



Mekong River Commission

MRC Work Programme 2008



FOREWORD


On behalf of the Mekong River Commission (MRC), I have the pleasure to present the MRC Work Programme for the year 2008 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 2008 describes the supporting outputs MRC will produce in the course 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 it started its implementation in 2007. The formulation of the Hydropower Programme is ongoing and subject to the availability of further funding. A Drought Management Programme document was also approved by the Council for fundraising purposes on the basis of the strategic framework. The Navigation Programme and the Flood Management and Mitigation Programme have gone through the start up phase and are now fully operational.

The basic structure of the Work Programme 2008 remains the same as in the last year, however, the presentation of this Work Programme is more output-oriented. The Work Programme 2008 starts with a general introduction to the MRC. The second part of the Work Programme presents the MRC integrated programme structure, with an overview of the programmes and their active agreements and funding source. The third part provides the reader with concise information on a given programme including what it is aiming to achieve and sets out its structure; it also provides the progress of the implementation per programme in 2007 with a chart on budget status and description on its output achievements. Planned outputs and activities per programme for the year 2008 are also described. In addition, a graphical illustration on the achieved outputs for 2007 and planned outputs for 2008 is provided in this part for those Programmes who have already been funded.

The Work Programme 2008 could not be successfully implemented without participation of the international donor community and the continued contributions from the MRC Member Countries. I should therefore like to take the opportunity of the publication of the MRC Work Programme to convey 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.



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Officer-in-Charge
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PREFACE

The Work Programme 2008 contains brief descriptions of MRC programmes and explains how they are contributing to the MRC Strategic Plan 2006-2010. It includes an activity plan for 2008 including a list of the active projects and their budget. The Work Programme presents the status of activities carried out in 2007 including graphic presentations of output achievement indicators. At the Twenty-sixth Joint Committee Meeting Programmes were requested to provide more information on progress made and difficulties encountered in their implementation. In line with 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.

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 (2007-2010) of the Basin Development Plan started in January 2007 with the preparation of the inception report.

In line with the MRC mission, the BDP Programme Phase 2 objective is to manage and develop the water resources of the Mekong River Basin in an integrated, sustainable and equitable manner for the mutual benefit of the riparian countries. The BDP Phase 2 will have one main component and three supporting components. The main component is designed to facilitate the formulation and implementation of a Basin Development Plan (BDP).

Environment Programme

Milestones for the programme were approved by the Joint Committee for the period 2004-2008 to allow for better monitoring. A revised programme document is currently under development to align the programme fully with the MRC Strategic Plan 2006 – 2010.

Water Quality and Ecological Health monitoring are continuing to be collected effectively in conjunction with line agencies. In particular, two new water quality parameters (chlorophyll-a and faecal coliforms) are now being collected for water quality monitoring, and a draft report the basin's ecological health is now ready. Environmental hot-spots and Environmental Considerations for Hydropower Development are emerging areas for future work under the programme.

The draft Framework for the Guideline for a Transboundary Environmental Assessment System (2005 milestone) was agreed to at a regional meeting in mid-2006, however at the Twenty-fourth Meeting of the Joint Committee one member country expressed concerns that the text of the Transboundary Environmental Assessment System (2005 milestone) 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 matter before it is considered by the Joint Committee.

A major difficulty encountered has been that Development Partner support for the programme has been lower than anticipated.

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). Subsequently, a programme has been formulated and, after receiving funding, is now gaining its full implementation capacity.

Integrated Capacity Building Programme

The Integrated Capacity Building programme developed an ambitious strategy in 2003 but could not really fulfil the expectations since then due to very limited funding and resources. The funding outlook for the coming years is however very promising. With Finnish funding, a second project of Junior Riparian Professionals will be trained starting from 2008. MRC together with AusAID will explore how Australia can contribute to an updated and improved programme. As a first step the programme document will be updated and priority training needs will be addressed.

In 2007 the budget of the Secretariat provided US\$ 50,000 to provide training opportunities to MRC staff and the gender mainstreaming project continued its activities to raise the gender issue at all levels. Both initiatives will continue in 2008 and be expanded towards National Mekong Committees.

Water Utilisation Programme

In 2006, the MRC Council approved an extension of WUP for the year 2007. In 2007, WUP provided financial support to the activities of all NMCs with regard to the capacity building, information dissemination, exchange visits among NMCs, and laboratory equipment for water quality. With regard to the Decision Support Framework (DSF), WUP continued to provide financial support to the DSF application for National Case Studies and training programmes for NMCs. In addition, WUP in collaboration with the Environment Programme provided the technical support to NMCs for the formulation of Technical Guidelines to implement the Procedures for Maintenance of Flows on the Mainstream (PMFM) and the Procedures for Water Quality (PWQ). Furthermore, WUP also assisted the World Bank and NMCs for the preparation of Mekong Integrated Water Resources Management Support Project (M-IWRMSP) or GEF 2 Project Formulation.

In addition, the MRC Joint Committee also instructed that the TOR of the WUP Team Leader should be revised to fit with the new assignment which focuses on coordination and facilitation for GEF2 project formulation, coordination and facilitation for Technical Review Group (TRG) to develop the Technical Guidelines to implement the Procedures for the Maintenance of Flows on the Mainstream (PMFM) and the Procedures for Water Quality (PWQ), producing a plan to handover WUP activities to relevant MRC Programmes, preparing a plan to work on pending issues of approved Procedures, a WUP Completion Report and a Final Programme Completion Workshop.

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 functioned as planned. The Fifth Annual Flood Forum was organised and implemented in 17-18 May 2007 under the theme Improving Data Inputs Towards Medium-term Flood Forecasting and Warning System in the Lower Mekong River Basin. The second phase of project on Capacity Building for Preparedness, Planning and Response through the Use of Flood Information Products in the Lower Mekong Basin has been completed in three countries (Vietnam, Lao PDR and Cambodia)

Drought Management Programme

Droughts are not new to the Lower Mekong Basin, and measures to mitigate the negative socio-economic impacts have been frequently considered under the work of the MRC and its predecessor bodies. The recent attention of the MRC originated with the regional drought of 2004 to 2005 where unusually low flows in the Mekong River and seasonal deficiencies in regional rainfall led to severe agricultural losses in North-east Thailand and Cambodia and to critical levels of saline intrusion in the Delta. These impacts resulted in calls for national and regional action at the highest political levels, including within the MRC. In March 2005 the MRC Joint Committee requested the development of a Drought Management Programme to be established within the MRC.

The formulation of the Drought Management Programme is seen as a direct outcome of the work initiated under the WUP. It was developed through a process of consultations between international and riparian consultants, MRCS staff, and representatives of the MRC Member Countries, during the period May 2006 to March 2007. Funding is being sought to start the Programme.

Agriculture, Irrigation and Forestry Programme

The first phase of AIFP 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 four on-going projects within the programme: the Watershed Management Project (WSMP) funded by the Government of Germany; the project on Demonstration of Multi-functionality of Paddy Fields (DMPF) funded by the Government of Japan; the project on Improvement of Irrigation Efficiency on Paddy Fields (IIEPF) funded by the Government of Japan; and the Challenge Program on Water and Food (CPWF) implemented by the Consultative Group on International Agricultural Research (CGIAR).

Navigation Programme

The NAP has gone through a preparatory phase in 2005 and started its full implementation in 2006. The NAP's objective is "to promote freedom of navigation and increase 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 environment". The Programme addresses issues as diverse as regional transport planning and the comparative advantages of waterborne transport, a new legal framework for Mekong navigation, measures to strengthen safety and environmental protection, improved information and coordination systems and institutional development through capacity and partnership building within the navigation sector. In addition, the programme seeks to develop national and regional management capacities; not only to ensure that it is implemented, but also to strengthen the voice and role of the navigation sector in national and regional development planning. Broadly speaking, the NAP focuses on three main cornerstones: navigation safety and efficiency, legal framework for cross-border transport (trade facilitation), and environmental sustainability.

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's role in the regional hydropower development.

Fisheries Programme

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. 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.

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. 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. Work Agreements are developed with counterpart staff at the start of the year, which outline the work content, outputs and respective responsibilities. Capacity development, formal and informal training, career support and gender awareness are inherent elements of the programme. The programme places a high priority on reporting its work in English and riparian languages, in many different formats (technical and non-technical publications, postings on web sites, films, books, brochures and posters).

Tourism Programme

This programme is still to be developed. Initial activities with regard to waterborne tourism have been included in the Navigation Programme. A baseline study on environmental impact of tourism was also undertaken under the Environment Programme.

Contact Details

The Work Programme 2008 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:

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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
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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Figure 1: Map of the Mekong River Basin

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 countries 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. Further details of the cooperation and its implementation framework are set out in the ensuing articles of the 1995 Mekong Agreement.

1.3 Structure

The MRC enjoys the status of an international body. It has signed several agreements and holds obligations with its donors and the international community. The Commission also has formal agreements for cooperation with a range of regional and international organisations. 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 (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 consultations with the donor community are undertaken through the annual Donor Consultative Group meeting and other regular meetings.

Figure 2: MRC Organisational Structure

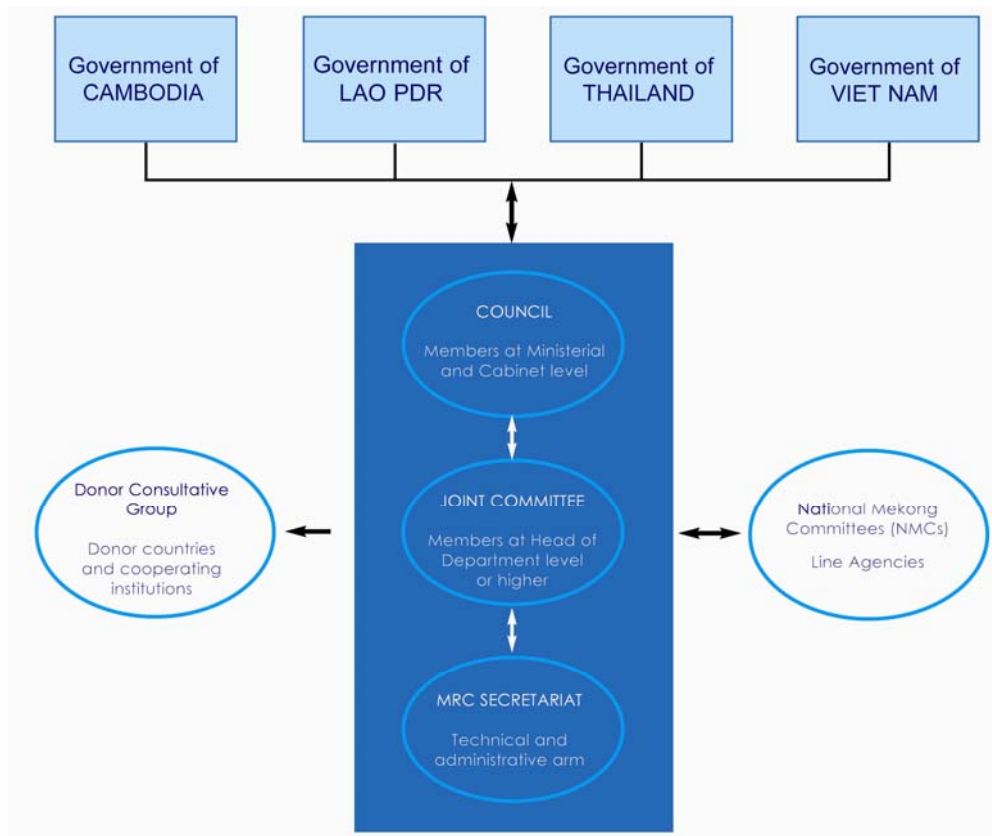
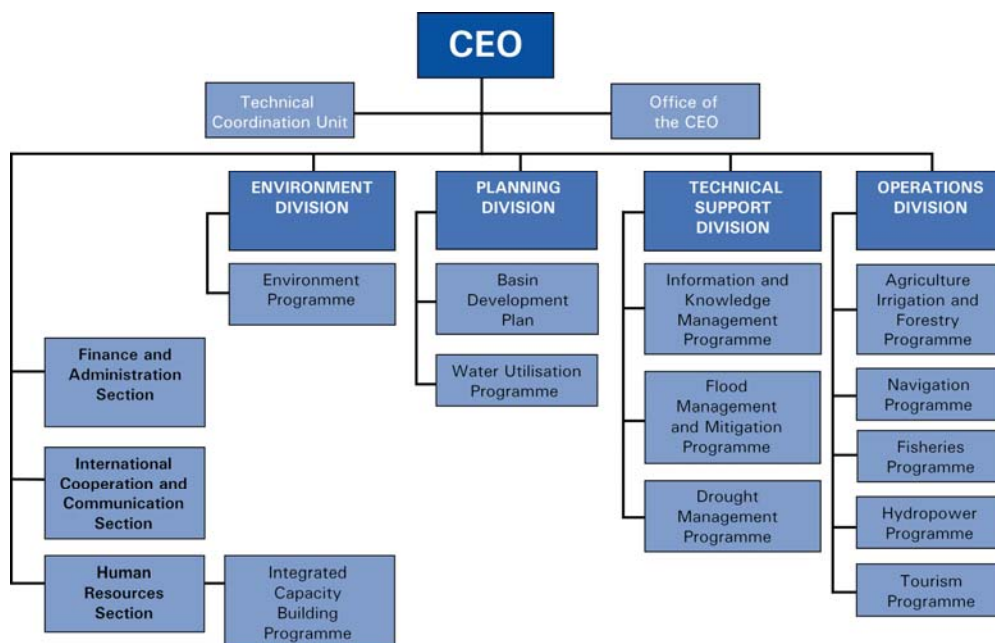


Figure 3: MRC Secretariat Organisational Structure



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. The natural capacity of the Mekong river system to supply goods and services may be pushed beyond sustainability limits, as currently experienced in localised developments. As a consequence and in addition to sustaining 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 key element 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 take account environmental impacts and planning must take place jointly based on regional cooperation, as this 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 approximately 57 million live in rural areas. These are mainly 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 and planning 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 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 and the subsistence livelihoods dependent on them.

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 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.

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 activities throughout the Mekong River System would 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 both in terms of flood retention and fish ecology. 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, however, 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, as are the benefits its people derive 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 the 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.

