forecasting techniques and capacities developed and implemented; (v) established new and/or strengthened existing mechanisms to provide appropriate early warning to vulnerable people and water related resource systems.

Component 2 - Drought Impact Assessment

Expected outputs are: (i) appropriate drought indicators/indices established integrating both probability and vulnerability; (ii) economic, social and environmental impacts of vulnerable people and water related resource systems assessed; (iii) critical regional and local thresholds reflecting increasing levels of risk and vulnerability to drought agreed by stakeholders.

Component 3 - Drought Preparedness and Mitigation Planning

Expected outputs are: (i) regional and local drought preparedness and mitigation planning mechanisms and/or bodies established and their capacity strengthened to identify, plan and prioritize drought mitigation measures – as a contribution to the MRC BDP process; (ii) drought preparedness and mitigation strategies formulated addressing economic, social and environmental impacts to vulnerable people and water related resource systems; (iii) drought mitigation scenarios, comprising both structural and non-structural interventions, developed in participatory ways, categorized and prioritized and provided as a contribution to the MRC BDP IWRM rolling planning process; (iv) programmes and projects promoted: High priority drought mitigation programmes and projects promoted and their implementation supported.

Component 4 - Drought Management Policy

Expected outputs are: (i) MRC drought-related policies and procedures developed and agreed, including sector policy analyses and advice completed enabling rationalisation of sector policies in Member States with particular emphasis on trans-boundary drought management issues; (ii) strengthened capacity of the MRC, NMCs and other programme partner organizations to effectively and efficiently plan, organize, direct and control implementation of the Drought Management Programme; (iii) Networks established and/or strengthened - with relevant national line agencies, regional organizations, research institutions and academia, and civil society organizations, related to drought management and mitigation in the Mekong Basin; (iv) technical cooperation with up-streams riparian countries strengthened - especially China - on drought-related issues; (v) drought Management Programme effectively managed from inception phase, through implementation, to completion, with adequate technical, administrative and financial support provided.

3.7.2 Workplan for 2007

At the Twelfth Meeting of the Council in December 2005, the Secretariat was asked to expedite the development of a Drought Management Programme. The Programme Document was approved for the fund raising purposes, and fund raising activities have been initiated. The planned activities under the Drought Management Programme in 2007 will be the finalisation of a Programme Document.

Relevant JC and Council decisions

At the Thirteenth Meeting of the Council in December 2006, the Council approved the Drought Management Programme Document for fundraising purposes.

3.8 Agriculture, Irrigation and Forestry Programme (AIFP)

3.8.1 Programme Overview

The programme as per the current programme document was concluded at the end of 2005. A concept paper for an AIFP Phase 2 has been developed. It is expected that a new programme document for the Second Phase of AIFP for 2006-2010 will be fully developed before 2007. The formulation of Phase 2 of AIFP will also take the view that there are continuing activities from the previous phase.

Purpose

Agricultural land use (irrigated and rainfed) and forestry play a very significant role in the LMB. More than 80 percent of the population derive a major share of their income from agriculture and/or the harvesting of natural resources. To sustain a growing population (with population growth in the basin ranging from 1 % in Thailand to 2.6 % in Lao PDR) and to allow for the alleviation of poverty and economic growth, production-oriented land-use in its various forms will be - and

has to be - extended in terms of area used, while its intensity needs to be increased and productivity enhanced.

Every land-use decision is a water-use decision. Irrigated agriculture is the main user of water in the LMB and is thus of considerable relevance to its hydrology. All kinds of land-use have an impact on water resources and potentially on the state of the river system. Land-use changes the characteristics of watershed areas in terms of infiltration, run-off and evapo-transpiration. Land-use may lead to the contamination of water with various physical, biological and chemical components. Both factors may result in changes in water quantity / flow and water quality. The agricultural utilization of land in proximity to wetlands, small streams and the main channel has direct effects on the river system as an eco-system and as habitat for aquatic plants and animals.

Land-use thus has a variety of interrelated potential impacts on the river system which in turn may influence the beneficial uses of the river system, such as the utilization of water for irrigation and human consumption, the (production and) harvesting of aquatic plants and animals (e.g. by fisheries), as well as opportunities to use the river system for various other purposes, such as navigation, generation of hydropower and tourism.

Approach

During the wet season, water availability is far in excess of demand, but dry season water shortages are common, particularly in the Mun-Chi basin in Thailand and in the Delta, which is currently responsible for about 50% of Viet Nam's total food production. There is still potential for expansion of irrigation in the basin, but more investment is also needed in the improvement of existing irrigation systems and management capacities aiming at increased irrigation efficiency and water productivity ("More Crop per Drop"). Intrusion of seawater into the Delta is becoming more and more an issue of concern, reducing the potential for irrigated rice production. It also affects shallow wells for domestic use.

Deforestation is a significant environmental concern of all Mekong country governments. There is an urgent need to preserve the integrity of the watersheds through monitoring land use changes, identifying problems and management training. Concerns focus on the loss of biodiversity and livelihoods as the forests are cleared, as well as the potential impact of the land-use change on the rivers. Forest clearing can lead to leaching of nutrients and erosion of sediments into rivers. The forests of the lower Mekong provide habitats for animals such as tigers, leopards and elephants, which apart from their intrinsic and cultural values are the sorts of species that can provide the basis of developing eco-tourism.

Strategy

The Programme Strategy consists of a collaborative learning approach to meet the evolving needs of basin communities, as these become progressively apparent. While objectives and intended outputs are fixed, actions undertaken to achieve these will remain flexible. The programme provides MRC with a micro level community-based mechanism for the basin development process. The strategy also facilitates macro level policy development and capacity building such

as in the forestry sector, building on the detailed forest cover and watershed classification work already undertaken under MRC by making it a basis for catchment planning and resource use monitoring for all land and water use for agriculture, forestry, and also fisheries.

Structure

Component 1: Watershed Management (WSM).

This component aims at institutionalising the watershed management planning in the MRC Member Countries. The proposed objective of this component is “National and local institutions increasingly and more competently consider the maintenance of watershed functions in their land-use related activities”. This will lead to an enhanced capability of the MRC Member Countries to manage their watersheds sustainably and increasingly in view of regional needs.

Component 2: Irrigation and Agriculture.

This component aims at developing irrigation and agriculture in a sustainable manner taking into account the requirements of a healthy river system by the relevant institutions. Demonstrate the Multi-Functionality of Paddy Fields (DMPF) and Improvement of irrigation Efficiency in Paddy Fields (IIEPF) are the two projects funded by the Government of Japan working to address the issues of water use efficiency of irrigated agriculture under this component.

The CGIAR Challenge Programme on Water and Food (CPWF) is also placed under this component. The latter is a US\$ 60 million initiative of the Consultative Group on International Agricultural research (CGIAR). This is a research-for-development program, and operates through a global network of partnerships. It seeks to develop innovative ways of producing more food with less water across nine ‘benchmark river basins’ in the developing world, including the Mekong. The MRC is the coordinating institution for CPWF projects in the Mekong River Basin, where it monitors the activities of some ten projects of various sizes. In addition, the MRC is represented on the CPWF Steering Committee, and the AIFP Research Coordinator sits on the CPWF Management Team

Implementation arrangements: international partners, main national partner network

The programme is seeking to develop strong links with both national counterparts and international partners such as the FAO and the CPWF.

Main Outputs

Presently, the main outputs of the components of the AIFP are the following.

Component 1: Watershed Management (WSM).

1. Watershed management approaches for selected watersheds are further developed, documented and disseminated.
2. Structure and instruments for analysis and further development of national policies and guidelines are developed and functioning.
3. Structures and instruments for continuous and effective regional collaboration are developed and functioning.

4. Regional data, information and knowledge management is improved.

Component 2: Irrigation and Agriculture.

1. Agriculture and water use database are improved.

2. Paddy field's functions are analysed.

3. Practical methods to increase water use efficiency are developed.

The Challenge Programme of Water and Food aims to develop innovative ways of growing more food with less water at the basin scale. The role of the MRC within the program is to coordinate the activities of the CPWF in the Mekong.

List of agreements/projects

| Project title | Start date | End date | Budget(US\$ 1,000) | Balance (US\$ 1,000) | Donors |
|---|------------|----------|---------------------------------------|----------------------|---------------|
| Active projects | | | | | |
| GTZ project on watershed management | 01/12/05 | 30/11/08 | 5,000 | | Germany |
| Japan contribution to Demonstrate the Multi-Functionality of Paddy Fields | Feb/03 | Mar/06 | 1,227 | 367 | Japan |
| Japan contribution to Improvement of irrigation Efficiency | 15/06/05 | 14/6/08 | 683 indicative budget 2007: 330 | 248 | Japan |
| Challenge Programme on Water and Food-2007 | 01/01/07 | 31/12/07 | 181 | 181 | CGIAR-IWMI |
| Projects in preparation | | | | | |
| KfW contribution to Watershed Management | N/A | N/A | 6,180 | N/A | Germany (KfW) |

3.8.2 Progress of Agriculture, Irrigation, and Forestry Programme for 2006

Component 1: MRC-GTZ Watershed Management Project (WSMP)

The project continued with its Phase 2 from December 2005. A series of consultations were held with the member countries to identify and formulate more detailed activities for the second phase. A Joint Working Group Meeting was organized in Khon Kaen in March to draft and agree on the work plan for 2005 – 2008 and a draft WSMP Programme document was formulated.

As a result from the meeting in Khon Kaen, capacity needs assessments for watershed management in Lao PDR, Cambodia and Vietnam were conducted. A process design for the introduction of a results-based monitoring system in the WSMP / MRCS has been initiated. The project continues to work on Watershed Management Resource Kit. WSMP Programme Document has been finalized and submitted.

The project also assisted TSD with developing IKMP Programme and started programming of Monitoring Data Base for Capacity Building and Information Distribution. An analysis of existing institutional arrangements for watershed

management on national, province and district level in Laos has been started.

Component 2: Agriculture and Irrigation Demonstration of Multi-Functionality of Paddy Fields (DMPF)

The progress made since December 2005 under the project to Demonstrate Multi-functionality of Paddy Fields (DMPF) includes the following:

- The report of Demonstrate Multi-functionality of Paddy Fields over the Mekong River Basin for the funding support 2003 was submitted in January 2006.
- Final report Data Collection on the Programme to Demonstrate Multi-functionality of Paddy Fields over the Mekong River Basin by Cambodia was completed. Final reports on data collection from four Member Countries have been submitted.
- An analysis of selected functions of paddy fields has been identified in Thailand and Viet Nam.
- The DMPF project was agreed to be extended till November 2007. The Japanese donor, Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF) agreed with the planned activities of DMPF as well as the fund reallocation of 2004 and 2005.
- The project also sponsored the MRC Secretariat officers and line agencies from Member Countries to participate in the Fourth World Water Forum in Mexico.

Improvement of Irrigation Efficiency on Paddy Field (IIEPF)

As for Improvement of Irrigation Efficiency on paddy fields over the Mekong River Basin project (IIEPF), the progress made include the followings:

- The first regional workshop to finalize the project document, and discuss the outline of the forthcoming activities under the project has been organized. The project document has now been finalized.
- Collaboration with FAO has been agreed on the following points: a) providing technical comments through participation to the workshops, b) transferring an irrigation scheme appraisal technique through RAP training workshop and its on-the-job training, and c) identifying appropriate consultants to draft guidelines.
- Summary project report and revised project document were submitted to the donor for their acceptance and approval in June. Both documents were approved and funding for 2006 was remitted in July.
- Four days training workshop for Rapid Appraisal Process (RAP) was held in July at MRC conference room. RAP is a tool to allow qualified engineer to systematically and quickly determine key indicators of irrigation projects performance, which were jointly developed by FAO. Around twenty engineers from the member countries were trained by FAO staff from

Bangkok. Trained engineers are expected to conduct irrigation scheme appraisal as a part of IIEPF field observation.

- Subcontracts for fieldwork were concluded with four member countries from October to November after a few months of negotiation. Initial meetings with NMCs and Line Agencies to confirm the detail of fieldwork for commencement were also conducted in November and December. Fieldwork started from this dry season irrigation and will continue to cover the next rainy season in all the Member Countries.

CGIAR Challenge Program on Water and Food (CPWF)

As for CPWF this year, it continues to be managed effectively and efficiently in the Mekong. Four CPWF Small Grants for Impact projects, each worth about US\$ 75,000, have been contracted and now fall under the purview of the MRC Research Coordinator. Two additional major projects (each worth more than US\$ 1 million) have been contracted and have held their inception workshops this year. The CPWF Basin Focal project (BFP) continues well, and aims to develop water poverty and water productivity maps and data for the Mekong River Basin. The MRC is a partner in this initiative. In May 2006, the CPWF held its steering committee meeting in Cairo, where the AIFP Research Coordinator represented the MRC. The MRC's AIFP Research Coordinator continues to be an active member of the CPWF Management Team. In November, the CPWF held the International Forum on Water and Food in Vientiane, where the event was hosted by the MRC. 250 delegates from around the world attended an extremely innovative and effective event.

Significant problems encountered, Corrective action taken

The programme as per current programme document was concluded by the end of 2005. A process to draft a concept paper for AIFP Phase 2 was initiated before the end of Phase 1 with a view to present the concept paper to the Twenty-third Meeting of the Joint Committee in April 2006, but had to be rescheduled.

For DMPF there was a significant delay of planned activities of the project for 2005 and continued to 2006 and consequently, the budget was underspent. In discussions with the donor a reallocation of budget and some new activities had been agreed.

Relevant JC and Council decisions

There has been no decision from the Council and the JC on AIFP in 2006. The AIFP continuously provided documents for information.

3.8.3 Workplan for 2007

MRC-GTZ Watershed Management Project (WSMP)

Under the Watershed Management Component, activities of the WSM GTZ Project will continue building on the outputs produced in Phase 1 and

recommendations made by the Project Progress Review Team. The following outputs and activities are planned for 2007:

Policy Analysis and Advice:

- Preparation of the final draft of an analysis of existing policies and legal framework for watershed management;
- Preparation of the final draft with proposals for optimizing the institutional framework for watershed management;
- Consultations with relevant institutions on the implementation of integrated watershed management processes.

Information Management:

- Review and optimizing databases in Laos (Nam Ton Watershed), Vietnam (Sre Pok Watershed) and Thailand
- Consultation processes on the maintenance of the watershed management databases
- Ongoing actualization of the watershed management information resource kit
- Ongoing updating of MekongInfo

Capacity Building:

- Ongoing preparation of training programme and curricula
- Conduct training (based on training needs assessment implemented in April/May 2006 and agreed training plan as is planned to be decided by the National Working Groups, second half of 2006)

Demonstration of Multi-Functionality of Paddy Fields (DMPF)

Under the Agriculture and Irrigation Component, AIFP will continue with the Project to Demonstrate the Multi-Functionality of Paddy Fields (DMPF) to achieve output 2 of the component, i.e. Analysis of Paddy Fields' functions.

Improvement of Irrigation Efficiency on Paddy Field (IIEPF)

As for the Improvement of Irrigation Efficiency in Paddy Fields (IIEPF) project to achieve output 3 of the component, i.e. Development of the method to improve water use efficiency, the following three outputs are expected:

1. Basic data presenting the status of irrigation activities (management) and its efficiency observed at four pilot sites;
2. Primary analysis based on above data observation for 2006-2007 dry season cropping made;
3. Necessary information for drafting guideline made available.

To achieve the three mentioned outputs field observation and analysis work at four selected sites will continue. This work started late in 2006 and will continue until the end of 2007 to cover one full dry and wet seasons cropping.

A consultant will be hired to engage in drafting the Guideline to Improve Irrigation Efficiency in the middle of 2007. This consultant will review the related activities in the past including the one under IIEPF, identifying the best practices, and prepares the draft guideline in 2007.

CGIAR Challenge Program on Water and Food (CPWF)

Under the MRC Participation in the Challenge Programme for Water and Food, planned activities in 2007 will include: (a) dealing with the outputs from the November 2006 International Forum on Water and Food; (b) Designing proposals for the second phase of the CPWF (2009 – 2012); (c) continued representation of the MRC in the CPWF; (d) Continued management of CPWF activities in the Mekong.

Donor reviews or appraisals planned

Presently, no donor review or appraisal is planned for the year 2007

3.9 Navigation Programme (NAP)

3.9.1 Programme Overview

Purpose

The Mekong River is an important gateway to trade centres in the Southeast Asia region and beyond. In 2005, trade valued at US\$ 6,200 million was transported throughout the LMB on the Mekong River and its tributaries, including the passage of an estimated US\$ 168 million of goods between Thailand and Yunnan. In many cases however, coordination and monitoring is required, especially when dealing with transport of hazardous materials. Moreover, in many stretches, the Mekong River of today has not exploited its inherent potentials to boost trade relations and income for the countries situated in its Basin. A regional development approach is needed to contribute to poverty reduction by reducing vulnerability, opening new economic opportunities, creating new employment, enhancing democratic process, developing skills, and improving the access facilities to the remote communities and the delivery of rural services.

Reflecting the content of Article 9 in the 1995 Agreement, the development objective of the Navigation Strategy is stated as: “promote freedom of navigation and increase the international trade opportunities for the MRC member countries’ mutual benefit, and to assist in coordination and cooperation in developing effective and safe waterborne transport in a sustainable and protective manner for the waterway”.

Approach

The flow regime exercises an important control on navigability, and changes in flow, either increases due to regulation or decreases due to diversions, will influence the viability of navigation. Issues to be addressed in a regional navigation programme include river navigation conditions; ports; integration of navigation with other transport modes (particularly in the international context);

physical and non-physical barriers to navigation; and environmental and safety concerns such as pollution.

The MRC Navigation programme has the following immediate objectives:

Legal Objective: Establish an appropriate legal foundation and navigation regime for International Mekong Navigation, and ensure its implementation and sustainability

Trade, Transport and Safety Objective (Physical and Non-Physical): Reduction of non-physical and physical barriers - Integrating navigation in the regional transport network - Reduction of navigation-related accidents

Environmental Objective: To promote the concept of “clean” river transportation, focusing on strategic prevention of environmental damage from waterway infrastructures/works or from shipping or port accidents rather than remedying or combating the impacts

Social Objective: Distributing benefits from navigation to the riparian people - Improve water transportation during floods - Increase river-based employment.

Strategy

The updated MRC Navigation Strategy, in its 2003 version, is based on basin-wide studies and reviews of the navigation conditions that helped to identify the most apparent regional weaknesses and strengths. The strategy formulation took place in close cooperation with MRC Member Countries and other partners. The strategy argues that the navigation sector holds comparative advantages that justify a higher allocation of investments in order to develop important business and trade potentials in the Lower Mekong Region. At the same time it was stated that a number of institutional and physical barriers must be overcome, for which a regional approach is indispensable.

Structure

A total of five components have been identified and will be implemented within a timeframe of six years.

Component 1: Socioeconomic Analysis and Regional Transport Planning.

This component will establish a strategic regional planning tool to identify comparative advantages for the navigation sector and thereby a tool to direct investments to strategic important locations and objects.

Component 2: Legal Framework for Cross-border Navigation.