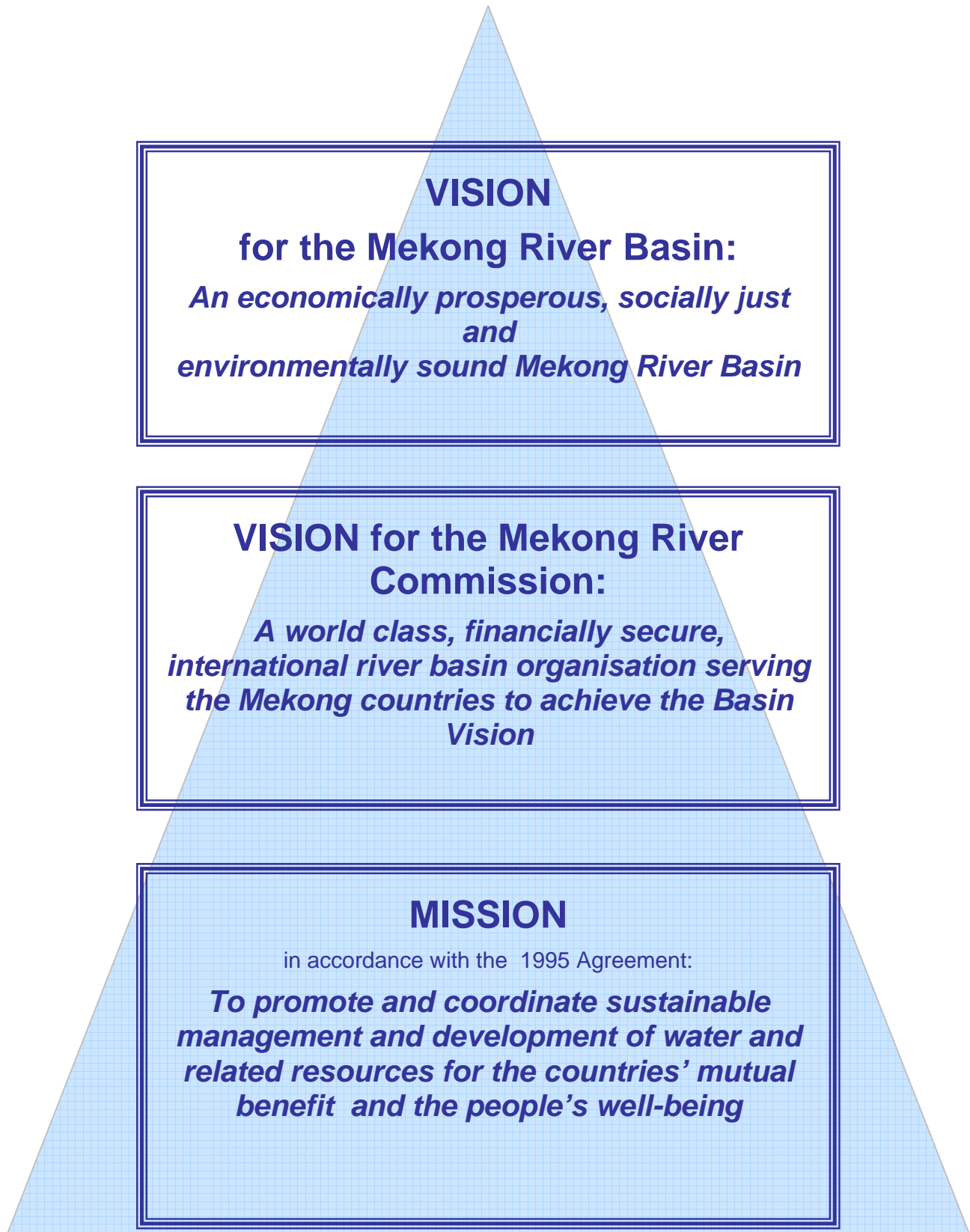
The use of water and related resources in one country can have negative effects for other countries, for example in terms of adverse effects on navigation, fisheries, scarcity of irrigation water, and seawater intrusion. Prevention and resolution of potential conflicts arising from the increasing pressure 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 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 2008, the MRC enters into the second year of its five-year strategic planning cycle. Within the Strategic Plan 2006 – 2010, the fundamental strategic direction of MRC, its vision statement, remained. The Strategic Plan 2006-2010, 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 4: MRC Vision



1.6 Goals and Objectives¹

The overall Five Year goal of the MRC is: “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;
 - 1.4.5 To maintain productive Mekong fisheries and enhance aquaculture of indigenous species for increased food security and economic output;

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.

- 1.4.6 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 Countries 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 is also dependent on funds made available by donors.

1.7 Criteria for Prioritising MRC Activities

All MRC programme activities contribute to the goals and strategic objectives of the MRC Strategic Plan. They also, 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 directions being applied as appropriate and relevant.

Strategic directions for IWRM at the basin scale³

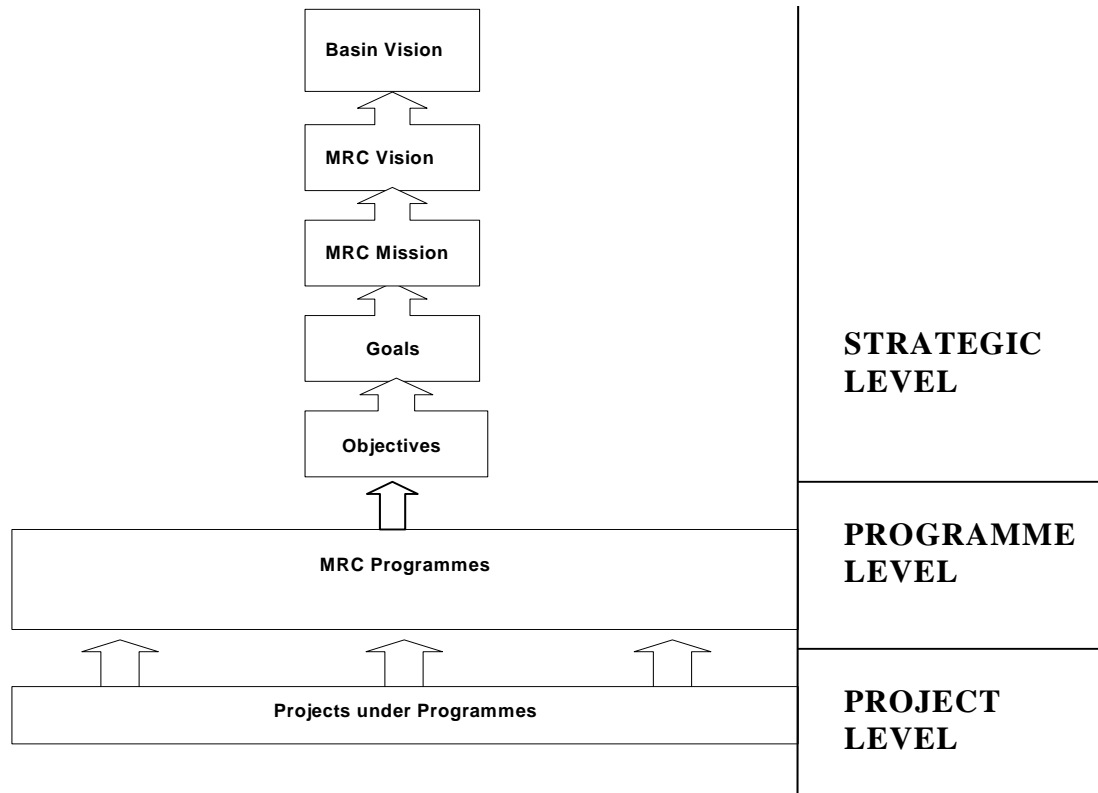
- Economic development and poverty alleviation: To promote economic growth through use and development of joint water resources in a manner that significantly alleviates poverty.
- Environmental protection: To protect the environment, natural resources, aquatic life and conditions and ecological balance 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 5: Links between the Basin Vision, MRC Vision and Programmes Development



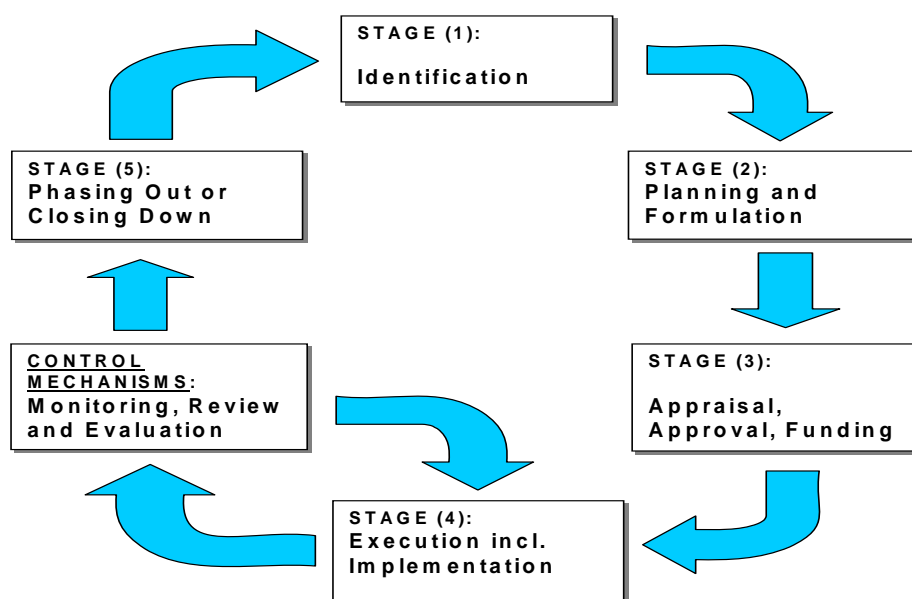
Progress towards the achievement of the goals is accomplished through achieving objectives. Progress towards objectives is monitored through indicators, which measure achievements and results made through various activities.

Each MRC programme is composed of a portfolio of projects which often 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 6: MRC Programme Management Cycle



Within the Strategic Plan 2006-2010, the MRCS aims to provide more 'output-orientation' to the MRC programmes. This is a first step to a full results-oriented monitoring and evaluation system to be established in 2008/2009. 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 in the programme reporting section, which includes narrative descriptions of achieved outputs for 2007 and planned outputs and activities for 2008 together with the Gantt Charts for those Programmes who have been funded. The Gantt Charts are to provide an overview of

programme achievements against the outputs set out in the programme documents and a list of main planned outputs and activities for 2008.

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.

2 The MRC Integrated Programme

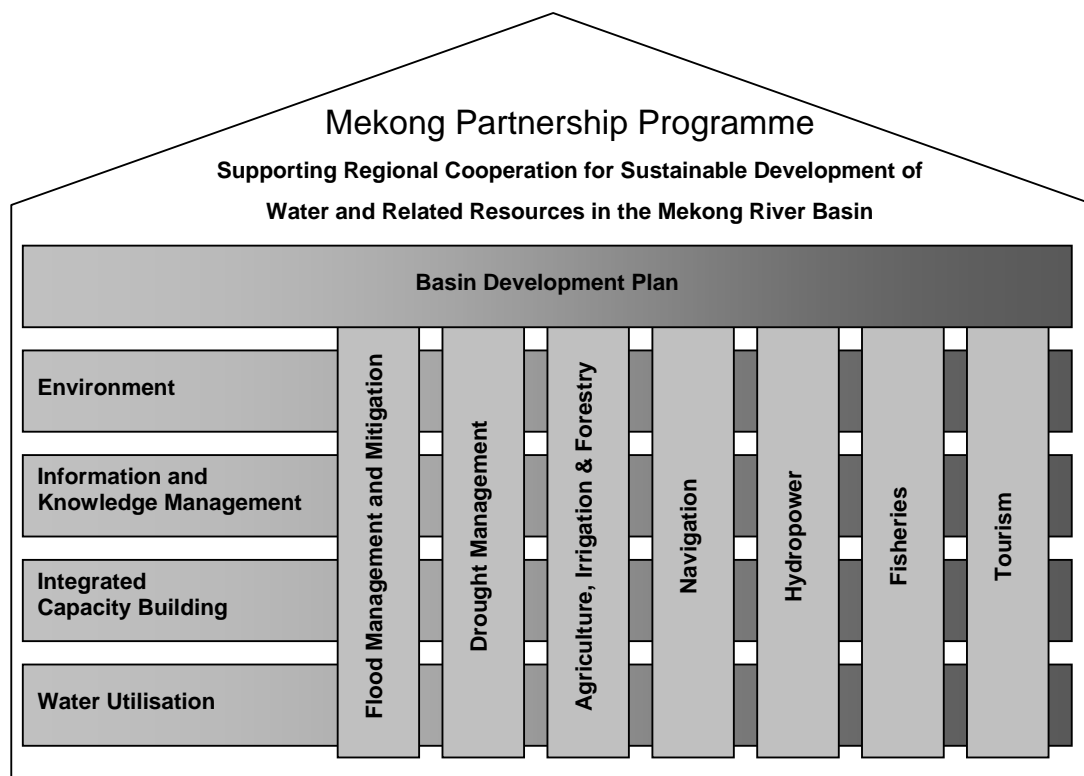
2.1 Introduction

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 2008.

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

Figure 7: MRC Programme Structure⁸



⁸ Details of MRC Programmes are developed through national and regional consultations with NMCs, and approved by the Council

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 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. 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 2008 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\$ 168.90 million. The total funding either signed or committed stands at US\$ 92.92 million. The total funding needs thus are US\$ 75.98 million.