This component addresses the need for improvement of the legal framework and implementation of Article 9 of the 1995 Agreement. This component has clear relations to the rules and procedures for water use developed within the Water Utilization Programme (WUP) and it is foreseen that the experiences made by the WUP team should be taken into consideration when developing the detailed implementation plan.

Component 3: Traffic Safety and Environmental Sustainability.

This component highlights the need for improving the signalling systems along the Mekong, promotion of environmental awareness and putting in place a system for trans-boundary Environmental Impact Assessments (EIA).

Component 4: Information, Promotion and Coordination.

This component addresses the establishment of a regional River Information System providing data on waterborne transport on the Mekong River (for planning and operational uses). The component also identifies activities to promote regional, safe and environment-friendly transport and improved coordination mechanisms to facilitate efficient navigation development.

Component 5: Institutional Development.

This component sets the overall frame for implementation of the Navigation Programme and it aims at providing extensive capacity building within the member countries and at the MRC Secretariat.

Implementation arrangements

The Navigation Advisory Body (NAB) will be the high-level body responsible to stimulate a more detailed input of the member states and to free the MRC Joint Committee from dealing with technical issues. The MRC Navigation Programme Office (NPO) consisting of the necessary experts from the countries and international advisors will not only formulate and supervise all activities necessary to implement the NAP, but it will also support the above-mentioned Advisory Body. International partners such as IMO (International Maritime Organization), PIANC (Permanent International Association of Navigation Congresses), the Central Commission for Navigation on the Rhine (CCNR), and the Danube Navigation Commission will be important partners to develop and assist in the implementation of the international standard for navigation safety and environmental protection measures.

Main Outputs

The main outputs of the NAP are the following:

1. An updated and harmonized legal regime legal to guarantee freedom of navigation consisting of legal and operational navigation agreements (Component 2).
2. Installation of aids to navigation (Component 3).
3. River Information Services Implementation Plans (Component 4).
4. Strengthening of Management Capacities of National Counterparts directly related to the implementation of the Navigation Programme and its functioning (Component 5).

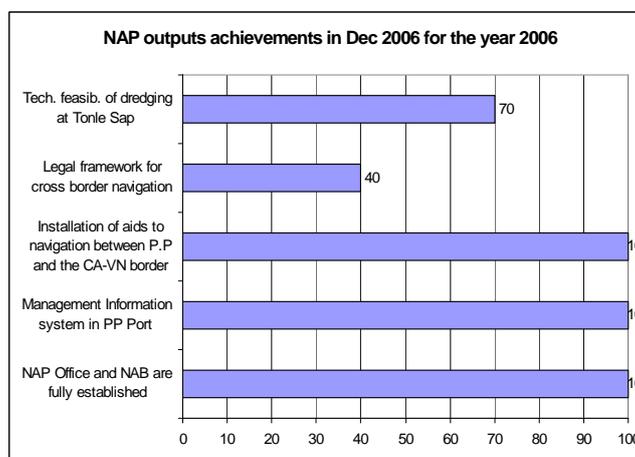
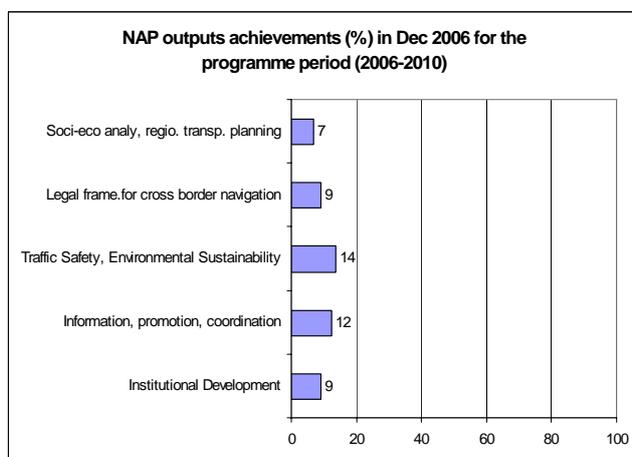
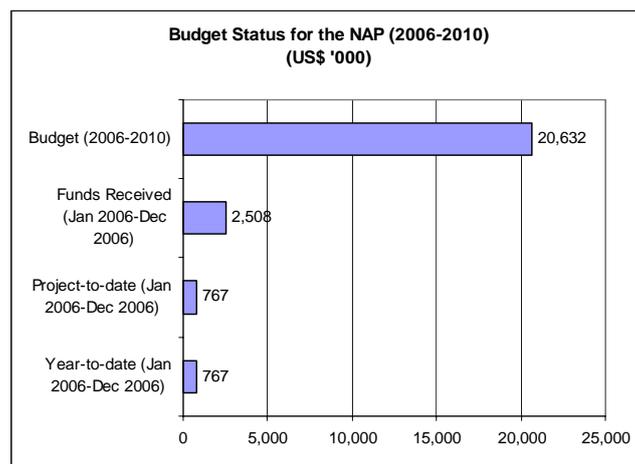
List of agreements/projects

| Project title | Start date | End date | Budget (US\$ 1,000) | Balance (US\$ 1,000) | Donors |
|--|------------|----------|------------------------|-------------------------|---------|
| Active Projects | | | | | |
| Belgium contribution to the Navigation Programme | 04/10/05 | 04/10/10 | 6,000 | 5,233 | Belgium |

3.9.2 Progress of Navigation Programme for 2006

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2006, respectively.

The basic approach and methodology for the two outputs achievement graphs is set out in the introduction of the Work Programme.



Notes: Graph for the programme duration:

Output 1: Socio-economic Analysis and Regional Transport Planning (component 1)

Output 2: Legal Framework for Cross border Navigation (component 2)

Output 3: Traffic Safety and Environmental Sustainability (component 3)

Output 4: Information, Promotion and Coordination (component 4)

Output 5: Institutional Development (component 5)

Graph for 2006:

Component 1: River Channel Study: The Project, "Hydrodynamic and morphological impacts of channel dredging in Tonle Sap Lake" started in June 2006 and will be completed in January 2007. The results provide a firm basis for evaluating the sustainability of dredging the Tonle Sap for navigation.

Component 2: *Output 2: Legal Framework for Cross border Navigation* (through the project Master Plan for Waterborne Transport on the Mekong River System in Cambodia, a comprehensive legal study of the current regime on the Mekong River between Cambodia and Viet Nam to assess and evaluate the existing Hanoi Navigation Agreement of 1998, including the new Draft Protocol is completed).

Component 3: *Output 3: Installation of Aids to Navigation between Phnom Penh Port and Cambodia-*

Viet Nam border (for this stretch of the Mekong River the following works have been completed: (i) topo-hydrographic data in digital format (ii) a detailed design for a system of aids to navigation including buoys and shore installations prepared, (iii) selection of the consultant firm and contract signed.

Component 4: *Output 4: Management Information System for Phnom Penh Port completed*

Component 5: *Institutional Development- NAP Office and NAB are fully established for the implementation of the Belgian Contribution to the MRC Navigation Programme*

Planned and achieved outputs for 2006

The main outputs of the NAP in 2006 were the following:

Component 1 - Socio-economic Analysis and Transport Planning

River Channel Study: The Project, "Hydrodynamic and morphological impacts of channel dredging in Tonle Sap Lake" started in June 2006 and will be completed in January 2007. The results provide a firm basis for evaluating the sustainability of dredging the Tonle Sap for navigation.

Component 2 - Legal Framework for Cross-border Navigation

Output 1: Through the project Master Plan for Waterborne Transport on the Mekong River System in Cambodia, a comprehensive legal study of the current regime on the Mekong River between Cambodia and Viet Nam to assess and evaluate the existing Hanoi Navigation Agreement of 1998 and the existing Protocol was developed.

Component 3 - Traffic Safety and Environmental Sustainability

Output 1: Aids to navigation consisting of buoys, beacons and shore marks to international standard are being installed on the stretch of the Mekong River between Phnom Penh Port and Cambodia-Viet Nam border. The national counterparts in Cambodia to perform normal maintenance and operational repairs for all types of aids to navigation were fully trained and operational.

Component 4 – Information, Promotion and Coordination

The Management Information System for Phnom Penh Port was developed and operational.

A further output was the presentation of the Navigation Programme in one of the local topic session (water and transport) of the Fourth World Water Forum in Mexico City, 16-22 March 2006.

Component 5 – Institutional Development

The Navigation Advisory Body was established and the first meeting among the NAB members organised. The Navigation Programme Office consisting of NAP Coordinator, Chief Technical Advisor, Programme Officer and Programme Assistant/Administrative Secretary to implement the Navigation Programme was established.

3.9.3 Workplan for 2007

Component 1 - Socio-economic Analysis and Transport Planning

Review of Project Implementation Plan through conducting National and Regional consultation workshops. Conduct Assessment Needs Study on the Improvement of Mekong navigation in the Lao PDR and Thailand – Project Identification. In line with this initiative, formulation of the Project "River channel stability- Study on mitigation measures to improve channel bed stability in the Lao PDR and Thailand" has commenced. Conduct Assessment Needs Study on the Improvement of Mekong navigation in Viet Nam – Project Identification.

Component 2 - Legal Framework for Cross-border Navigation

An updated and harmonised legal frame work to guarantee freedom of navigation consisting of legal and an operational navigation agreement between Cambodia and Viet Nam prepared, including follow-up.

Identified linkages between Quadrangle Navigation Agreement (China PRC, Lao PDR, Myanmar, Thailand) and the Bilateral Navigation Agreement (Cambodia and Viet Nam)

Component 3 - Traffic Safety and Environmental Sustainability

Depending on the result of Needs Assessment, Detailed design of Aids to Navigation system on the Mekong River between Luang Prabang and Vientiane, including surveying and preparation of full set of bidding documents

Depending on the result of the Needs Assessment and Detailed design, Operational Aids to Navigation system on the Mekong River between Luang Prabang and Vientiane, including commissioning and trained maintenance staff, fully functional.

Depending on the result of Needs Assessment, Detailed design of Aids to Navigation system on the Mekong River between the vam Nao Pass and the CA-VN border, including surveying and preparation of full set of bidding documents

Depending on the result of the Needs Assessment and Detailed design, Operational Aids to Navigation system on the Mekong River between the vam Nao Pass and the CA-VN border, including commissioning and trained maintenance staff, fully functional

Risk analysis and its scope for the prevention and contingency planning will be developed through:

- Detailed analysis of the situation in the most important ports (a minimum of 3 ports per country).
- Analysis of the waterway characteristics - Detailed analysis of the possible risks for groundings, collisions, etc.

Component 4 – Information, Promotion and Coordination

Concrete programme for cooperation on the Mekong Navigation Development between the Lower and the Upper Mekong Countries will be formulated.

First Phase of the Atlas of Mekong Ports and Landing Facilities on the Lower Mekong Basin including photographs, descriptions, an overview map and more detailed maps for each country showing the locations of the ports, landing facilities and tourist attraction sites along the river to facilitate trade and waterborne tourism will be prepared.

Component 5 – Institutional Development

The Navigation Advisory Body and the management structure of the Navigation Programme Office are fully functioning to implement the Belgian Contribution to the MRC Navigation Programme.

Successful achievement of NAP's outputs will require extensive cooperation from the NMCs as well as with the line agencies, stakeholders and beneficiaries in each of the member countries. Political commitment of the Member Countries who have endorsed the Navigation Programme should be translated into a high level of commitment at the operational and executive level within the NMCs and national line agencies involved. The major risk that may affect the implementation of the NAP as planned above would be a lack of available funds.

Donor reviews or appraisals planned

Presently, no donor review or appraisal has been planned.

3.10 Hydropower Programme (HP)

3.10.1 Programme Overview

Despite the significance of the hydropower sector for water resources development in the Mekong Basin, respective activities of the MRC are very limited at present due to lack of funding. A hydropower programme document formulating programme objectives, structure and outputs is expected for the coming year. Funds are being raised for this process.

Purpose

The Lower Mekong Basin has abundant sites suitable for hydropower development – over 60 schemes have been identified, with total potential estimated at 30,000 MW – 13,000 on the mainstream, 13,000 MW on Lao tributaries, 2,200 MW on Cambodian tributaries and 2,000 in Viet Nam. In Thailand no further major schemes are proposed. To date 11 hydropower schemes with a total capacity of 1,600 MW have been developed in the LMB (and an additional 2,850 MW in the Upper Basin).

Total energy demand in the four countries in 2000 was estimated at 125,000

GWh. Of this, around 22% is supplied from hydropower, with the balance mainly from fossil fuels. Electrification rates, however, are still low in Cambodia, Lao PDR and parts of Viet Nam but growing rapidly. Demand for power is expected to increase by 7% a year over the next 20 years – requiring generating capacity four times greater than at present. ADB (2001) estimates that MRC member countries will need to develop about 20,000 MW of new generating capacity in the next 10 years, and that after that demand will increase even more quickly.

Export trade in power is well established between Thailand, Lao PDR and Viet Nam; it is of particular significance for Lao PDR, where potential substantially exceeds projected demands and export of power is an important component of GDP. The regional power market will be enhanced by extension and upgrading of regional transmission systems under ADB and ASEAN programs.

Approach

Successful development of the region's hydropower potential will require a well structured and integrated programme founded on a basin-wide strategy, with due regard to environmental and social aspects.

Strategy

The MRC Hydropower Development Strategy was adopted in 2001 with the vision of "the efficient and socio-economically and environmentally appropriate generation and distribution of hydropower in the riparian countries, in a cooperative and well coordinated way, is provided".

This vision is supplemented by an immediate objective that "hydropower resources of the Mekong mainstream and its tributaries are developed according to true least-cost planning, fully considering environmental and social impacts", and a development objective described as "the increasing demand for affordable electric energy in the MRC member countries is met with minimal negative impacts on the environment and local people, thereby promoting economic growth for the countries' mutual benefit".

Structure

Structure and components of MRC's hydropower programme would be defined during programme formulation. Potential outputs could fall in three strategic areas:

- (i) Consideration of integrated water use, environment and socio-economic factors;
- (ii) Efficient hydropower generation and distribution mechanisms; and
- (iii) Information system and capacity building:

Implementation arrangements

The programme shall closely coordinate with national line agencies, initiatives of development banks, as well as MRC's BDP and sector programmes. MRC's lessons in multi-objective and multi-stakeholder planning processes as well as the recommendations of the World Commission on Dams, eg on public participation in

the planning process will be taken into account, as appropriate and applicable in the regional context.

Main Outputs

Potential activities associated to the three strategic areas could include:

- (i) Consideration of integrated water use, environment and socio-economic factors:
 - Enhance regional coordination and planification of hydropower development;
 - Sector EIA for hydropower development, assist countries in developing their own EIA systems, support countries in reviewing EIAs;
 - Study of cumulative effects of reservoirs and inter-basin diversions on downstream conditions;
 - Clarification of potential negative side effects on water-related livelihoods, fisheries and the environment and possible mitigation and compensation measures; and
 - Analysis and optimisation of operating regimes of existing and proposed hydropower plants.
- (ii) Efficient hydropower generation and distribution mechanisms:
 - Study private sector participation and develop conducive framework conditions for private participation; and
 - Study of potential improved efficiency, reduced power demand and investment savings in power sector through Demand Side Management etc;
- (iii) Information system and capacity building:
 - Evaluate and improve existing data acquisition and holdings for planning and assessment purposes;
 - Review and update existing sector studies and establish tentative ranking of hydropower projects, under a triple bottom line approach;
 - Provide data and decision support services, provide impartial expert opinion on social and environmental impacts, in particular in trans-boundary settings; and
 - Review and disseminate best practices, eg for planning and public participation, trans-boundary issues, environment.

3.10.2 Progress of Hydropower Programme for 2006

None of the activities associated under the above outputs have attracted funding thus far, although it is evident that EP, BDP and FP are addressing some aspects of the above through their own programmes

Significant problems encountered, Corrective action taken

None.

Donor reviews or appraisals

There has been no donor review or appraisal.

Relevant JC and Council decisions

In December 2004, the Council endorsed the creation of a Hydropower Programme (ex-Hydropower Component of the Water Resources Management Programme) to better reflect the strategic priorities of the MRC. The concept paper was drafted in July 2005 and approved to the Twenty-Second Meeting of the MRC Joint Committee in August 2005.

3.10.3 Workplan for 2007

The development of the start up of the new Hydropower Programme (HP) is planned for 2007, subject to the availability of funding. A programme document will be formulated, providing full information on the expected outputs of the programme. MRCS is currently seeking funds for formulation of the programme document.

Donor reviews or appraisals planned

Presently, no donor appraisal has been planned for the new HP.

3.11 Fisheries Programme (FP)

3.11.1 Programme Overview

The Fisheries Programme Phase 2 was initiated in January 2006. It builds on the achievements of the first phase of the Programme, specifically in the areas of fisheries ecology; valuation of fisheries in the LMB; mitigation of the impacts of developments; fisheries management and governance; aquaculture of indigenous species; and communication of information to governments and planning agencies.

Purpose

The Lower Mekong fishery is the world's largest freshwater fishery, estimated at over two million tonnes per year, with a total value of around \$US 1.4 billion. Up to 40 million people (two-thirds of the population of the LMB) are actively involved at least part-time in the fisheries and in many places in the basin; the fishery is one of the few sources of employment for an increasingly young, often landless rural population. Fisheries products also supply essential micro-nutrients and the bulk of the animal protein for the population in the basin. It is necessary to manage the productive Mekong fisheries so as to sustain their high yield and economic output well into the future.

The development objective of the Fisheries Programme is "Coordinated and sustainable development, utilization, management and conservation of the fisheries of the Mekong Basin".

Approach

In the Lower Mekong Basin, floodplains provide benefits for the livelihoods of tens of millions of people. Much of this floodplain is subject to a substantial annual wet season flood pulse, which is crucial to the survival and production of most of the

fish and aquatic animals and many of the plant species in the basin. The flood recession provides major fishing opportunities as well as supplying water to the recession rice crop in much of Cambodia and southern Laos. Change in the annual flood pattern is a major threat to the fishery, as well as loss of habitat (e.g. conversion of wetlands into agricultural land), and barriers across rivers blocking fish migration routes. Increasing fishing effort is also a threat, and will become more so as populations in the region increase. A regional programme is needed to deal with these major constraints.

The immediate objective of the programme is “MRC, riparian organizations and users implement sustainable fisheries management and development at local, national and regional levels”.

Strategy

The strategy of the FP relies on dealing with information relevant for fisheries development, utilisation, management and conservation in the Mekong basin. Relevant information is that identified as being necessary for developing an understanding of biology, ecology, economics and social aspects of fisheries, and for the planning and management of fisheries activities. The primary focus of activities is on trans-boundary issues affecting fisheries, so that appropriate fisheries information is available for other MRC's programmes. Information produced within the Fisheries Programme is incorporated into national and regional management and development plans, with a view to continuously increasing fisheries productivity and maintaining a healthy ecosystem.

Structure

There are four components within the FP Phase 2.

Component 1: Programme Management and Communication.

This component will ensure that 1) MRC finances, organizes and implements the Fisheries Programme Phase 2 (FP 2) in close integration with other MRC programmes, and cooperation with NMCs and national line agencies; and 2) MRC, riparian fisheries management organisations and fisheries sector stakeholders cooperate in information generation, capacity building, and development of the inland fisheries resources of the LMB.