MRC Programmes, Programme Costs and Funding - Multi-Year

Programme	Programme Components	Total Budget (US\$ 1,000)	Funding Needs (US\$ 1,000)	Funded/Committed (US\$ 1,000)
Basin Development Plan	BDP Phase 2 (2006-2010)	10,000	1,300	8,700
	Rolling IWRM based Basin Development Plan	5,200	700	4,500
	Knowledge Base and Assessment Tools	2,600	300	2,300
	Capacity Building for IWRM	2,200	300	1,900
Environment Programme	Five Years (2006-2010)	15,000	8,580	6,420
	Programme Management	2,310	0	2310
	Environmental Monitoring and Assessment	2,980	1,510	1,470
	Environmental Decision Support	2,940	2,180	760
	People and Aquatic Ecosystems	2,860	1,910	950
	Environmental Knowledge	1,410	1,310	100
	Environmental Flow Management	2,500	1,670	830
Information and Knowledge Management Programme	Five Years (2006-2010)	26,500	15,000	11,500
	Programme Management	1,900	600	1,300
	Hydro-meteorological data	6,100	1,700	4,400
	GIS & databases	7,700	6,000	1,700
	Modeling	7,400	3,700	3,700
	Communication and Knowledge Management	3,400	3,000	400
Integrated Capacity Building Programme	Five Years (to be developed: 2006-2010)	6,600	5,300	1,300
	Integrated Training Programme (Management)	4,000	4,000	0
	Junior Riparian Professional Scheme	1,800	800	1,000
	Gender Mainstreaming in IWRM	800	500	300
Water Utilization Programme	Eight Years (2000-2008)	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)	23,400	0	23,400
	Regional FMM Centre	11,700	0	11,700
	Structural Measures & Flood Proofing	4,300	0	4,300
	Transboundary Flood Issues	1,600	0	1,600
	Flood Emergency Management and Strengthening *	2,500	0	2,500
	Land Management *	3,300	0	3,300
Drought Management Programme	Five Years (2006-2010)	13,600	13,600	0
	Drought Forecasting	2,500	2,500	0
	Drought Impact Assessment	2,900	2,900	0
	Drought Management Policy	1,200	1,200	0
	Drought Preparedness and Mitigation Measures	5,200	5,200	0
	Programme Management	1,800	1,800	0
Agriculture Irrigation and Forestry Programme	Five Years (2006-2010)	10,400	2,100	8,300
	Watershed Management (TA) *	5,000	0	5,000
	Demonstration of Multi-functionality of Paddy Fields	1,300	0	1,300
	Improvement of Irrigation Efficiency on Paddy Fields	2,000	1,000	1,000
	Research Coordination in Challenge Programme	1,200	200	1,000
	Formulation of a new AIFP	100	100	0
	Technical Cooperation to KfW on Sustainable WM	800	800	0
Navigation Programme	Six Years (2006-2010)	21,600	15,300	6,300
	Socio-economic Analysis and Planning	3,200	1,900	1,300
	Legal Framework for Cross-Border Navigation	1,700	1,400	300
	Traffic Safety and Environmental Sustainability	6,700	3,100	3,600
	Information, Promotion and Coordination	4,000	3,400	600
	Institutional Development	6,000	5,500	500
Hydropower Programme	Five Years (2006-2010)	5,000	3,100	1,900
Fisheries Programme	Five Years (2006-2010)	13,100	6,300	6,800
	Programme management and communication	5,100	2,600	2,500
	Fisheries management and governance	2,700	1,300	1,400
	Fisheries ecology, valuation and mitigation	3,500	900	2,600
	Aquaculture of indigenous Mekong fish species	1,800	1,500	300
Tourism Programme	Five Years (2006-2010)	3,000	3,000	0
MRC Trust Fund	Five Years (2006-2010)	3,000	2,400	600
TOTAL		168,900	75,980	92,920

* Supported through Technical Assistance from Germany

3. The MRC Programmes

This section provides a brief account of each programme on the progress of the activities in 2007 and the work plan activities in 2008. A comprehensive progress report for each programme can be found in the individual programme's periodical full progress reports. Gantt charts are also presented in this section to provide an overview on the main achieved outputs for 2007 and major planned activities and outputs for 2008.

To be consistent with the Work Programme for 2007, the structure adopted in this section follows the structure of the Work Programme for 2007, and therefore programmes are presented in an integrated programme structure. The planned activities reported under this section can be found in more detail in the individual programme work plan for 2008 available for each programme. This section provides the following information for each programme.

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 partners network.
- Main outputs: main outputs expected from the programme.
- List of projects: active projects and projects in preparation under the programme.

2. Progress for 2007

- Funding status graph, providing the reader with funding and expenditures information for 2007 and an inclusion of the planned expenditure for 2008;
- Planned outputs and achieved outputs for 2007;
- Significant problems encountered and corrective actions taken;
- Donor review or appraisals carried out in 2007;
- Relevant JC and Council decisions taken in 2007.

3. Workplan for 2008

- Planned outputs and activities for 2008: including the prerequisites and risks for output achievement; and the projects in preparation.
- Planned donor reviews or appraisals in 2008
- Gantt Charts, presenting the progress made in achievement of the main outputs as selected by programmes for the year 2007 and for the programmes' planned achievements for 2008;

3.1 Basin Development Plan (BDP)

3.1.1 Programme Overview

Purpose

Over the next decades, the Mekong region will undergo great social, economic and environmental change. Demands for food, water supply and energy will increase as a result of economic growth, industrialization and urbanization. MRC has a coordination and supporting role to ensure that the development of the Mekong Basin's water and related resources contribute to sustainable economic development. At the same time, poverty alleviation remains the main goal of MRC's support to water resources development in the Mekong Basin. Therefore, national poverty reduction strategies and water-related poverty alleviation measures need to be supported and promoted under the BDP Programme.

The development objective of the BDP Programme is based on 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 development 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 basin countries"

Approach

The MRC adopted an IWRM-based approach in its Strategic Plan 2006-2010. The approach aims to balance the promotion and facilitation of the further development of some of the basin's water and related resources with the maintenance of the basin's ability to sustain livelihoods and environmental values. This will require a basin-wide planning process and a strong partnership of the basin's stakeholders, which can effectively link development and natural resource conservation. The BDP Programme provides this planning process.

In the process, the BDP Programme makes an important contribution to the achievement of all four strategic goals in MRC's strategic plan. In addition, the Programme will contribute to: (i) the coordination and programming of other MRC Programmes towards the achievement of MRC strategic goals and (ii) the visible engagement of the MRC in

transboundary governance, based on IWRM, through the assessment of the cumulative impact of existing and planned water resources developments and the screening of individual projects.

Strategy

The BDP Phase 2 (2007-2010) is designed to institutionalize the participatory planning process established during BDP Phase 1, and further develop the assessment tools and IWRM capacity, to prepare a rolling IWRM-based Basin Development Plan in support of sustainable development in the Mekong Basin, as envisioned in the 1995 Agreement. The plan will be implemented by the member countries and their development partners with facilitation, coordination and other support of the MRC.

All significant water and related resources developments will be brought in the planning process. The formulation of the IWRM-based Basin Development Plan will employ appropriate knowledge and tools that will ensure the plan achieves benefits for all countries, and the projects comply with sound environmental and socioeconomic principles. This will offer a platform for MRC to visibly engage in transboundary assessment, and help ensure that the triple bottom line is maintained and transboundary conflicts prevented.

The plan comprises three elements that will be prepared with support from the NMCs, national line agencies, local agencies and other MRC Programmes. Given the people's high reliance on the river's natural system, the planning process requires a strong partnership of the basin's stakeholders. The three Plan elements can be summarized as follows:

- *Basin-wide Development Scenarios*, which assess the potential for the further development of some of the water and related resources in the different parts of the Mekong Basin. The results will guide the formulation of the IWRM-based basin strategy and the project portfolio.
- *An IWRM-based Basin Strategy*, which provides a long-term view of how the Mekong Basin will be developed, and guides the implementation of useful IWRM principles and practices at the basin, national and sub-basin levels. The strategy will assist the line agencies in the preparation of plans and projects that are sensitive to resource protection issues.
- *A Project Portfolio* of water resources development projects and supporting non-structural projects that would continue to develop some of the Mekong Basin's water and related resources for the socio-economic development of the Member Countries, as envisioned in the 1995 Agreement.

Structure

BDP Phase 2 has four components, in line with the immediate objectives identified in the Programme Document, approved by the JC in 2006.

Component 1: Programme Management and Communication.

Besides programme management, this component will support the communication, coordination, and information exchange with the various stakeholder groups, including MRC Programmes, NMCs, national line agencies, river basin organizations, civil society, NGOs, the private sector, the development banks, and others.

Component 2: Rolling IWRM-based Basin Development Plan.

This component will prepare the basin-wide development scenarios, the IWRM-based basin strategy, and the project portfolio. The component will also address gaps in sector knowledge and support the next steps in sub-basin planning.

Component 3: Knowledge Base and Assessment Tools.

This component will further upgrade the existing knowledge base and selected modelling and assessment tools, such as the DSF and the IBFM process for the analysis of basin-wide development scenarios, and the checklists for the screening of individual projects. It will also continue to build capacity for the maintenance and use of the tools by the NMCs and selected national and sub-basin agencies.

Component 4: IWRM-based Planning Capacity.

This component will build capacity for IWRM planning, including scenario formulation and analysis, project identification and preparation, the linkage and harmonization of planning across sectors and aerial jurisdictions, and trade-off facilitation and dispute prevention. The component will also explore the option to build IWRM training capacity in one or more riparian (training) institutions.

Implementation arrangements

National BDP units have been established in each member country under the NMCs. They are a functional part of the BDP Phase 2 team. The collaboration between the BDP Phase 2 team, the national line agencies, and other MRC Programmes will be further strengthened, since they will be responsible for the implementation of the IWRM-based Basin Development Plan. Strong links will be maintained with regional and national initiatives of development banks (World Bank, ADB) and other international organizations, including NGOs. The periodic dialogue with UNESCAP, ASEAN, and GWP will be maintained. There will also be scope for coordination with the upstream riparian countries, starting with a training workshop on the formulation and evaluation of development scenarios, using MRC's modelling and assessment tools.

Main Outputs

BDP Phase 2 will produce 16 outputs that collectively would achieve the immediate objective. The main outputs are the following:

1. A rolling IWRM-based Basin Development Plan that comprises of selected development scenarios, and IWRM-based basin strategy, and the project portfolio of structural (investment) and non-structural projects, which are acceptable to various stakeholders to guide and facilitate the equitable utilization of some of the water resources in the Mekong Basin to alleviate poverty and support economic and social development in the Member Countries.
2. A project database, selected modelling and assessment tools, a published Planning Atlas, and an updated State-of-Basin report, to be used by MRC Programmes, NMCs, national line agencies, sub-basin/provincial agencies and development partner for the management and development of water resources.
3. Training modules and planning guides for IWRM-based planning, and improved capacity at the regional, national and sub-basin levels for mainstreaming IWRM principles in policies, plans and projects.

List of agreements/projects

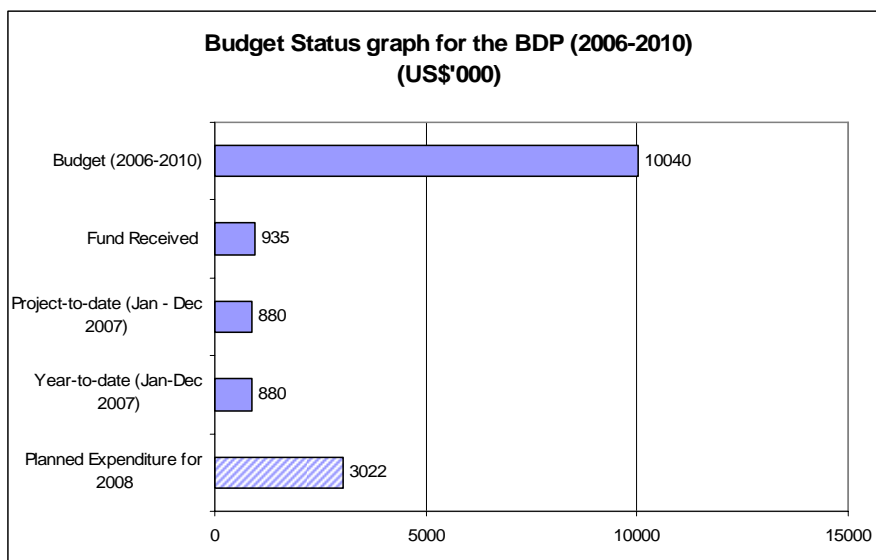
(US\$ 1,000)

Project title	Start date	End date	Budget	Balance 2007 (*)	Donor(s)
Active projects					
Danish contribution to the Basin Development Plan (2006-2010)	12/2006	12/2010	7,720	6,840	Denmark
SIDA contribution to the Basin Development Plan Phase 2	01/2007	12/2009	1,000	950	Sweden
Japan contribution to Basin Planning	06/2006	05/2008	In kind from Japan Water Agency - JWA, dispatched an expert	-	Japan

(*) Balance as per end November 2007

3.1.2 Progress of BDP in 2007

The following graph provides an overview of the budget status of the BDP Phase 2. The planned output achievement for the Programme and the output achieved for the year 2007 are provided in the Gantt chart as supporting information to this Work Programme.



Planned and achieved outputs for 2007 **

The year 2007 was a transition period between the closure of BDP Phase 1 and the beginning of BDP Phase 2. The process and results of BDP Phase 1 were reviewed and an inception report prepared.

The Inception Report (IR), which includes a PIP for the period through 2010, has benefited from the comments and suggestions from MRC Programmes and national consultations with NMCs and representatives of line agencies, research institutions and other stakeholders. A regional consultation meeting held at the MRCS in December 2007 endorsed the revised IR ad referendum (i.e. subject for incorporation of comments). It will be sent to countries for endorsement before sharing at the stakeholder consultation.

The following outputs were produced in support of the inception report or priority activities identified in consultation with the NMCs.

Component 1: Programme Management and Communication.

The BDP Phase 1 management processes and procedures were reviewed and strengthened where necessary. A BDP participation and communication plan is being prepared. A concept paper has been prepared for the consideration of the NMCs for the implementation of a broad stakeholder forum on the BDP Programme in the beginning of 2008.

Component 2: Rolling IWRM-based Basin Development Plan

A concept note of the three elements of the plan has usefully contributed to a shared understanding among key regional stakeholders of the main aim of BDP Phase 2: the formulation of the IWRM-based Basin Development Plan. The gaps in the sectoral knowledge base for basin

** The Programme structure is revised in the Inception report dated 30 November 2007. Therefore former output and activity numbers are excluded to avoid confusion when compared to 2008 workplan.

planning are identified and work packages for other MRC Programmes prepared. The existing ten sub-area studies were reviewed and draft terms of reference prepared for the implementation of the next steps in sub-basin planning. Terms of References are being considered by the NMCs for working groups that would strengthen the role of key stakeholders in the formulation and evaluation of basin-wide development scenarios and the IWRM-based basin strategy, and promote consensus and acceptance of the outcomes in the Member Countries. A discussion paper is being prepared that defines the requirements of development scenarios for BDP purposes and the ways and means for their formulation and analysis. A plan is prepared for the consolidation of the existing longlist of projects and the promotion of the shortlisted projects.

Component 3: Knowledge Base and Assessment Tools

Relevant documents and tools were reviewed. A discussion paper is being prepared on the assessment framework for basin planning in BDP Phase 2.