Component 2: Fisheries Management and Governance.

This component's objective is that resource users, riparian fisheries line agencies and other organizations develop and implement improved institutional arrangements and technical measures for inland fisheries management.

Component 3: Fisheries Ecology, Valuation and Mitigation.

This component will develop the MRC, line agencies and the water management industry knowledge of fisheries ecology, valuation, and mitigation and management of environmental impacts that are needed for management of fisheries in the LMB.

Component 4: Aquaculture of Indigenous Mekong Fish Species.

This component will ensure that line agencies, other relevant users develop and implement indigenous Mekong fish species culture systems for aquaculture, stocking and mitigation.

Implementation arrangements

The programme operates within one shared system of support functions and infrastructure. Activities and staff are maintained in each of the riparian countries, so building an excellent network with line agencies and institutes. This presence includes a national programme director and the support required for programme activities in the country. Virtually all field-based activities of the programme are conducted through fisheries line agencies, although national consultants are also used when necessary for particular activities.

List of agreements/projects

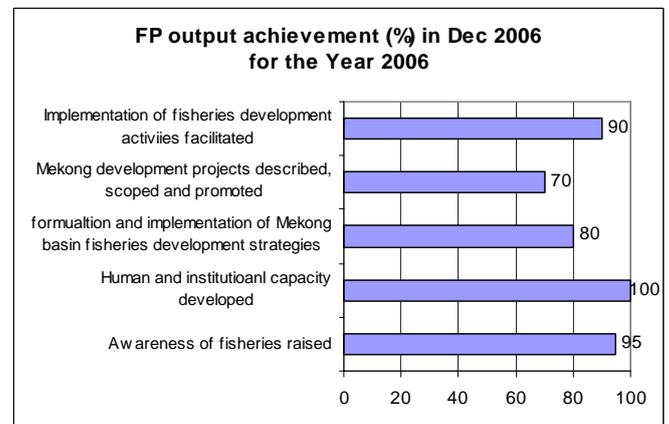
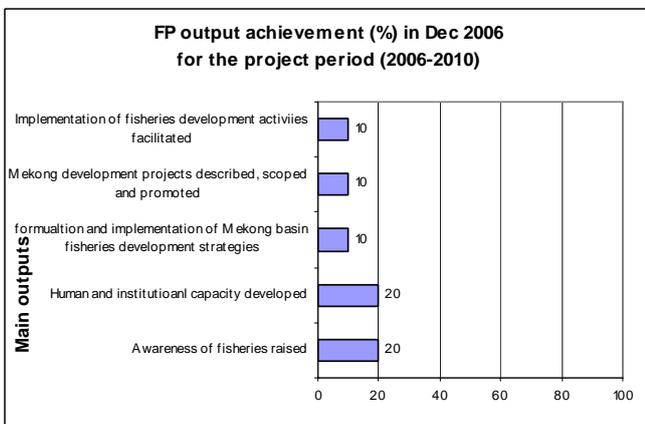
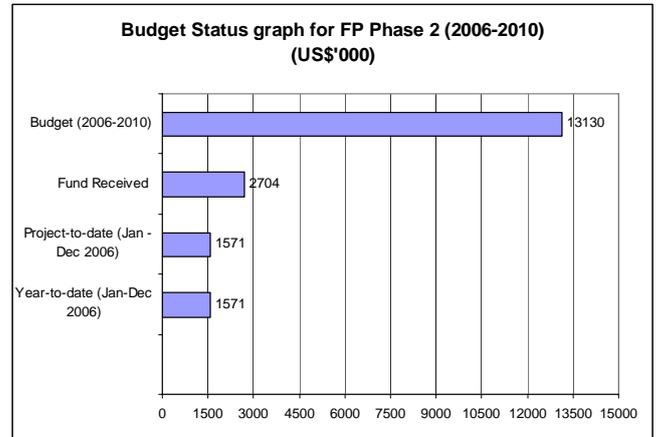
| Project title | Start date | End date | Budget (US\$ 1,000) | Balance (US\$ 1,000) | Donors |
|---|-------------------|-----------------|-------------------------------|--------------------------------|---------------|
| Projects signed | | | | | |
| Swedish contribution to the Technical Advisory Body | 01/01/04 | 31/12/06 | 159 | 0 | Sweden |
| Swedish contribution to FP2 (MK 2004/06) | 01/01/06 | 31/12/06 | 180 | 0 | Sweden |
| Denmark support to FP2 | 01/01/06 | 31/12/08 | 5,000 | 3,605 | Denmark |

3.11.2 Progress of Fisheries Programme for 2006

The progress reported herein covers Fisheries Phase 2, which commenced in January 2006

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2006, respectively.

The basic approach and methodology for the two outputs achievement graphs is set out in the introduction of the Work Programme.



Planned and achieved outputs for 2006

Progress is presented according to the five main outputs of the FP.

Output 1: Awareness of fisheries raised.

Several communication products had been produced and disseminated during the first half of 2006. These included publications in the Technical Series and the Technical Advisory Body's Management Recommendation Series; the regular newsletter Catch and Culture (in English and riparian languages); and a film on the fisheries of the Mekong delta (similar films for Lao and Thailand are currently being finalised). In addition, translation and publication of technical and Development Series publications in riparian languages had continued. One of these is the Khmer version of the book on "Fishing Gears on the Cambodian Mekong", which was highly appreciated by parliamentarians during debates on the new fisheries law in Cambodia. All documents were available in hard copy, as well as posted on various websites. The FP continued to provide input into several regional planning initiatives, such as the integrated basin flow management studies being organised by the EP and WUP, and a range of activities coordinated by the Mekong Wetlands Biodiversity Programme.

Output 2: Human and institutional capacity developed.

The Technical Advisory Body on Fisheries Management (TAB) continued the implementation of its 2004-2006 work plan. Organizationally the TAB was now well established, being supported in its work by a functioning secretariat with presence at both the regional and national levels. The major activity for the TAB over the last 6 months was the implementation of a series of three-day learning events on regional fisheries management conducted in Member Countries. The learning events targeted mid-level provincial fisheries managers were conducted in the national languages. Assessment of the value of the learning events had been extremely positive, and the TAB was now looking to extend the activity in its next 3-year work programme. A series of research training activities (on fisheries ecology, economics and management) was completed in March at the fisheries institute in Cambodia. These activities provided specialised training at all stages of projects design and implementation as well as in institutional management of the projects. Further on-the-job training had also been completed particularly within the Fisheries Management and Governance and Aquaculture of Mekong Indigenous Fish Species components.

Output 3: Formulation and implementation of Mekong basin fisheries development strategies

Several fisheries development strategies, at country level and for particular fisheries, were already available. These were elaborated within various activities of the Fisheries Programme. National partners would build on these activities to determine whether a regional strategy would complement the national strategies, or whether the necessary components were already covered at national levels. The FP worked with a consortium of partners in developing conservation strategies for the giant Mekong catfish. This included technical work in developing models which might assist in indicating the conservation status of the species, as well as the more practical aspects of implementing a moratorium on fishing for the species in the Mekong in northern Thailand and Lao PDR.

Output 4: Mekong development projects described, scoped and promoted

FP assisted fisheries consultants to develop a project on fish passage (facilities enabling fish to pass upstream and downstream of barriers) in Lao PDR. While the project would be based in Lao, the FP was ensuring the project had broader regional applicability, and that fisheries technicians in other countries would have observer status during the course of the project. The project was likely to start in 2007 and probably run for 2-3 years. A project was also being planned by FP to review and analyse the data from three fisheries that had been monitored in the Mekong for approximately 10 years. An initial scoping study was conducted in May-June, under funds supplied by the Australian Centre for International Agricultural Research. The report was very favourable, and was now being reviewed by ACIAR to determine follow-up action.

Output 5: Implementation of fisheries development activities facilitated

The Fisheries Management and Governance component continued to provide a platform for the development of co-management activities in all MRC-member countries.

Significant problems encountered, corrective action taken

Two major difficulties had been encountered in implementing the FP Phase 2. The first was that inadequate funding was available to implement all activities as planned. The shortfall in funding resulted in one international position being terminated, and several important activities (such as valuation of fisheries and development of an “inland fisheries management” syllabus) were delayed. The second was the lack of a component coordinator for the Fisheries Ecology, Valuation and Mitigation component. The coordinator took up the position in May 2006, but immediately became ill and subsequently passed away in July 2006. Although the recruitment process had been reactivated, the overall outcome was that the component would be effectively leaderless for most of 2006. This severely impacted on the implementation and outcomes of the component.

Donor reviews or appraisals

A completion report for FP Phase 1, covering the years 2003-2005, was completed and forwarded to Danida. No donor reviews or appraisals were conducted during the reporting period.

Relevant JC, Council decisions

The Joint Committee and the Council had been informed on the progress of the FP through the Meetings of the MRC Joint Committee and the Council. The Twelfth Meeting of the MRC Council in December 2005 approved the programme document for the Fisheries Programme Phase 2.

3.11.3 Workplan for 2007

Component 1: Programme Management and Communication.

Major milestones and indicators for 2007 include the following: 1.1. Coordination and overseeing of production of communication products from all components of the Programme, including translation and publishing of documents in riparian languages; 1.2. Production of the FP newsletter “Catch and Culture”; three editions per year in English, one amalgamated edition in each of the four riparian languages; 1.3. Annual Meeting to be held in Cambodia, overviewing both FP work and other significant fisheries activities in the LMB; Annual Mekong Fisheries Technical Symposium organised.

Component 2: Fisheries Management and Governance.