Component 4: IWRM-based Planning Capacity

The training needs assessment is in progress and start has been made with the preparation of the priority training activities

Significant problems encountered and corrective actions taken

During the first half of 2007, the BDP Programme has operated at a reduced level of activity, due to the need to recruit an entirely new regional BDP team at the MRCS. The completion of the inception report by the new team has involved intensive discussions on the approach of BDP Phase 2 within MRCS and the Member Countries.

Donor reviews or appraisals

No donor review was conducted in 2007 although the first review of was planned for the second half of 2007. The reason is the delayed Inception stage and low level of activity during most of 2007.

Relevant JC and Council decisions

The final draft IR will be submitted to JC members by circulation letter, for approval.

3.1.3 *BDP Workplan for 2008*

In the beginning of 2008, the Inception Report of BDP Phase 2 will be discussed in a wider basin development context, with a view to enhancing the engagement of various stakeholder groups in the BDP planning process. Subsequently, the Inception report will be shared with the BDP donors.

Component 1: Programme Management and Communication.

- BDP 1.1.1 In addition to the common programme management documents, a BDP stakeholder analysis will be conducted and the existing BDP guidelines for stakeholder participation updated and discussed in a workshop. The resulting participation and communication plan will be discussed and agreed to guide the engagement of stakeholders in the various activities under the other three Programme components.
- BDP 1.1.3 A stakeholder consultation on BDP Phase 2 and Inception report will be organized in early 2008.

Component 2: Rolling IWRM- based Basin Development Plan

- BDP 2.1.1 The sub-area reports of 2004 will be updated to include most of the additional information needed for the formulation of basin-wide development scenarios, based on analysis of the strategic development options and the description of the related water resources development projects in each sub-area. In parallel, the gaps in the sector knowledge will be addressed by the appropriate MRC Programmes in consultation with national agencies.
- BDP 2.1.2 In the beginning of 2008, a regional working group will be established that will strengthen the role of key stakeholders in the formulation and evaluation of basin-wide development scenarios and promote consensus and acceptance of the outcomes in the member countries. In 2008, this would result in the acceptance by the countries of the formulated development scenarios that represent various levels of water and related resources development. A start will be made with the assessment of the benefits and costs of the formulated scenarios to the countries during the next few decades.
- BDP 2.2.1 The above working group will also support the preparation of a first draft of the IWRM-based basin strategy, based on the existing strategic directions for IWRM in the LMB and other documents. The strategy must usefully guide the implementation of IWRM principles and practices at the basin, national and sub-basin levels. In 2009 when the assessments of the formulated development scenarios are available, the strategy will be enhanced with strategic directions for the long-term development of water and related resources in the LMB.
- BDP 2.3.1 The project database will be improved to include the relevant data and information of all significant projects with potential transboundary implications, including any newly identified projects through the above sector and sub-area activities.
- BDP 2.4.1 The project classification system will be updated and tuned to support the BDP Phase 2 planning process. Existing and new priority projects will be discussed with the appropriate national agencies and MRC Programmes. This will result in 2008 in an indicative project portfolio.

Some projects will be selected for further development and promotion.

- BDP 2.5.1 A substantive outline of the rolling IWRM-based Basin Development Plan will be prepared in the context of the Mekong Partnership Programme, with a view to promoting consensus among MRC Programmes, NMCs, national line agencies and other stakeholders on the purpose, scope and implementation modalities of the plan, which will provide further direction to the preparation of the three elements of the plan.

Component 3: Knowledge Base and Assessment Tools

- BDP 3.1.2 A draft Planning Atlas will be completed.
- BDP 3.2.1 A technical note on the assessment framework for basin planning will be completed and agreed with the key stakeholders. The BDP Programme will support the improvement of the DSF and the IBFM process by IKMP and EP, respectively.

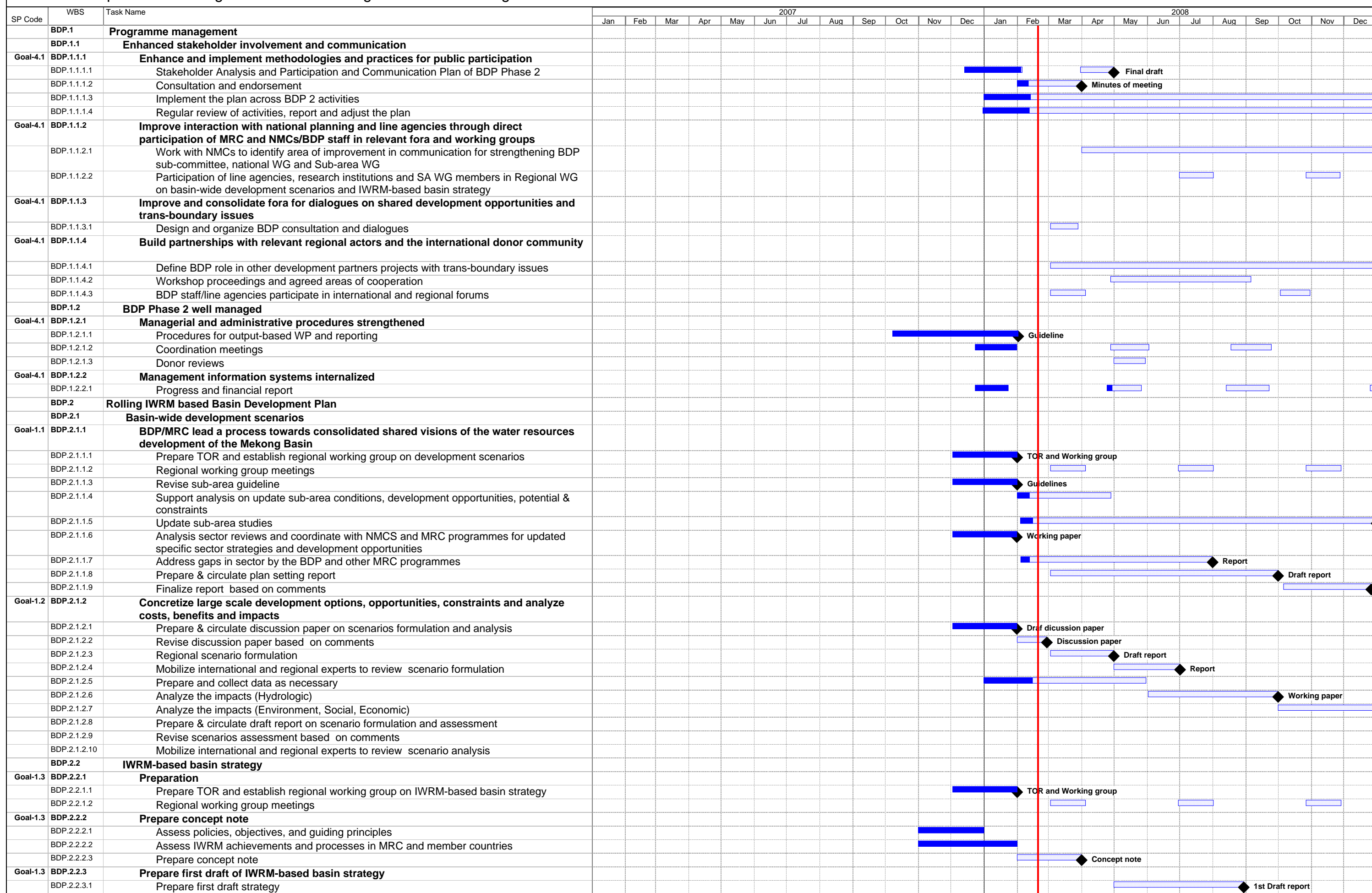
Component 4: IWRM-based Planning Capacity

- BDP 4.2-4.4 The training needs assessment will be completed and priority training workshops implemented on subjects such as: 1) scenario formulation and analysis 2) use of assessment framework and tools in BDP; 3) IWRM principles and approaches in planning including the preparation of water and related resources strategies and the identification of the associated projects. Other training programmes will be planned.
- BDP 4.4.2 Building on conducted training needs assessment, the BDP team, in consultation with the ICBP and the NMCs, will assess the feasibility of building IWRM training capacity in a few existing institutes in the Lower Mekong Basin. Depending on the outcome, a start will be made with providing support to selected institutes in the development of training capacity and material needed for the implementation of specific training programmes related to IWRM planning, which would be tuned to the needs of the specific target groups in the Member Countries.

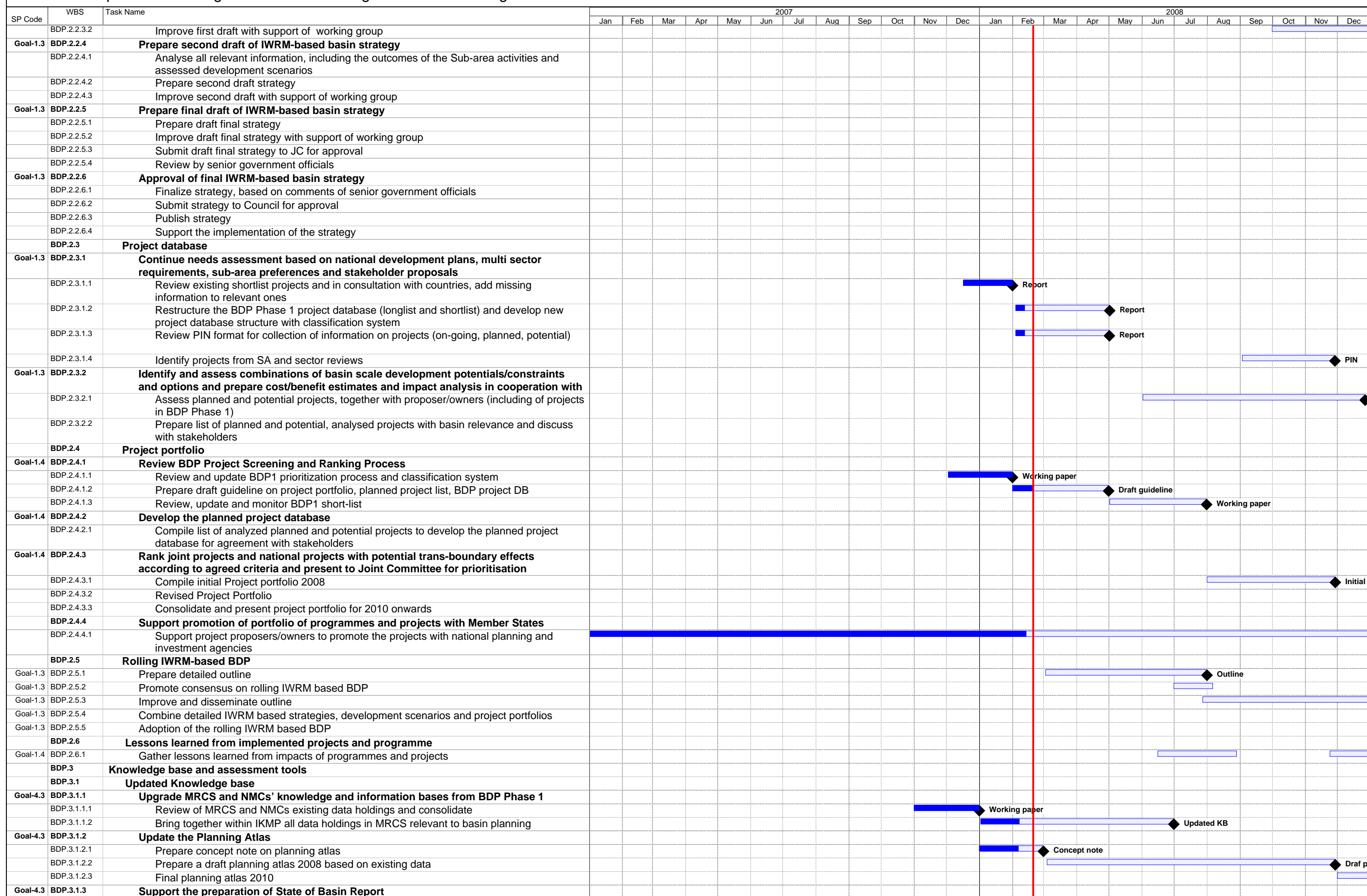
Donor reviews or appraisals planned in 2008

A donor review of the Programme implementation, as well as initial outputs of the BDP Phase 2, will likely take place mid 2008.

Basin Development Plan Programme Phase 2-Progress and Work Programme 2007-2008



Basin Development Plan Programme Phase 2-Progress and Work Programme 2007-2008



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. Consequently MRC Countries have enshrined protection of the environment and ecological balance in the 1995 Mekong Agreement.

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 aims to assist the countries to fulfil the articles in the 1995 Agreement that relate to the protection of the environment (Article 3) and prevention and cessation of harmful effects (Article 7). The programme also supports the other programmes through cross cutting initiatives such as the 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 the programme 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 organisational structure of MRC Secretariat. In contrast to previous and more technically oriented environmental projects, the central focus of the programme is people in a poverty reduction perspective.

Structure

The programme has six components that reflect MRC's mission of promoting and coordinating sustainable management and development of water and related resources.

Component 1: Programme Management

Besides managing the operation of the Programme to comply with set schedules, this administrative component supports the communication, coordination and information exchange with various stakeholder groups, and provides programme monitoring and reporting and coordination with other MRC programmes.

Component 2: Environmental Monitoring.

This component focuses on ensuring that monitoring data on water quality, ecological health and the socio-economic conditions of rural basin households is collected, analysed and reported in a timely manner at regular intervals.

A sediment characteristics and transport monitoring programme is expected to be developed jointly with IKMP.

Component 3: 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.

A particular new activity being developed is environmental considerations for hydropower development.

Component 4: 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 provides such information to be used by the BDP and other regional (such as ADB-GMS) and national planning agencies.

Component 5: Environmental Knowledge.

An adequate understanding of how environmental issues in the different parts of the basin are linked and depend on each other can lead to the formulation of better development initiatives with fewer unforeseen

negative environmental consequences. The Environmental Knowledge component aims to 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 6: Environmental Flows 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 conducted with BDP's Integrated Basin Flow Management (IBFM) 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.

The emerging issue Climate Change and vulnerability will be addressed under Environmental Flows Management.