Major milestones and indicators for 2007 include the following: 2.1. Further development of fisheries co-management activities in the Central Highlands of Viet Nam; 2.2. An extension of activities of participatory water management in

rice/shrimp culture from commune to district level in the Mekong Delta in Viet Nam (Soc Trang Province) continued (2006-2008); 2.3. Development of local management organizations (“RFMCs”) in Lao PDR to improve fish marketing systems; 2.4. In conjunction with the TAB, undertake ‘local transboundary management’ of deep pools in Lao PDR and Cambodia (Champassak and Stung Treng provinces); 2.5. Curricula development for inland fisheries management initiated; 2.6. A training course on regional issues of fisheries management delivered; 2.7. A third yearly cycle of community-based operations of four mobile/fixed small-scale hatcheries for stocking of water bodies and fish culture in Lao PDR and Cambodia completed and evaluated; 2.8. A project for local management organizations (“Community Fisheries”) in Cambodia to develop an example of a federated user organization comprising local, commune and provincial levels extended; 2.9. 2 ‘TAB Updates’, 4 TAB ‘Mekong Fisheries Management Recommendations’ and 1 MRC Development Series issue completed; 2.10. An inventory of research institutions in the LMB and an annotated bibliography of literature on regional issues of fisheries management in the LMB completed.

Component 3: Fisheries Ecology, Valuation and Mitigation.

Major milestones and indicators for 2007 include the following: 3.1. Employment of an economist to initiate a large study on economic valuation of the fisheries resources of the Mekong; 3.2. Fisheries elements of Integrated Basin Flow Management document completed for MRC; 3.3. Work agreements established and work carried out by line agencies for monitoring of fishers’ catches in Cambodia, Lao PDR, Thailand and Viet Nam; 3.4. Publication of documents on trends in fishers catches; 3.5. Work agreements established and work carried out by line agencies for monitoring of key fish markets in Cambodia, Lao PDR, Thailand and Viet Nam; 3.6. Publication of documents on trends in fish market sales completed; 3.7. Work agreements established and work carried out by line agencies for monitoring of fish fry/larval drift in Cambodia and Viet Nam; 3.8. Work agreements established and work carried out by line agencies for monitoring of Tonle Sap dai fisheries in Cambodia; 3.9. Publication of summary document and database from Tonle Sap dai monitoring; 3.10. Papers are prepared and presented by counterparts at the MRC Technical Symposium; 3.11. Facilitation of development and implementation of capture fisheries projects in each of Cambodia, Lao PDR, Thailand and Viet Nam.

Component 4: Aquaculture of Indigenous Mekong Fish Species.

Major milestones and indicators for 2007 include the following: 4.1. Broodstock of AIMS2 priority species are conditioned and spawned by counterpart organizations; 4.2. Two priority species reach farmer extension stage and are transferred to extension agents; 4.3. contributions are prepared and presented at the MRC Fisheries Technical Symposium.

Other potential projects for 2007 in the field of fisheries could emerge from the BDP database or list of projects, promoted by the MRC.

The following are prerequisites for achieving the outputs: adequate funding is

available for FP Phase 2 – this particularly relates to new funding which will be required to initiate the planned study on economic valuation of fisheries; the commitment of line agencies to objectives and work programme of FP is maintained; FP continues to receive the cooperation of other MRC programmes; and all levels of government implement regional and national fisheries management agreements, as well as the recommendations of the FP relating to development of the fisheries sector.

The major risk relating to the uptake of the results and recommendations of the programme relate to developments undertaken outside the fisheries sector. There is the possibility that initiatives will be taken in other areas of river development which will be to the detriment of the fisheries. The strategy to minimize this risk will be to widely disseminate the findings from the programme, especially to planners outside the fisheries sector, to ensure that all management agencies have the knowledge on decisions can be made to provide the overall best social, economic and environmental outcomes.

Donor reviews or appraisals planned in 2007

No reviews or appraisals are planned for 2007.

3.12 Tourism Programme (TP)

3.12.1 Programme Overview

Purpose

The tourism industry is already making a significant contribution to the economies of the Member Countries. Being blessed with abundant historical and cultural heritage and unspoiled natural beauty, the Mekong River Basin has also a great potential to attract visitors from various parts of the world, generating more income from foreign exchange. Being a highly labour-intensive industry, tourism also plays a significant role in generating employment opportunities to localities where it is promoted.

The development objective of the TP would reflect the need: “To promote tourism within the Mekong River Basin in a balanced manner, which also ensures necessary protection of the environment against adverse effects of tourism.”

Approach

The Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin (the 1995 Agreement) provides a broad framework for regional cooperation to work and cooperate in all fields of sustainable development, including “recreation and tourism”. It is a major concern whether in addition to the economic rationale tourism might have adverse environmental effects. There is therefore a need to ensure that tourism can be promoted within the framework of the MRC for a sustainable development of the Mekong River Basin.

Presently, no immediate objective of the TP has been defined.

Strategy

Development of the programme would be based on an analysis of needs and opportunities. This will include: (a) a review of documents concerned; (b) consultations with the national and international agencies concerned with tourism industry in the MRC member countries; and (c) studies to determine the scope of work and identify priority activities.

Implementation arrangements

The programme should be linked with related projects carried out under the ADB's initiatives tourism sector of the GMS and those being carried out by the Transport, Communications and Tourism Division of ESCAP, especially the Mekong/Lancang River Tourism Planning Study.

Structure and Main Outputs would be determined through the formulation of the programme proposal.

3.12.2 Progress of Tourism Programme for 2006

Tourism has been considered under the Navigation Programme's subcomponent 1 regional master plan for navigation. The formulation of the Tourism Programme is ongoing and subject to the availability of funding. Supply-demand analysis and investment opportunities for tourism as well as the strategy to stimulate growth of the cross-border waterborne tourism are major activities of the project. To undertake these activities a pilot project was envisaged. The Development of Waterborne Tourism from Luang Prabang to Simao Pilot Project is based on the conclusions, recommendations and lessons learned from existing tourist operations.

Moreover, under the Environment Programme, a focussed assessment on environmental impact of tourism, using existing documents, studies and plans in the tourism sector was undertaken. The work on environmental impacts of tourism has been initiated under Component 3 People and Aquatic Ecosystems. It will link (where appropriate) to the socio-economic components of the relevant sector programmes (Navigation, Watershed Management and Fisheries). This assessment will also include an analysis of the MRC's comparative advantage in tourism, if any, thus allowing for future programme development. It will be important to look at the impact of both mass tourism and eco-tourism as they pertain to the MRC's mandate.

Relevant JC and Council decisions

At the Twelfth Meeting of the MRC Council, the Secretariat was requested to accord more attention to Tourism.

3.12.3 Workplan for 2007

The main activity would be a study of the tourism sector and development of a comprehensive programme proposal. To this effect, tourism is considered with a baseline study under the Navigation Programme's component 1 (subcomponent 1

regional master plan for the region). Supply-demand analysis and investment opportunities for tourism as well as the strategy to stimulate growth of the cross-border waterborne tourism are major activities of the project. To undertake these activities a pilot project was developed. The Development of Waterborne Tourism from Luang Prabang to Simao Pilot Project is based on the conclusions, recommendations and lessons learned from existing tourist operations. The NAP envisages commencing implementing component 1 in 2007. The study under component 3 "People and Aquatic Ecosystems" commenced in 2005 and will be completed in early 2007. It will link (where appropriate) to the socio-economic components of the relevant programmes (Navigation, Watershed Management and Fisheries). This assessment will also include an analysis of the MRC's comparative advantage in tourism, if any, thus allowing for future formulation. It will be important to look at the impact of both mass tourism and eco-tourism as they pertain to the MRC's mandate. This programme formulation could be started up, subject to availability of funding.

Other potential projects for 2007 in the field of tourism could emerge from the BDP database or list of projects, promoted by the MRC.

Donor reviews or appraisals planned

Presently, no donor appraisal has been planned under this programme.

3.13 MRC Water Management Trust Fund

3.13.1 Programme Overview

Background

The Mekong River Commission (MRC) was established by the 1995 Agreement on Co-operation for the Sustainable Development of the Mekong River Basin, between the Governments of Cambodia, Lao PDR, Thailand and Viet Nam. In accordance with this Agreement, the Mission of MRC is: "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."

To this end the MRC is implementing Programmes covering all relevant sectors of Integrated Water Resources Management¹⁰.

The MRC programme is approved by the MRC Council at its annual session and forms the reference framework for the work of the MRC in general and its Secretariat in particular.

Rationale

The nature of the work of the MRC requires that it is able to respond with some flexibility to emerging demands and the need for formulating new projects and activities as new problem settings require to be cast into the ongoing integrated programme. Only on that basis can the MRC Secretariat seek both approval and

funding to address new problems in Integrated Water Resources Management in the Mekong region. The established programme funding mechanism and the annual approval process through Council however do not provide for such flexibility and a complementary mechanism is needed

Moreover, the role of the MRC as a facilitator of consensus building in transboundary water resources development requires for it to be able to provide technical advisory services, facilitation through workshops, and neutral high-quality technical information through specific studies and consultancies in response to such short-term facilitation needs.

Finally, the MRC requires long-term strategic orientation to provide the best substantive and organizational response to longer-term regional development and integration challenges. This requires premium-quality short-term expertise to develop strategic concepts on the basis of a consultative and participatory process.

Objective

The Objective of the MRC Water Management Trust Fund is to provide strategic and flexible support to MRC programme development and a facility for the MRC to develop and implement its programme responding to short-term demand of member countries in fulfilling its mandate in transboundary water resources management and development.

MRC Water Management Trust Fund Activity Tracks

The MRC Water Management Trust Fund will work on three activity tracks in support of the 1995 Agreement: (i) Strategic Policy Development; (ii) Transboundary Mediation Facility; and (iii) Responsive Programme Development.