Implementation arrangements

The Environment Programme ensures the progressive incorporation of information, and promotes 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. Each NMC has a national Environment Programme Coordinator who is the focal point for communication and coordination. An Environment Programme Management Group comprising the national environmental coordinators and the representatives of line agencies meets regularly to review, adjust and modify the work plan as required. The implementation strategy involves national and regional research institutes as well as local and international NGOs.

Main Outputs

The main outputs the Environment Programme seeks to deliver by 2010 reflect the programme component structure:

1. The programme will continue to ensure that data on Water Quality and Ecological Health of the Mekong River will be collected effectively in conjunction with line agencies and 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 link/communicate the results. (Component 2)
2. Improved Environmental and Social Impact Assessment, including Cumulative Impact Assessment processes, focusing on transboundary effects. In particular, a better understanding of conflict issues in transboundary environmental matters, formulation of a project on Environmental Considerations for Hydropower Development. (Component 3)

3. A realistic valuation of aquatic ecosystems and natural resources and human interactions in the Mekong River Basin. (Component 4)
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 5)
5. Environmental flows in the Mekong River basin assessed using methodology developed by the Environment Programme. (Component 6)

The Environment Programme's logical framework matrix and the programme reports provide more information on each specific output. These selected outputs provide an overview of the expected programme's outputs.

List of agreements/projects

(US\$ 1,000)

Agreement title	Start date	End date	Budget	Balance 2007*	Donors
Agreements as of January 2006					
<i>Danish contribution to EP 2002-06**</i>	01/10/04	31/03/07	56	0	Denmark
<i>Dutch support to Mekong wetland biodiversity programme**</i>	01/10/04	31/03/07	592	0	Holland
<i>Participation in the UNDP Mekong wetland biodiversity programme**</i>	19/07/05	31/03/07	81	0	UNDP
<i>Swedish contribution to EP 2004-06**</i>	01/01/04	31/03/07	1,825	0	Sweden
Swedish contribution to EP 2007-09	01/01/07	31/12/09	2,560	1,846	Sweden
Danish contribution to EP 2007-2010	01/01/07	31/12/10	1,305	732	Denmark
Total value of current agreements	2007	2010	6,419	2,578	All

(*) Balance projected by end of Dec 2007 based on actual expenditure Jan 2006 to Nov 2007 (\$3,716,000) plus forecasts for Dec 2007 (\$125,000).

(**) agreements closed as of mid 2007.

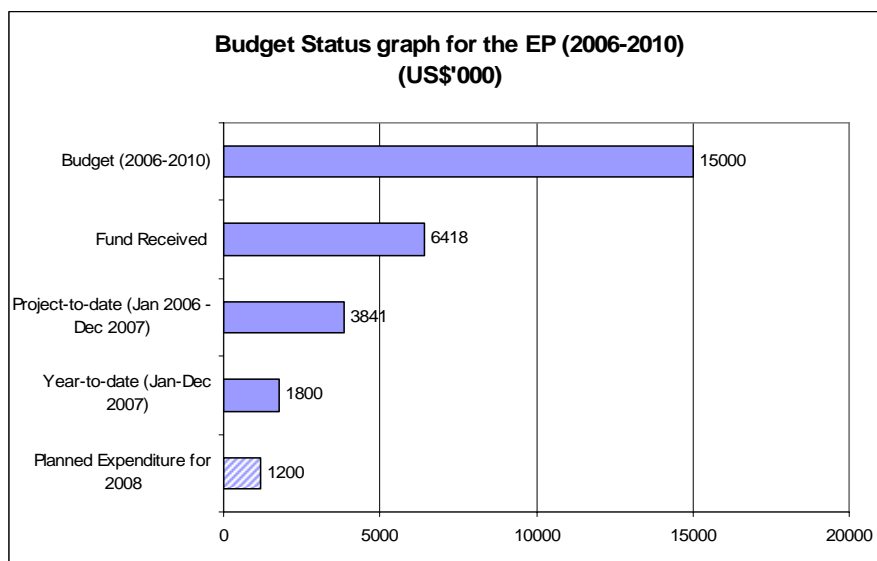
It is noted that in the budget available column for the first four agreements, all of which were commenced prior to 2006, the budgets shown are those that were actually spent during the period Jan 2006 to November 2007. The actual values of those agreements on signing of the contracts were: US\$2,449,000 for the Danida 2002-06; US\$1,604,000 for the Dutch wetlands; US\$156,000 for the UNDP; and US\$3,317,000 for the Sida 2004-06 funds.

Of the agreements tabulated above, the first four funds have been closed in early 2007. Therefore, as of the end of 2007 the only currently active funds for the Environment Programme are the last two agreements.

The Dutch support to the Mekong Wetland Biodiversity Programme was originally for a sum of US\$1,604,000. However it was reduced in past years and eventually cancelled during early 2007 resulting in a total cut of about US\$879,000 from the Environment Programme's budget. Similarly, about US\$75,000 was curtailed from the UNDP funds. Therefore, in total the Environment Programme budget was reduced by approximately US\$964,000.

3.2.2 Progress of EP for 2007

The following graph provides an overview of the budget status of the Programme for the year 2007 which includes budget for the Programme period, total funds received and expenses on the Project-to-date and Year-to-date.



The estimated budget needs for the period 2006-2010 are based on the actual budget (US\$2 million) spent during 2006 and the projected programme budget (US13 million detailed in the Programme Document 2007-2010).

Achieved Outputs for 2007

The progress of the various activities of the EP during 2006-2007 is shown schematically in the attached gantt chart and is briefly described below.

Component 2: Environmental Monitoring

- EP2.1.1. Published MRC Technical Paper No 15 – Diagnostic Study of Water Quality in the Lower Mekong Basin which describes baseline conditions for environmental contaminants in the lower Mekong River and its tributaries.
- EP2.1.3 Completed the system report on quality assurance/quality control for water quality sampling and analysis: it is a report of work performed to bring the laboratories closer to the international standard ISO 17025 requirements and to improve the data quality and laboratory management for the laboratories participating in the Water Quality Monitoring Network in the Lower Mekong Basin (WQMN. All labs are now monitoring and assessing two additional parameters.
- EP2.1.4 Baseline report on water quality: a comprehensive analysis of status and trends of water quality in the Lower Mekong Basin over the past 20 years has been prepared in a user-

friendly format for dissemination as a report and by web-based media.

- EP2.2.1 Published MRC Technical Paper No 13 – Biomonitoring of the Lower Mekong River and selected tributaries.
- EP2.2.2 Technical report on aquatic ecological health (to be published as an MRC Technical Series Report): a synthesis of the first four seasons of completed ecological health monitoring data for the Lower Mekong Basin.
- EP2.2.3 Completed a book on identification of freshwater invertebrates of the Mekong River and its tributaries. The funds remaining under the UNDP/GEF budget line were used to complete and distribute this document.
- EP2.4.1 Draft Indicative Mekong River report card - water quality: has been prepared in an easy to read document to inform the people of the Lower Mekong Basin of the water quality conditions of the Mekong river mainstream.
- EP2.4.2 Draft Indicative Mekong River report card – ecological health: has been prepared in an easy to read document to inform the people of the Lower Mekong Basin of the water quality conditions of the Mekong river mainstream.

Component 3: Environmental Decision Support:

- EP3.2.1 Principles and mechanisms for conflict mediation and resolution: The work plan on the MRC transboundary framework conflict management initiative in the LMB has been completed and is ready for implementation by Member Countries.
- EP3.2.2 Priority areas (hot spots) for environmental conflict prevention have been identified and are being discussed with Member Countries with a view to conducting case studies and developing procedures for addressing regional differences and disputes.
- EP3.3.5 Draft concept note on environmental considerations for hydropower development have been prepared in consultation with WWF and ADB.

Component 4: People and Aquatic Ecosystems

- EP4.3.1. MRC-IS Portal wetland maps and information and water quality information are now accessible over the internet in a user friendly format.
- EP4.3.2 Ramsar Site Establishment: Ongoing support for the establishment of the Lao PDR's first Ramsar wetlands site at Siphandone, Champassak Province.
- EP4.3.6 Capacity development of government staff in field survey and GIS for wetlands: Line agency staff have been trained in wetland mapping techniques using remote sensing.

- EP4.4.1 Three national reports on the environmental impact of tourism have been completed.

Component 5: Environmental Knowledge

- EP5.1.1 Annual Technical Meeting Proceedings produced

Component 6: Environmental Flows Management

- EP6.1.1 Specialists reports for the IBFM predictive tool were completed and are now ready for trial and use by other programmes, and eventually line agencies.
- EP6.1.2 Booklets for stakeholder consultations have been prepared.
- EP6.1.3 Methodology for assessing environmental flows has been completed and is ready for adoption and use by line agencies in the riparian countries.
- EP6.1.6 Planning workshop on integrated basin flow management (IBFM) has been conducted and national consultations were held to negotiate national pilot studies on IBFM.
- EP6.2.1 Draft contract has been prepared with CSIRO for an AusAID-funded study of impacts of climate change on water resources with the lower Mekong Basin.

Significant problems encountered, corrective action taken

The programme as a whole is significantly under-funded. Corrective actions that have been taken are to hold discussions with development partners to identify and formulate new initiatives such as environmental considerations for hydropower development and study of climate change effects on the basin. Such initiatives are proactive, cross-cutting as required under the Strategic Plan, and are in the interests of the riparian countries. It is hoped that this will generate additional support.

The end of the Mekong Wetlands Biodiversity Programme (due to changes in GEF Regional Biodiversity Funds) meant a shortfall in funds for the second identification guide planned by the EP: 'Wetland Plants of the LMB'. This activity should have commenced in late 2006 and was to run until 2009. As part of the corrective actions, no contracts were finalized, the activity has been suspended until such time that further funds are secured and the funds remaining under the UNDP/GEF budget line have been used to complete the remaining parts of the MRC-IS web portal. In addition, intensive funding efforts have been launched by the MRC.

The first interactive modules of the portal available for public access are the EP components on wetlands and 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 that the text may be

perceived as binding, which is not the intention of the guideline. The working group was advised to seek solutions on this issue further before it is considered again by the Joint Committee. Discussions with those concerned have been held to create a better understanding on this issue. A regional seminar on addressing transboundary impacts is being planned to raise awareness and seek agreement on a way forward.

Under the management of environmental flows, a critical problem has been that dealing with complex disciplines such as IBFM requires a broad understanding across many fields of ecosystem functions and flow-ecology relationship. To effectively discuss and communicate such issues to the NMCs and line agencies requires a better approach. Capacity needs to be built and promoted in order to better understand IBFM across the region. To address this, an IBFM capacity building programme has been initiated that will involve training and pilot studies to help improve understanding about IBFM, and it will build capacity for conducting flow assessment and equip those involved with better skills for assessing such scenarios. Such capacity building will ensure that the knowledge from the IBFM is transferred effectively to the NMCs and line agencies including tools to help assess scenarios using national efforts.

Donor reviews or appraisals

The mid-term review and donor report of the MWBP (which essentially became the closing report) gave a very positive assessment of all of the MRC components of this regional programme. In particular, the wetland web portal, wetland mapping, and IBFM-environmental flows activities were highly recommended for further continuation, development and expansion. The EP contribution to the Lao Ramsar accession process was also highly commended.

The annual progress review by Sida in November 2007 raised the need to demonstrate how the tools, procedures and databases developed by the EP are being used or implemented. Sida also recommended greater linkage of the EP effort to poverty alleviation for consistency with the new direction of the Swedish government's policies in its foreign aid programme. Sida noted that it will curtail funding to the MRC in 2008 by some SEK3 million (US\$450,000). However, Sida noted that it will compensate for this by increasing the 2009 allocations by the same amount. This action will also affect the budget and so workplan of the EP over the next two years.

3.2.3 EP Workplan for 2008

The work plan under the various activities of the EP during 2008 is shown schematically in the attached gantt chart and is briefly described below.

Component 2: Environmental monitoring:

EP2.1.7 Coordination with WUP: EP will take over the responsibility for developing technical guidelines to implement the procedures for water quality (PWQ) that were approved by the Joint Committee in 2006 and draw up the TOR for a technical body for the procedures for the maintenance of

flows in the mainstream and PWQ and to follow up the signing of the PWQ.

- EP2.1.8 Sediment monitoring: This will be a new activity. EP jointly with IKMP, will develop a sediment monitoring plan as a proactive activity to determine the profile and transport characteristics of sediments and prior to the construction of several planned dams in the Mekong Basin. A long-term view will be to develop models that can be used in the planning stage for locating sites for dams and to look at their potential downstream impacts.
- EP2.2.1 Biomonitoring of the lower Mekong River and selected tributaries: the effectiveness of the existing stations will be reviewed and to ensure at least 30 EHM stations will be operational and functioning well.
- EP2.2.4 The next phase of the environmental health monitoring will be commenced – transfer of the program to the NMCs and line agencies through hands on training with case studies.
- EP2.3.1 Development of a social impact monitoring system (including indicators): a set of socio-economic indicators that link changes in water and related resources to social impact will be developed through fieldwork and will be agreed across the region. A baseline study will be completed which will serve as a reference benchmark for comparing the effects and benefits of projects in the future.
- EP2.4.1 Basin report card – water quality: an easy to read document will be completed that will inform the people of the Lower Mekong Basin of the water quality condition in the basin.
- EP2.4.2 Basin report card - aquatic ecological health: an easy to read document will be completed that will inform the people of the Lower Mekong Basin of the aquatic ecological health conditions of the basin.
- EP2.4.3 Basin report card - socio-economic conditions: an easy to read document will be completed that will inform the people of the Lower Mekong Basin of the relations between socioeconomic conditions and basin wide water resources management for the Mekong.

Component 3: Environmental Decision Support:

- EP3.1.1 Guidelines for transboundary impact assessment: framework and technical guidance of the .guidelines will be completed and reviewed by the NMCs and pilot exercises will be conducted on the activity.
- EP3.2.1 Conflict mediation and resolution: at least 20 people will be trained in conflict prevention, and dialogue facilitation.
- EP3.2.2 Priority areas for environmental conflict prevention: hot spots will be identified for MRC focus of resources.
- EP3.3.6 ECHD project formulation: proposal will be developed for a detailed study on environmental consideration for hydropower development.

- EP3.4.1 SEA procedures and BDP: strategic environmental assessment procedures will be taken up by BDP for use in its basin planning.