Strategic Policy Development:

- Consultant services in support of strategy development and implementation;
- High-level comparative studies on water resources policy issues;
- Expert and Advisory Panel on Mekong IWRM;
- Liaison travel of management to IWRM global and regional events; and
- IWRM Trust Fund Management and Coordination.

Transboundary Mediation Facility

- Multi-party study visits;
- Studies on transboundary mediation options and approaches in the Mekong;
- Environmental Impact Assessments expertise, information or studies upon request of Member States; and
- Facilitation of Member States consultation processes under the MRC Procedures for Notification, Prior Consultation and Agreement.

Responsive Programme Development

- Programme development consultancies;
- Programme development and review workshops; and

- Cross-cutting evaluation consultancies.

Use and Implementation Arrangements

For any activity under US\$ 100,000 the use of funds of the MRC Water Management Trust Fund are authorized by the Chief Executive Officer of MRC within the Trust Fund's Activity Tracks in support of the 1995 Mekong Agreement: (i) Strategic Policy Development; (ii) Transboundary Mediation Facility; and (iii) Responsive Programme Development. For any activity with a budget of or above US\$ 100,000 approval of the Joint Committee is being sought.

The MRC Water Management Trust Fund makes use of the project format for each activity drawing upon the Fund to facilitate implementation and monitoring. These projects are screened against the above agreed funding criteria for separate funding trenches by donors and approved either by the Chief Executive Officer of MRC or by the Joint Committee.

The standard MRC budget policy will be applied, namely that no advance of funds will be possible against funds not yet received. No overspending beyond the level of funds available is authorized. The funds disbursement policy is the same as for MRC projects and programmes, in particular the same signature authority procedures and checks and balances apply.

The overall coordination and annual reporting responsibility for the MRC Water Management Trust Fund rests with the MRC Secretariat International Cooperation and Communication Section.

While implementing an activity under the MRC Water Management Trust Fund, recruitment follows the MRC standard procedures as set out in Personnel Manual. A special emphasis is given to the involvement of regional and local experts to give them an opportunity to participate.

Monitoring and Reporting

The MRC Water Management Trust Fund makes use of the established and transparent substantive and financial reporting system of the MRC which is geared towards multiple-donor funding formats and project-based reporting.

Donor contributions in towards the MRC Water Management Trust Fund are re-traceable and drawn upon under the conditions agreed upon in the funding agreement with the MRC Water Management Trust Fund Donor.

3.13.2 Progress for the MRC Water Management Trust Fund for 2006

The MRC Water Management Trust Fund for Supporting Integrated Water Resources Management in the Mekong Basin has been created by a decision of the Joint Committee at its Twenty-second Meeting in Vientiane on 30-31 August 2005. The Agreement between the MRC and the French Development Agency (AFD) signed on 13 January 2006 provides the first allocation to the Trust Fund of an amount of € 150,000 (about USD 200,000).

In 2006, two requests to mobilize the Trust Fund were sent and considered by the donor: (i) a contribution to the formulation of the MRC Hydropower Programme Document; (ii) a contribution to the Joint Water Resources Development and Management between Lao PDR and Thailand under the World Bank/ADB Mekong Water Resources Partnership Program (MWARP) in collaboration with the MRC.

On the latter, it was agreed in principle that the Trust Fund would usefully support the contracting of national consultants in the study. National consultants are expected to be on board in early 2007. As regards the Hydropower programme, it was suggested that the Trust Fund could support initial consultations with Member States prior to a full programme document formulation.

ANNEX 1: MRC Strategic Outputs 2006 – 2010

| <p>Goals / objectives</p> <p>What is our purpose?</p> <p>What do we want to achieve?</p> | <p>MRC Key actions / outputs</p> <p>What are the goods and services to be delivered?</p> | <p>Lead Programme/ Section[*]</p> | <p>Priorities (High, medium, low)</p> | <p>Funding status (Funded, partial, none)</p> |
|---|--|--|---|--|
| <p>GOAL 1: To promote and support coordinated, sustainable, and pro-poor development</p> | | | | |
| <p>1.1 To establish a system for analysing water demand, water supply and water use in the basin to support the basin development planning process</p> | <ul style="list-style-type: none"> Upgraded modelling toolkit and decision support framework (DSF) Water supply and demand maps Basin-wide water resources development scenarios and options A series of water accounts and verifiable water use indicators to guide decisions-making and development strategy formulation | <p>WUP</p> <p>WUP</p> <p>BDP</p> <p>BDP</p> | <p>High</p> <p>High/Medium</p> <p>High</p> <p>Medium</p> | <p>Partial</p> <p>None</p> <p>None</p> <p>None</p> |
| <p>1.2 To establish processes and mechanisms enabling the balancing of trade-offs between economic and political net benefits of different sectors, areas, and regions; and benefits from environmental and social protection</p> | <ul style="list-style-type: none"> Baseline thematic maps of water and related resource and beneficiaries Consolidated trade-off analysis of development scenarios based on assessed and quantified net impacts on economic, ecological and social values Process of discussions on trade-offs and mutual benefits in basin development, including forum/ policy dialogue meeting. | <p>BDP</p> <p>BDP</p> <p>BDP</p> | <p>Medium</p> <p>High</p> <p>High</p> | <p>None</p> <p>None</p> <p>None</p> |
| <p>1.3 To produce a regularly updated rolling plan applying the planning process for identification, categorization and prioritization of projects and programmes</p> | <ul style="list-style-type: none"> An IWRM rolling plan Collaborative basin development planning processes for project identification and prioritization in water related sectors Integrated Water Resource Management (IWRM) Strategy supported by assessed development scenarios and options MRC projects and programmes database Cumulative impact assessment studies of development scenarios | <p>BDP</p> <p>BDP</p> <p>BDP</p> <p>BDP</p> <p>BDP</p> | <p>High</p> <p>High</p> <p>High</p> <p>High</p> <p>High</p> | <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> |
| <p>1.4 To screen, formulate and promote wise development options at the transboundary and basin levels for preparation and implementation by other appropriate development agencies¹²</p> | <ul style="list-style-type: none"> Support to identification and preparation of balanced sustainable development options in partnership with donors, development partners and investment banks. Support to Line Agencies with knowledge and expertise in preparation of project proposals, focusing on joint and basin-wide projects and national projects with significant basin impacts Project promotion and fund-raising services for joint and basin-wide projects | <p>BDP</p> <p>BDP</p> <p>BDP</p> | <p>High</p> <p>Medium</p> <p>Medium</p> | <p>None</p> <p>None</p> <p>None</p> |
| <p>1.4.1 To support sustainable land and water</p> | <ul style="list-style-type: none"> Watershed management policy guidelines and proceeding | <p>AIFP</p> | <p>Medium</p> | <p>Partial</p> |

* It is not always possible to determine a single lead Programme as often several Programmes will cooperate and contribute to a key action/output.

¹² Supported by sector specific objectives: 1.3.1 through 1.3.7.

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|---|---|--|---|---|
| <i>development through more effective and integrated utilization of agricultural, irrigation, drought, and watershed management systems</i> | <ul style="list-style-type: none"> • <i>Best practises on watershed management and technologies</i> • <i>Support to Line agencies in identification and preparation of BDP watershed management projects</i> • <i>Basin-wide irrigation efficiency improvement strategy</i> • <i>Institutional and managerial guidelines to improve irrigation efficiency</i> • <i>Assessment of irrigation efficiency in the basin</i> • <i>Assessment of groundwater potential for irrigation</i> • <i>Support to Line Agencies in identification and preparation of BDP priority irrigation development and rehabilitation projects</i> | <i>AIFP</i> <i>AIFP</i> <i>AIFP</i> <i>AIFP</i> <i>AIFP</i> <i>AIFP</i> | <i>Medium</i> <i>Medium</i> <i>Medium</i> <i>Medium</i> <i>High</i> <i>Low</i> <i>Medium</i> | <i>Partial</i> <i>Partial</i> <i>None</i> <i>Funded</i> <i>Partial</i> <i>None</i> <i>None</i> |
| 1.4.2 <i>To assist in the development of the basin's hydropower potential to ensure safeguarding of the environment and social interests while meeting the Basin's increasing need for energy</i> | <ul style="list-style-type: none"> • <i>Review and update assessment of hydropower potential in the Mekong Basin</i> • <i>Update basin-wide hydropower development strategy</i> • <i>Update hydropower database of planned and existing dams</i> • <i>Impact assessments of hydropower projects</i> • <i>Best practices to mitigate negative impacts of hydropower focussing on environmental and social impacts</i> | <i>Operations Division</i> <i>Operations Division</i> <i>Operations Division</i> <i>Operations Division</i> <i>Operations Division</i> | <i>Medium</i> <i>Medium</i> <i>High</i> <i>High</i> <i>High</i> | <i>None</i> <i>None</i> <i>Partial</i> <i>None</i> <i>None</i> |
| 1.4.3 <i>To achieve more active and efficient river transportation through increased freedom of navigation to increase social development, international trade and tourism opportunities</i> | <ul style="list-style-type: none"> • <i>Regional master plan for navigation</i> • <i>Legal Framework for Cross-border Navigation</i> • <i>Aids to Navigation Systems</i> • <i>Traffic safety management system</i> • <i>Improved risk and emergency management capacity as related to navigation</i> • <i>Navigation emergency management plan</i> • <i>Navigation pollution control system and environmental management tools and best practices for navigation and river works.</i> • <i>Mekong River Navigation Information Systems</i> • <i>Support to Line Agencies in identification and preparation of BDP priority navigation development projects</i> | <i>NAP</i> <i>NAP</i> <i>NAP</i> <i>NAP</i> <i>NAP</i> <i>NAP</i> <i>NAP</i> <i>NAP</i> <i>NAP</i> | <i>High</i> <i>High</i> <i>High</i> <i>High</i> <i>High</i> <i>High</i> <i>High</i> <i>Medium</i> <i>Medium</i> | <i>Partial</i> <i>Partial</i> <i>Partial</i> <i>Partial</i> <i>Partial</i> <i>None</i> <i>Partial</i> <i>Partial</i> <i>Partial</i> <i>Partial</i> |
| 1.4.4 <i>To build regional flood and drought management</i> | <ul style="list-style-type: none"> • <i>Flood probability maps</i> | <i>FMMP</i> | <i>High</i> | <i>Partial</i> |

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|---|--|---|---|---|
| <i>benefiting local economies</i> | <ul style="list-style-type: none"> Development of tools and best practices to reduce negative impacts of tourism on environment and social conditions Support to Line Agencies in identification and preparation of BDP priority sustainable tourism development projects | Operations Division Operations Division | Medium Medium | Partial None |
| 1.4.7 <i>To assess domestic water supply and sanitation options to ensure adequate protection and improvement of peoples' lives and the environment</i> | <ul style="list-style-type: none"> Report on domestic water supply and sanitation needs in the basin Water supply and sanitation development strategy Support to identification of BDP priority water supply and sanitation projects | Operations Division Operations Division Operations Division | Low Low Low | None None None |
| GOAL 2. To enhance effective regional cooperation | | | | |
| 2.1 <i>To increase MRC's function as a transparent and effective cooperation mechanism among Member States and develop and demonstrate enhanced linkages, compatibility and complementarities of partnerships with other regional organizations and initiatives such as GMS, the World Bank's MWRAP, ACMECS, ASEAN, etc., including sub-basin organizations</i> | <ul style="list-style-type: none"> Increased cooperation between MRC Member States Partnership agreements (MoUs) with development partners, International River Basin Organisations, and research institutions | ICCS ICCS | High High | Partial None |
| 2.2 <i>To complete, adopt and make applicable mechanisms, procedures and guidelines as required under the 1995 Mekong Agreement</i> | <ul style="list-style-type: none"> Technical guidelines for implementing the procedure for maintenance of flows on the mainstream Guidelines for transboundary environmental impact assessment Procedures/Guidelines for water quality Technical guideline for implementing the procedures for water quality Adopted procedures are implemented | WUP WUP WUP WUP WUP | High High High High High | Partial Partial Partial Partial Partial |
| 2.3 <i>To identify potential transboundary issues for negotiation, mediation and conflict prevention; and develop mediation and conflict management capacity</i> | <ul style="list-style-type: none"> Increased capacity for managing transboundary issues Development of awareness of tools and approaches to mediation and conflict management in natural resources issues Inventory of issues and areas with potential for conflicts in use and impacts related to water Development of mechanisms to address environmental issues | WUP WUP WUP WUP | High High High High | Partial Partial Partial Partial |
| 2.4 <i>To promote and improve dialogue and collaboration with China and Myanmar.</i> | <ul style="list-style-type: none"> Increased cooperation with upstream riparian countries through joint studies and projects | OCEO | High | Partial |

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|--|---|--|--|--|
| GOAL 3. To strengthen basin-wide environmental monitoring and impact assessment | | | | |
| 3.1 <i>To improve monitoring of the environmental condition of the Mekong River basin, focusing on water quantity and quality, ecological health and social impact</i> | <ul style="list-style-type: none"> • <i>Environmental water quality monitoring system</i> • <i>Social impact monitoring system</i> • <i>Mekong River ecological health monitoring system</i> • <i>Model of the Mekong Basin's aquatic ecosystems</i> | <i>EP</i> <i>EP</i> <i>EP</i> <i>EP</i> | <i>Medium</i> <i>High</i> <i>High</i> <i>Medium</i> | <i>Partial</i> <i>Partial</i> <i>Partial</i> <i>Partial</i> |
| 3.2 <i>To regularly report on the environmental condition of the Mekong River basin and disseminate this information widely</i> | <ul style="list-style-type: none"> • <i>Updated environmental status report</i> • <i>Updated State of the Basin Report</i> • <i>Updated Basin Report Cards on environmental and on social conditions</i> • <i>Guideline on best environmental management practises</i> | <i>EP</i> <i>EP</i> <i>EP</i> <i>EP</i> | <i>High</i> <i>High</i> <i>High</i> <i>Medium</i> | <i>Partial</i> <i>Partial</i> <i>Partial</i> <i>Partial</i> |
| 3.3 <i>To raise awareness of MRC, NMCs, and Line Agencies on transboundary and basin-wide environmental issues and to increase the capacity to address them</i> | <ul style="list-style-type: none"> • <i>Training modules on the use of EIA, SEA, and other tools</i> • <i>Environmental educational kits</i> • <i>Environmental awareness on transboundary issues</i> | <i>EP</i> <i>EP</i> <i>EP</i> | <i>Medium</i> <i>Medium</i> <i>High</i> | <i>Partial</i> <i>Partial</i> <i>Partial</i> |
| 3.4 <i>To ensure that development initiatives are planned and implemented with a view to minimize negative environmental impacts;</i> | <ul style="list-style-type: none"> • <i>To support line agencies in identification and preparation of BDP priority environmental management projects and protection</i> • <i>Upon request of Member Countries, screening of projects for environmental impacts(Technical support to project level SEA, independent review of EIA)</i> • <i>Promote and support the implementation of transboundary EIA</i> | <i>EP</i> <i>EP</i> <i>EP</i> | <i>High</i> <i>High</i> <i>High</i> | <i>None</i> <i>None</i> <i>None</i> |
| 3.5 <i>To ensure that social, economic and environmental concerns are incorporated into basin-wide water</i> | <ul style="list-style-type: none"> • <i>Strategic environmental impact assessment (SEA)</i> • <i>Environmental impact assessment (EIA)</i> | <i>EP</i> <i>EP</i> | <i>Medium</i> <i>Medium</i> | <i>Partial</i> <i>Partial</i> |

| Goals / objectives What is our purpose? What do we want to achieve? | MRC Key actions / outputs What are the goods and services to be delivered? | Lead Programme/ Section | Priorities (High, medium, low) | Funding status (Funded, partial, none) |
|---|--|------------------------------------|---|---|
| <i>resources development strategies</i> | <ul style="list-style-type: none"> <i>Promote stakeholder discussions to identify valuable assets in water resources which are to be protected</i> <i>Providing information and knowledge to decisions makers through the IBFM process on economic benefits and environmental and social impacts of development as related to changes in the flow regime.</i> <i>A set of spatial tools to enable planners to take into consideration environmental and social aspects of development plans and projects. Initially covering, wetlands, protected areas, vulnerability and dependence on aquatic resources.</i> | EP EP EP | High High High | Partial Partial Partial |
| GOAL 4. To strengthen the Integrated Water Resources Management capacity and knowledge base of the MRC bodies, NMCs and Line Agencies and other stakeholders | | | | |
| 4.1 <i>To improve management systems to allow MRC to operate as a highly effective, transparent and innovative International River Basin Organisation</i> | <ul style="list-style-type: none"> <i>Management policies, systems and manuals</i> | OCEO | Medium | None |
| 4.2 <i>To establish a technical coordination capacity for preparing and coordinating the implementation of MRC's Work Programme applying IWRM principles</i> | <ul style="list-style-type: none"> <i>Technical coordination advisor and efficient programme coordination mechanisms in place</i> <i>Annual work programmes</i> <i>Harmonized project progress reports</i> | OCEO OCEO OCEO | High High Medium | Partial Funded Partial |
| 4.3 <i>To enhance and maintain a common GIS-based information and knowledge management and dissemination system to support all MRC activities</i> | <ul style="list-style-type: none"> <i>Operational information system and information management and dissemination tools (GIS, Remote Sensing, portal) supporting all MRC programmes</i> <i>Information and datasets provided to outside users</i> | IKMP IKMP | High High | Partial Partial |
| 4.4 <i>To maintain partnerships with leading organizations, universities and civil society stakeholders for programme-focussed collaboration of common interest</i> | <ul style="list-style-type: none"> <i>Network of partners (universities, research institutes, civil society and other interested and relevant organizations) established</i> <i>Assessment of research priorities to support MRC's mission</i> | ICCS OCEO | High Medium | None Partial |
| 4.5 <i>To strengthen the human resources capacities of the MRC, NMCs and the Line Agencies</i> | <ul style="list-style-type: none"> <i>Capacity needs assessment reports</i> <i>Training modules and toolkits</i> | ICBP ICBP | High High | None None |

| Goals / objectives What is our purpose? What do we want to achieve? | MRC Key actions / outputs What are the goods and services to be delivered? | Lead Programme/ Section | Priorities (High, medium, low) | Funding status (Funded, partial, none) |
|---|---|------------------------------------|---|---|
| | <ul style="list-style-type: none"> • <i>Training sessions and study tours of JC, NMCs, MRCS staff and line agencies</i> | ICBP | High | None |
| 4.6 <i>To develop and update as new knowledge becomes available regional assessment tools (EIA, SEA, DSF, TB-EIA, RAM, SIA etc.) for all development projects to be implemented in the lower Mekong River basin</i> | <ul style="list-style-type: none"> • <i>Regional assessment tools available and promoted for use by NMCS and Line Agencies</i> • <i>Training/Orientation sessions in the use of assessment tools for NMCs and Line Agencies</i> | ICCS | High | Partial |
| | | ICCS | High | Partial |



Mekong River Commission

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

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

E-mail: mrcs@mrcmekong.org

Website: www.mrcmekong.org