Component 4: People and Aquatic Ecosystems:

- EP4.1.1 Wetlands database: the database will be completed.
- EP4.1.4 Wetlands valuation: A technical report on wetlands valuation for the Lower Mekong Basin covering environmental, social and economic values of aquatic ecosystems products will be drafted ready for review.
- EP4.2.1 Report on people vulnerable to changes in aquatic resources: A draft technical report on social vulnerability to changes in aquatic resources and production will be submitted for review by NMCs.
- EP4.3.4 Transboundary wetlands management: case study projects will be identified and prepared for implementation.
- EP4.3.5 Biomonitoring information: biomonitoring information will be added to the portal web page.
- EP4.4.1 All four national reports on impacts of tourism on the environment will be finalised.
- EP4.4.2 Regional report on environmental impacts of tourism will be published and proposed actions to address the adverse impacts will be identified.

Component 6: Environmental Flows Management:

- EP6.1.3 Environmental flows assessment methodology: A technical report on the assessment methodology for environmental flows to be ready for trialling and adopted under Integrated Basin Flow Management for evaluations.
- EP6.1.4 Assessment of flows under BDP scenarios: report to be drafted on flow assessments and submitted to countries for comments.
- EP6.1.5 Capacity building in flow assessment: at least 20 riparian professionals are to be trained and be in a position to conduct pilot exercises.
- EP6.2.2 Commence 24-months duration study on impacts of climate change on water resources with the lower Mekong Basin

Donor reviews or appraisals planned in 2008

Sida and Danida annual progress reviews are anticipated towards the end of the calendar year.

Possibly AusAID will conduct an annual progress review of its support programme on climate change during the latter part of 2008.

Environment Programme - Progress and Work Programme 2007 - 2008

SP Code	WBS	Task Name	2007												2008											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	EP.1	Programme management																								
	EP.1.1	Coordination and communications																								
Goal-3.1	EP.1.1.1	with MRC units																								
Goal-3.1	EP.1.1.2	with national line-agencies and other national units																								
Goal-3.1	EP.1.1.3	with academia, international NGO, etc																								
	EP.1.2	Preparation of management information																								
Goal-3.1	EP.1.2.1	Progress and other reports																								
	EP.2	Environmental monitoring																								
	EP.2.1	Water and sediment quality																								
Goal-3.2	EP.2.1.1	Diagnostic Study on Water Quality																								
Goal-3.1	EP.2.1.2	Quality assurance/quality control (QA/QC) system for water quality sampling and analysis																								
	EP.2.1.3	Baseline report on water quality																								
Goal-3.2	EP.2.1.4	Monitoring network operational																								
Goal-3.2	EP.2.1.5	Technical paper on water quality assessment																								
Goal-3.2	EP.2.1.6	Training of laboratory staff in analytical techniques																								
Goal-3.2	EP.2.1.7	Technical guidelines to implement Procedures on Water Quality (PWQ)																								
	EP.2.1.8	Sediment monitoring																								
	EP.2.2	Aquatic ecological health																								
Goal-3.2	EP.2.2.1	Bio-monitoring of the Lower Mekong River and selected tributaries																								
Goal-3.2	EP.2.2.2	Technical report on aquatic ecological health																								
Goal-3.2	EP.2.2.3	Identification of freshwater invertebrates of the Mekong River and its tributaries																								
Goal-3.3	EP.2.2.4	Transformation of EHM to NMCs and line agencies																								
	EP.2.3	Livelihoods dependent on aquatic systems																								
Goal-3.2	EP.2.3.1	Development of social impact monitoring system																								
	EP.2.4	Basin wide environmental monitoring																								
Goal-3.2	EP.2.4.1	Indicative / Basin Report Card - water quality																								
Goal-3.2	EP.2.4.2	Indicative / Basin Report Card - ecological health																								
Goal-3.2	EP.2.4.3	Indicative / Basin Report Card - soci-economic conditions																								
	EP.3	Environmental decision support																								
	EP.3.1	Environmental and social impact assessment																								
Goal-3.4	EP.3.1.1	Guidelines for trans-boundary environmental impact assessment system																								
Goal-3.4	EP.3.1.2	Cumulative impact assessment system for BDP																								
	EP.3.2	Trans-boundary environmental issues																								
Goal-3.3	EP.3.2.1	Principles and mechanisms for conflict mediation and resolution																								
Goal-3.3	EP.3.2.2	Priority areas for environmental conflict prevention																								
	EP.3.3	New environmental concepts, techniques and tools																								
Goal-3.1	EP.3.3.1	Indicators and performance assessment systems																								
Goal-3.2	EP.3.3.2	Transboundary environmental risk assessments, Thai/Lao and Cambodia/Viet Nam																								
Goal-3.3	EP.3.3.3	Environmental risk assesment tools																								
Goal-3.4	EP.3.3.4	Analysis of risks for oil spills and other related navigation hazards (coop with Navigation Proj)																								
Goal-3.4	EP.3.3.5	Environmental Considerations for Hydropower Development (ECHD), project identification																								

Environment Programme - Progress and Work Programme 2007 - 2008

SP Code	WBS	Task Name	2007												2008																																	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																						
Goal-3.4	EP.3.3.6	ECHD project formulation																																														
	EP.3.4	Strategic environmental assessment (SEA)																																														
Goal-3.4	EP.3.4.1	SEA procedures applied in BDP																																														
	EP.4	People and aquatic ecosystems																																														
	EP.4.1	Valuation of aquatic ecosystems																																														
Goal-3.5	EP.4.1.1	Wetlands data base																																														
Goal-3.5	EP.4.1.2	Wetlands maps																																														
Goal-3.5	EP.4.1.3	Wetlands atlas																																														
Goal-3.5	EP.4.1.4	Wetlands valuation																																														
	EP.4.2	Vulnerability and dependence on aquatic ecosystems																																														
Goal-3.2	EP.4.2.1	Report on people vulnerable to changes in aquatic resources																																														
Goal-3.2	EP.4.2.2	Risk assessment reports for important wetlands																																														
	EP.4.3	Wetlands management systems																																														
Goal-3.2	EP.4.3.1	MRC-IS Portal - wetland and water quality information now accessible over the internet																																														
Goal-3.4	EP.4.3.2	Ramsar sites established																																														
Goal-3.2	EP.4.3.3	Guidelines for regional wetlands management																																														
Goal-3.2	EP.4.3.4	Trans-boundary wetlands management projects identified																																														
Goal-3.1	EP.4.3.5	Biomonitoring information added to the portal																																														
Goal-3.3	EP.4.3.6	Capacity development of government staff in field survey and GIS wetlands																																														
	EP.4.4	Environmental Impact of Tourism in the LMB																																														
Goal-3.2	EP.4.4.1	National reports environmental impacts of tourism																																														
Goal-3.2	EP.4.4.2	Environmental impact of tourism																																														
	EP.5	Environmental knowledge																																														
	EP.5.1	Environmental research																																														
Goal-3.2	EP.5.1.1	Proceedings from EP Annual Technical Meeting 2006, Chiang Rai																																														
Goal-3.2	EP.5.1.2	Identification of knowledge gaps																																														
Goal-3.2	EP.5.1.3	Prioritisation of research needs																																														
Goal-3.2	EP.5.1.4	Improved linkages between research groups																																														
	EP.6	Environmental flows management																																														
	EP.6.1	Support to basin development plan																																														
Goal-3.5	EP.6.1.1	Specialist reports for the improvement of the IBFM predictive tool																																														
Goal-3.5	EP.6.1.2	Booklets for stakeholder consultation																																														
Goal-3.5	EP.6.1.3	Environmental flows assessment methodology																																														
Goal-3.5	EP.6.1.4	Reports on flow assessments of BDP scenarios																																														
Goal-3.5	EP.6.1.5	Capacity building in flow assessment																																														
Goal-3.3	EP.6.1.6	Awareness raising through stakeholder consultations																																														
Goal-3.3	EP.6.1.7	Technical assistance, pilot flow initiatives																																														
	EP.6.2	Climate change vulnerability																																														
Goal-3.5	EP.6.2.1	Project formulation on climate change (coop with CSIRO)																																														
Goal-3.5	EP.6.2.2	Impacts of climate change on water resources in the LMB																																														

3.3 Information and Knowledge Management Programme (IKMP)

3.3.1 Programme Overview

As requested by the Joint Committee, the MRC Secretariat has formulated the Information and Knowledge Management Programme (IKMP). The programme document and the Programme Implementation Plan were approved in principle by the Steering Committee by end of 2007. The programme will serve to facilitate access to and use of the data, information and decision support tools comprising the MRC-Information System (MRC-IS) which is necessary to promote and coordinate sustainable development of water and related resources in the Mekong Basin.

The IKMP is a five-year programme (2007-2011) with a total budget of 25 million USD. To date, the total value of Agreements signed for the programme is 13 million USD.

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). These databases and tools need to be integrated and constantly updated and quality-controlled. 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, updating and interfacing to other models based on an effective international data management and exchange policy.

The immediate objectives of the programme were defined under the programme document formulation process. They reflect 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.

Immediate Objective 1 – Demand-driven and client-oriented information and knowledge systems, services and products are integrated throughout the MRC's programmes and enhance regional cooperation.

Immediate Objective 2 - Required hydro-meteorological data is acquired, processed and made available.

Immediate Objective 3 - A geographical information system comprehensively integrates MRC data and information holdings and provides access, support services, and value added products.

Immediate Objective 4 - Providing the MRC, riparian countries and other clients with decision support tools, services and capacity for planning, forecasting and impact assessment.

Immediate Objective 5 - Data, information and knowledge are easily exchanged and shared with a wide network of decision makers and other stakeholders

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. Knowledge transfer to NMCs and Line Agencies and knowledge retention are important issues to address in highly specialised staff environments, combined with the use of virtual training and transfer methods.

These crucial tasks will guide the strategy of the programme.

Structure

Component 1: Programme Management.

The Programme Management Component 1 of the IKMP provides overall leadership, coordination and management for IKM and for the programme. This includes putting in place the framework for systematisation of data, information and knowledge management by designing and implementing appropriate business processes throughout the MRCS and working closely with the national agencies to support their capacity building and cooperation with the programme.

Component 2: Hydro-Meteorological Data.

The hydro-meteorological data Component 2 adds to the level of understanding that currently exists on the physical condition of the mainstream and major tributaries in the Mekong River Basin. Each of the MRC programmes collects considerable amounts of data and information, and generates knowledge within their particular area of expertise. The IKMP will support these programmes by providing services and expertise in the processing, storage and management of these data, and the linking of it to knowledge from other programmes to form the MRC knowledge base. IKMP Component 2 will be responsible for collecting hydro-meteorological data, which is critical for many MRCS

functions. Component 2 will also accommodate other types of monitoring activities in synergy with the hydro-meteorological data collection, such as sediment and river-morphological monitoring activities. Component 2 of the IKMP will ensure that collection of these types of data and information is properly coordinated, planned and performed.

Component 3: GIS and Databases.

The GIS and Databases Component 3 constitute the technical backbone of the IKMP, providing core database services upon which all other components of the IKMP depend and build. It will closely interface with and coordinate data and information collection and management activities in the other components of the IKMP as well as the other MRC programmes. It will set standards and guidelines valid and binding for all data collection and management activities performed in other components of the IKMP and in other MRCS programmes, and provide related technical coordination and service functions for data and information collection and production.

Component 4: Modelling.

The Modelling Component 4 will work in close cooperation with and support most of the MRCS thematic areas and programmes like basin-wide hydrological/ hydrodynamic scenarios, hydropower and irrigation development, climate change, sediments at basin-wide scale, productivity of the system, navigation, ecosystem productivity, especially Tonle Sap fisheries, sustainable agricultural and forestry development, basin-wide mitigation and trade-off mechanisms, basin-wide flood modelling support and trans-boundary and cumulative issues.

The successful execution of the works requires integration of existing data, collection of relevant primary data, multidisciplinary impact assessment, use of state-of-the-art assessment tools, broad partnership and networking, and communication of generated information to the stakeholders.

Component 5: Communications and Knowledge Management

The Communications and Knowledge Management Component 5 facilitates data, information and knowledge exchange, sharing and networking and supports collaboration within MRC and among other stakeholders. It includes a focus on eliciting ‘soft’ knowledge, the tacit knowledge that exists throughout the wide network of people who work within the MRC or interact with it. Through identification and setting up of virtual systems on the internet, the Communications and Knowledge Management Component will assist the MRC to take advantage of the latest technologies to improve work processes and efficiency, and drive the demand for information flows while building the infrastructure to supply it.

Implementation arrangements

For the past years, information and knowledge activities were carried out within the framework of the TSD. 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

The expected outputs during programme implementation are:

Component 1: Programme Management.

The IKMP team and resources are well managed. Communication, cooperation and coordination with IK clients and partners are effective. Business Processes ensure client oriented delivery of IK products and services. IKM policy, implementation strategy and guidelines are developed and implemented.

Component 2: Hydro-Meteorological Data.

Monitoring programmes and networks are operating and maintained. Monitoring data is processed, quality managed and compiled into the knowledge base. Hydro-meteorological data services and products are provided. Monitoring programmes and networks are integrated and improved.

Component 3: GIS and Databases.

Core MRC spatial and other databases are integrated, spatially linked, maintained and accessible. Data access, management and analysis services are provided to MRC and external clients. Relevant geospatial information is acquired and incorporated in the GIS. (This output includes two optional activities.) Capacity building services to access and manage data and produce maps. Visualisation of data and information for improved communication.

Component 4: Modelling.

Operational and well maintained modelling platform. Visualisation tools to communicate modelling scenarios and assessments (for the most part optional). A validated Modelling Toolbox that provides tools to assess impacts and alternatives of proposed developments (optional). Modelling services and data products focusing on basin-wide issues. Modelling services focusing on national and trans-boundary feasibility, planning and scenario studies. Optional services and case studies (optional).

Component 5: Communications and Knowledge Management

User friendly and powerful MRC-IS Portal. MRC Documentation and Learning Centre operational. International and regional networks, and collaborative tools. MRC Management Information System (MRC MIS)

List of agreements/projects

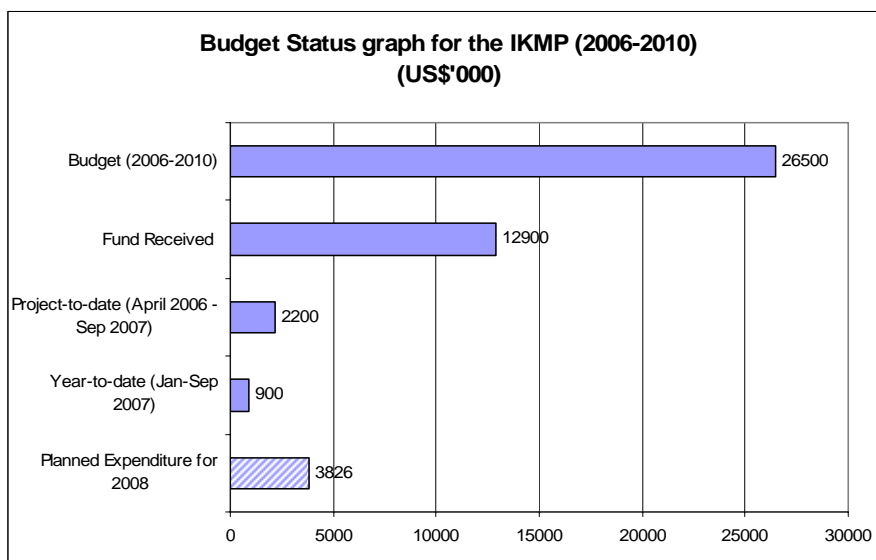
(US\$ 1,000)

Project title	Start date	End date	Budget	Balance 2007 (*)	Donors
Active projects					
Australian contribution to AHNIP Extension	Apr 2006	August 2007	469	179	Australia
AFD support to Mekong Hycos –Project Management Unit –Other programme activities	Jan 2006 May 2006	Jan 2012 May 2012	600 3,000	555 2,217	France France
Finnish contribution to the IKMP implementation phase	Jan 07	Dec 2010	8,746	8,206	Finland
Flood Mapping for Kok River Basin in Northern Thailand	Mar 2007	Jun 2008	156	100	Finland and FMMP

(*) Balance as per end November 2007

3.3.2 Progress of IKMP for 2007

The following graph provides an overview of the budget status of the Programme for the year 2007 which includes budget for the Programme period, total funds received and expenses on the Project-to-date and Year-to-date.



Achieved Outputs for 2007:

Component 1: Programme Management

Following the MRC Council's instruction at its Thirteenth Meeting in December 2006, the draft IKM Programme Document was improved and finalized in June 2007 taking into account outcomes of the second round in-house consultation (21 January 2007) with other MRC programmes and of the second regional consultation meeting (22-23 March 2007).

IKMP1.1.1 In line with the programme document completion, the Programme Implementation Plan (PIP) was developed. The first round of consultation with Member Countries on the PIP was carried out in September 2007. It was agreed by the regional IKMP Workshop (29 November 2007) then approved in principle by the IKMP Steering Committee at its first meeting (30 November 2007). Finalized approval to

the PIP will be made at the Programme Coordination Committee meeting (15 January 2008).

- IKMP1.7.1 In this regard, two Terms of Reference (ToR), for IKM Technical Assistance and Coordination Team (IKM-TACT) and the other one is for IKMP Steering Committee, respectively, were finalized at the regional IKM TACT meeting (19-20 June 2007) and then approved by the Joint Committee at its Twenty-Sixth Meeting in August 2007.

Component 2: Hydro-meteorological Data

- IKMP2.1.1 The Appropriate Hydrological Network Improvement Project (AHNIP) has improved field equipment, developed a policy and strategy framework, and formulated a project design document for upgrade of the AHNIP Network and integration with the Mekong-HYCOS Network.

The MOUs for management and operation of the AHNIP Network 2007 were signed with four NMCs. As a result, the operation of AHNIP network has been improved. Accurate and reliable data from all AHNIP stations are now being sent to the MRC Secretariat and delivered to the users every morning. The AHNIP was completed successfully in August 2007.

- IKMP2.2.1 The Mekong-HYCOS project activities in 2007 are focused on the inception phase, which has designed Mekong-HYCOS network with 31 stations (first priority), equipment and civil work and been preparing for tendering and contracting process.

- IKMP2.3.1 The hydro-meteorological data collected from Member Countries of up to 2005 are being processed. The CD-Rom Hydrological Yearbook for 2003-2004 was produced.

- IKMP2.3.2 Technical cooperation with China under the Agreement on the Provision of Hydrological Information of Lancang / Mekong River in the Flood Season 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 renewal.

Component 3: GIS and Databases

- IKMP3.2.3 Remote sensed data and a time-series data are being used for the project on Strengthening of Flood Management Capacity for the Kok River in Chiang Rai Province, Thailand.

- IKMP3.4.2 The collection and supply of improved quality, quantity and timely hydro-meteorological information and maps to all programmes, forecasting, monitoring, strengthening and consolidation of the network and capacity involved is continuing in 2007. The component is focused on

strengthening the capacity for building an MRC integrated GIS.

Making use of remote sensed data and a time-series data is in progress for the project on strengthening of flood Management Capacity for the Kok River in Chiang Rai Province, Thailand.

Component 4: Modelling

- IKMP4.1.2 The Decision Support Framework (DSF) has been extensively used in MRC programmes and activities, notably the Basin Development Plan (BDP), the Integrated Basin Flow Management (IBFM), and the Flood Management and Mitigation Programme (FMMP) with intensive support of the (TSD) Modelling Team. In parallel, other activities relating to the DSF enhancement and modelling capacity building are also carried-out including upgrading the Isis dongle, developing a Reporting Tool Wizard, and DSF Online Support.
- IKMP4.4.1 Two projects have been implemented: namely (1) the Finish Funded Decision Support Services (FINDS) with national case studies developed a Tonle Sap Productivity Model, and (2) a model system for flood forecasting for Kok River Basin.

Component 5: Communications and Knowledge Management

- IKMP5.1.2 The MRC-IS Portal for external access was built and tested with very good results. A 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. 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.

The development of MRC M&E (Monitoring and Evaluation) system is given a high priority by the Council.

Significant problems encountered, corrective action taken

Under IKMP Component 2, delays have occurred with the Mekong-HYCOS project on identifying some stations in Chi and Mun River basin. It is expected to be resolved at the end of the year.

3.3.3 **IKMP Workplan for 2008**

The IKMP Programme started its full implementation phase during the first quarter of 2007. These are reported here, under the five expected components of the programme for 2008.

Component 1: Programme Management

An obvious priority is to design data, information and knowledge products. The second high priority is to develop IKM operational manual (business processes). The IKM Guidelines draft already exists, but its consolidation will require additional work and consultations with the countries.

Component 2: Hydro-meteorological Data

IKMP2.2.2 Component 2 provides primary data necessary for all
IKMP2.2.4 functions of the MRC. Hydrographic data is needed in flood management, basin planning, fisheries management, navigation, environmental monitoring and other purposes. The most urgent tasks for the component are:

- AHNIP: operational and maintained AHNIP hydro-met network;
- Mekong-HYCOS: finalizing hydro-met observation network, hydro-met equipment and civil works;
- Developing a discharge-sediment monitoring programme;
- Data base system and audit.

IKMP2.4.1 The medium priority is to have upgraded AHNIP technology to HYCOS-WMO standards.

Component 3: GIS and Database

IKMP3.1.2 The first priority is auditing existing data holdings. The second high priority is to develop a manual of standards and guidelines for data and information management. The other high priorities are as follows: data and information needs assessment; data acquisition and generation plan; new data (acquired and generated); and hardcopy printing services for map and 3D products

Component 4: Modelling

IKMP 4.1.2 Three priorities exist for the Modelling Component. (i) The
IKMP 4.1.3 first is to upgrade DSF partly, (ii) maintain and (iii) support use of it with data acquisition and generation.

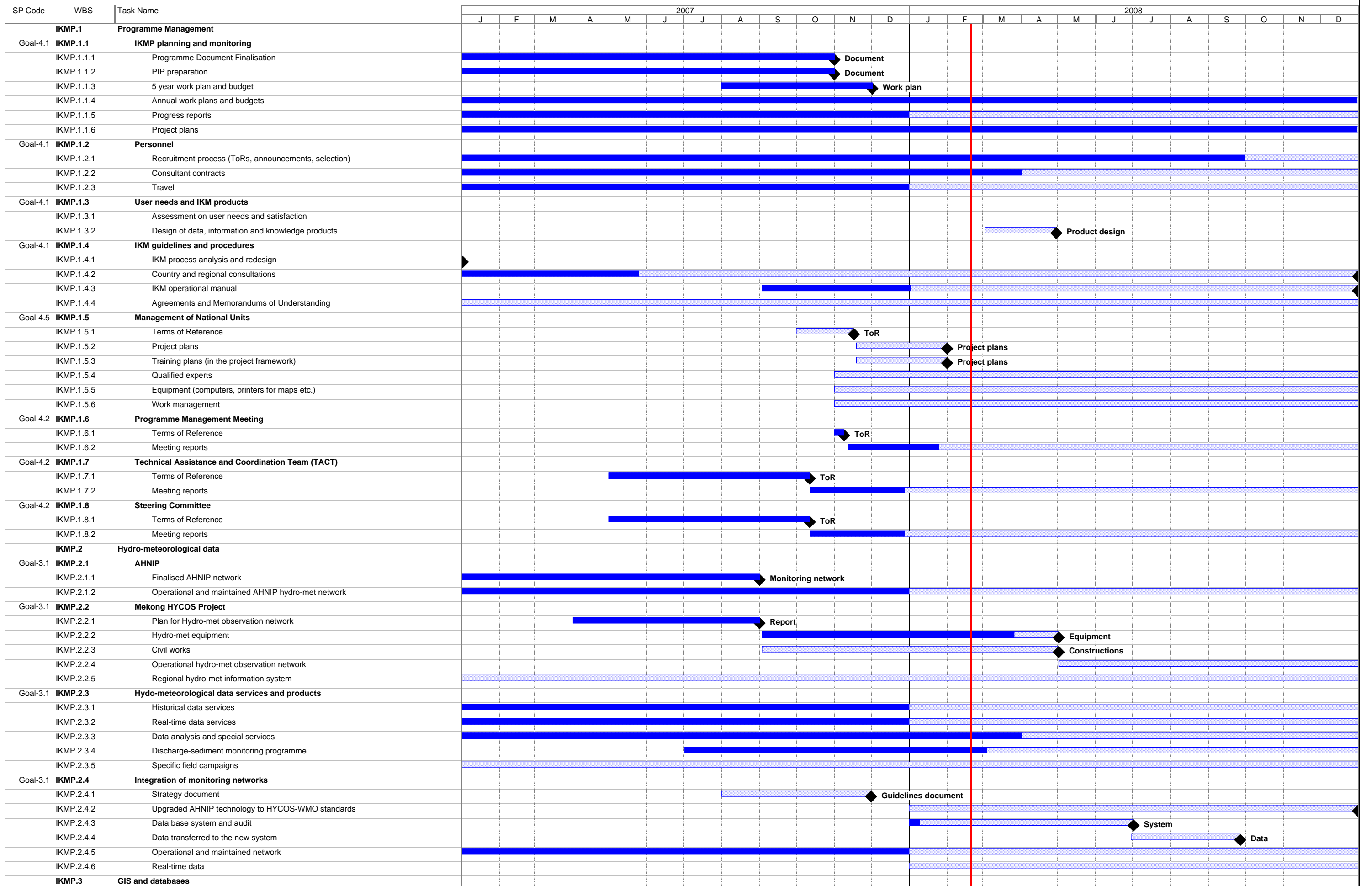
Component 5: Communications and Knowledge Management

IKMP5.4.2 The high priority output is implementation of the MRC Monitoring and Evaluation system. An important part of the IKMP Component 5 is communication to MRC Member Countries on sharing technical issues.

Donor reviews or appraisals planned for 2008

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 early 2008.

Information and Knowledge Management Programme - Progress and Work Programme 2007-2008



3.4 Integrated Capacity Building Programme (ICBP)

3.4.1. Programme Overview

Purpose

To assure effective and sustainable development of water related resources in the Lower Mekong Basin according to the shared concepts of Integrated Water Resources Management it is vital to develop a critical mass of human resources at the MRCS, NMCs and the MRC-related national line agencies. The aim of the ICBP is to develop this critical mass by means of a comprehensive and long-term training programme that integrates the various MRC training activities, with the focus on cross-cutting knowledge areas, as well as related skills and competence.

Approach

The relevant target group for capacity building and training is broad, including staff of the MRCS, NMCs, MRC-related line agencies, the MRC Joint Committee, staff of training and education centres, local authorities and the basin population. Whereas the ICBP will mainly focus on staff of MRCS, NMCs and MRC-related line agencies, civil society and staff from bilateral projects may also be considered to participate in ICBP activities.

Strategy

The strategic focus of ICBP will be placed on 'integration'. Priority will be on cross-cutting (integrative) knowledge areas and related skills and attitudes. The main ICBP knowledge areas are Integrated Water Resources Management (IWRM), planning and management. In-depth, knowledge in thematic areas will not be the focus of ICBP as these are more specific, and less cross-cutting issues and will be addressed through capacity building activities of respective programmes.

Structure

The ICBP plans to have its programme document formulated in 2008 based on the approved integrated training strategy. Therefore the programme structure consisting of the following components remains preliminary:

Component 1: Programme Management and Communication

This component will provide management support to ensure that demand-driven and relevant capacity building activities are designed, delivered and fully integrated throughout MRC's programmes, NMCs and MRC-related line agencies, and to a certain extent radiate to a wider audience of stakeholder groups. Professional contacts to regional academia and training institutions will be maintained and deepened.

Component 2: Integrated Capacity Building

The objectives of this component are to raise the level of competence among MRC staff and staff in the riparian Governments particularly on cross-cutting issues pertinent to IWRM, and to provide methodological support, integrate and consolidate MRC's training activities in priority areas. The component includes three activity lines / projects:

- *Training Activities*

This project will be the centre piece of the new ICBP. The AusAID ICBP programme formulation will detail objectives, scope, approach and methodology of this project.

This project also hosts all OEB funded training activities targeting MRCS and NMC staff. The ICBP programme formulation will allow to strategically realign these activities to make them fully complementary to the other projects under this component as well as MRC programmes' training activities.

- *Junior Riparian Professionals Project*

The objective of this project is to provide training and hands-on experience to young riparian professionals in the areas of IWRM. The JRP project involves the training of forty-eight promising young professionals.

- *Gender Mainstreaming Project*

This 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.

Main Outputs

Component 1: MRC capacity building activities are well aligned and support achieving the goals of the Strategic plan, respective activities are well managed and integrated throughout programme, NMCs, MRC-related line agencies and provide an outreach into other stakeholder groups.

Component 2: MRC staff and staff in the riparian Governments are trained in areas relevant to IWRM. Skills relevant to IWRM among young Riparian Professionals are improved. 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.

List of agreements/projects

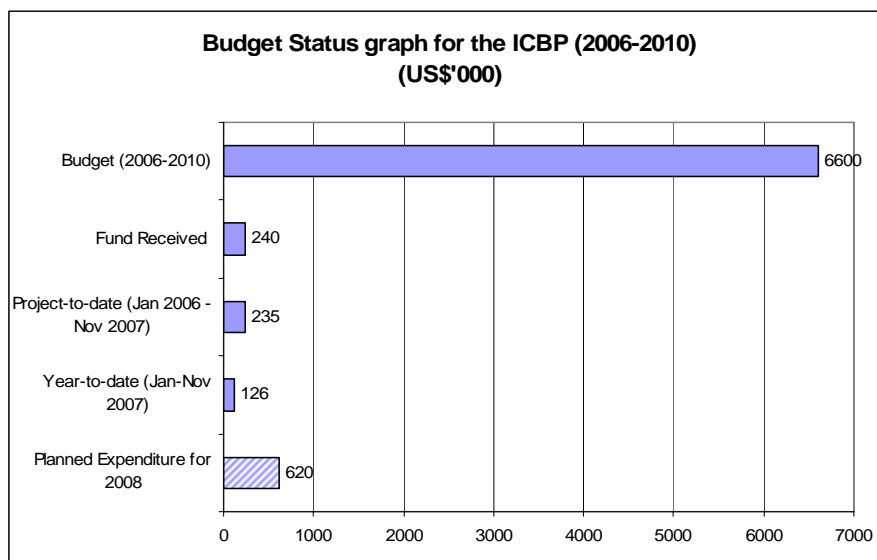
(US\$ 1,000)

Project title	Start date	End date	Budget	Balance 2007 (*)	Donors
Active projects					
MRCS staff training	Jan 2008	Dec 2008	112		OEB
New Zealand contribution to Gender Mainstreaming Project	Dec 2004	Dec 2008	280	100	New Zealand
Projects in preparation					
New Junior Riparian Professional Scheme (JRP Project phase 2)	Jan 2008	Dec 2011	1,800	N/A	Finland
MRC Integrated training	Jan 2008	Dec 2011	4,000	N/A	

(*) Balance as per end June 2007

3.4.2. Progress of ICBP for 2007

The following graph provides an overview of the budget status of the ICB Programme for the year 2008 which includes budget for the programme period, total funds received and expenses on the Project-to-date and Year-to-date.



Planned and achieved outputs for 2007

Component 1: Programme Management and Communication

ICBP1.1.1 Fund raising activities for ICBP in 2007 have yielded AusAID's commitment to provide significant funding for ICBP in the coming years. TOR and other preparatory works for the ICBP programme formulation have been finalised.

ICBP1.1.4 MRC and the Murray Darling Basin Commission (MDBC) are preparing the next phase in their long term cooperation possibly to be included in ICBP.

Component 2: Integrated Capacity Building

- ICBP2.1.1 Training activities to MRC staff funded by OEB have continued.
- ICBP2.2.1 The Secretariat has continued its efforts to seek funding for the junior riparian professional project. As a result, after the informal donor meeting held at the Secretariat in June 2007, the Government of Finland indicated interest in funding the project in the amount of €750,000 or equivalent to US\$1,000,000.
- ICBP2.3.1.2 Gender sensitivity trainings in collaboration with NMCs, in which four training courses were conducted among the four countries. MRC capacity in gender responsiveness has been improved by organizing training activities of the national gender teams.
- ICBP2.3.1.3 The training manuals for the four national gender teams were updated. Within the MRC Secretariat, the gender perspective in the organization has been promoted.
- ICBP2.3.1.4 Four national gender teams were established and its national action plans developed during the gender basin-wide workshop. Technical assistance was provided to each national gender team to finalize its action plan.
- ICBP2.3.2.4 The translation of the MRC Gender Strategy and Policy in Khmer, Thai and Vietnamese has been completed.

Significant problems encountered, corrective action taken

Three significant problems within 2007 that ICBP encountered are:

- (i) Funding situation. Activities were limited because of the low level of funds available.
- (ii) Communication between ICBP and the other MRC programmes is not structured which makes it difficult for ICBP (and MRC) to maintain an overview of the on-going capacity building needs. The comprehensive ICBP programme formulation to be conducted during 2008 will address this issue.

Donor reviews or appraisals

None

3.4.3. ICBP Workplan for 2008

Component 1: Programme Management and Coordination

- ICBP1.1.2 Under AusAID funding support, the ICBP programme document will be developed. Country consultations will

facilitate the process. In parallel potential strategic linkages to academia and training institutions will be actively explored.

- ICBP1.1.3 Using the ICBP programme document funding will be sought.

Component 2: Integrated Capacity Building

- ICBP2.1.1 OEB funds in the order of USD 112,000.- have been earmarked to provide training opportunities for MRC and NMC staff during 2008. Thematic areas will follow the needs assessment and priorities of the ICBP programme formulation.

- ICBP2.1.2 Subject to availability of funds, priority capacity building activities identified during the ICBP formulation will be carried out using donor support.

- ICBP2.2.1.2 A preparatory phase during the first half of the year will prepare the Junior Riparian professionals Project and prepare recruitment and training of a first batch of JRPs during the second half 2008.

- ICBP2.3.1 The Gender mainstreaming Project will focus mainly on capacity-building on gender and development concepts and frameworks at the MRC Secretariat, NMCs, and line agencies.

- ICBP2.3.1.8 Organisation of the second gender basin-wide workshop.

- ICBP2.3.2.3 Networking with gender activities and projects in other international organisations, agencies, and institutions will also be undertaken.

- ICBP2.3.2.5 Three training courses on Gender Mainstreaming in Project Cycle Management and to introduce gender guidelines will be conducted.

- ICBP2.3.2.6 Mid-term evaluation

Donor reviews or appraisals planned in 2008

In January 2008 the Gender Mainstreaming Component has a project mid-term evaluation.

Integrated Capacity Building Programme - Progress and Tentative Work Programme 2007-2008

SP Code	WBS	Task Name	2007												2008											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	ICBP.1	Programme management and communication																								
	ICBP.1.1	ICBP identification, formulation and funding																								
Goal-4.5	ICBP.1.1.1	TOR for programme formulation																								
Goal-4.5	ICBP.1.1.2	ICBP programme formulation																								
Goal-4.5	ICBP.1.1.3	Funding for core functions of ICBP secured																								
	ICBP.2	Integrated capacity building																								
	ICBP.2.1	Training activities																								
Goal-4.5	ICBP.2.1.1	Training to MRCS and NMC staff (OEB-funded)																								
Goal-4.5	ICBP.2.1.2	Implementation of priority traing activities (condition to pending AusAID funding)																								
	ICBP.2.2	Junior riparian professionals project (JRP)																								
	ICBP.2.2.1	JRP formulation and funding																								
Goal-4.5	ICBP.2.2.1.1	Donor agreement																								
	ICBP.2.2.1.2	Recruitment and training of first batch of JRP																								
	ICBP.2.3	Gender mainstreaming project (GMP)																								
	ICBP.2.3.1	Gender awarenes and senistivity training, data and information																								
Goal-4.5	ICBP.2.3.1.1	International women's day																								
Goal-4.5	ICBP.2.3.1.2	Gender awareness and sensitivity training																								
Goal-4.5	ICBP.2.3.1.3	Update of training manuals for mnational gender teams																								
Goal-4.5	ICBP.2.3.1.4	Establishment of 4 national gender teams																								
Goal-4.5	ICBP.2.3.1.5	Preparation for gender awareness training																								
Goal-4.5	ICBP.2.3.1.6	Prparation for regional workshop																								
Goal-4.5	ICBP.2.3.1.7	Improved MRC capacity in gender responsive planning and impelementation																								
Goal-4.5	ICBP.2.3.1.8	Prparation for 2nd regional workshop workshop																								
	ICBP.2.3.2	Institutionalised gender responsive organisational structures and procedures																								
Goal-4.5	ICBP.2.3.2.1	MRC gender in-house network																								
Goal-4.5	ICBP.2.3.2.2	Gender mainstreaming in water and related resources																								
Goal-4.5	ICBP.2.3.2.3	Networking with external																								
Goal-4.5	ICBP.2.3.2.4	Provision of technical support, tools and guidelines for gender responsive development																								
Goal-4.5	ICBP.2.3.2.5	Training courses on gender mainstreaming in project cycle management																								
Goal-4.5	ICBP.2.3.2.6	Mid term project evaluation																								

3.5. Water Utilisation Programme (WUP)

3.5.1 Programme Overview

The Water Utilization Programme (WUP) Start-up Project, funded by the Global Environment Facility (GEF) and executed by the World Bank (WB), was planned and approved for implementation over a seven year period from 2000 to 2006. An extension of WUP's completion and closing dates of one year to 31 December 2007 and 30 June 2008 respectively was granted in late 2006

Purpose

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 prospect of increased water diversions and constructions represent competing water uses that impact on 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.

Approach

The WUP 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)".

Under this objective areas of work are 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 to develop procedures for water use and management.

Strategy

The overriding principle governing the WUP process is that the Member Countries own it, with the Secretariat acting as a facilitator. The WUP will assist the MRC Member Countries 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). An additional modelling project is also carried out.

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 Guidelines"; 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 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:

Component 1: Basin Modelling and Knowledge Base

- Decision Support Framework (DSF), DSF enhancement and capacity building

Component 2: Environment and Trans-boundary Analysis

- 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 Procedures for Water Quality

Component 3: Procedures for Water Utilization

- 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
- Procedures for Water Quality

Component 4: Management and Institutional Strengthening.

- Project Management and Capacity Building for MRCS and NMCs.

List of agreements/projects

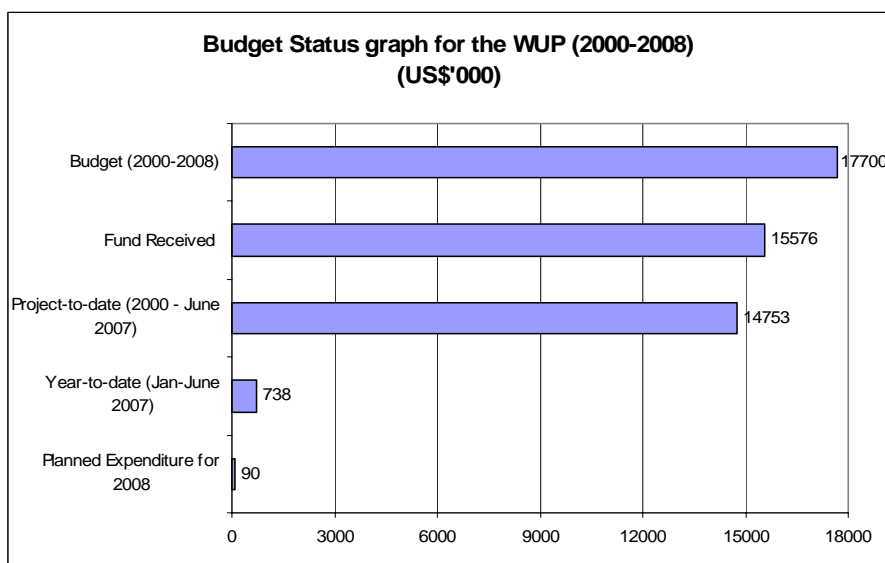
(US\$ 1,000)

Project title	Start date	End date	Budget	Balance 2007 (*)	Donors
Active projects					
GEF World Bank contribution to the Water Utilisation Programme	Jan2000	Dec 2007	11,000	433	GEF
Finland contribution to the Water Utilization Programme	Jun 2001	Jan 2007	3,620	545	Finland
France contribution to the Water Utilization Programme	2000	2004	659	70	France
Support to position of senior modelling advisor	14/03/05	13/03/08	597	192	Finland
Projects in preparation					
Water Utilisation Programme – follow up project	N/A	N/A	N/A		tbd

(*) Balance as per end June 2007

3.5.2 Progress of WUP for 2007

The following graphs provide: An overview of the budget status of the programme; the outputs achievement for the year 2007 is also provided.



Planned and achieved outputs for 2007

- WUP1.4.1 WUP-Fin Phase 2 completed;
- WUP1.4.2 DSF maintenance and enhancement;
- WUP1.5.2 DSF National Case Studies: The DSF application of 2 Case Studies for each NMC completed;
- WUP3.8 Assisting NMCs to further development of Technical Guidelines to implement Procedures for Maintenance of Flows on the Mainstream and Procedures for Water Quality; Assisting NMCs for Capacity Building and Procedures Disseminations.

Significant Problems Encountered, Corrective Action Taken

The current WUP Start-Up Project is planned to close by end December 2006. Nonetheless, there are still some unfinished WUP activities with remaining WUP fund. Therefore, the MRC Joint Committee approved for WUP Extension until October 2007. However, MRC Member Countries requested the World Bank to formulate a follow up WUP 2 Project (GEF 2). Therefore, the World Bank in closed consultation and collaboration with MRCS and NMCs has started to prepare for a project formulation process in November 2006. In this connection, the World Bank recommended to retain one WUP Team member beyond October 2007. Subsequently, in August 2007 the MRC Joint Committee approved to retain WUP Team Leader beyond October 2007 until March 2008 subject to available funds. In addition, the MRC Joint Committee also instructed that the TORs of WUP Team Leader will be revised to fit with new assignment which focuses on coordination and facilitation for the project formulation, coordination and facilitation for Technical Review Group (TRG) to develop the Technical Guidelines to implement the Procedures for the Maintenance of Flows on the Mainstream (PMFM) and the Procedures for Water Quality (PWQ), making a plan to handover WUP

activities to relevant MRC Programmes, making a plan to work on pending issues of approved Procedures, WUP Completion Report and Final Workshop.

Donor reviews or appraisals

The World Bank Supervision Mission took place in March 2007. The World Bank expressed satisfaction of over all progress of WUP activities, however, realizing that the process to develop Technical Guidelines to implement the Procedures for Maintenance of Flows on the Mainstream (PMFM) and the Procedures for Water Quality (PWQ) need more time and provided strong support to WUP Team and NMCs activities.

An Independent WUP Evaluation was carried out in May 2007, which concluded that WUP *“...has been successful in meeting the legal requirements, commitments and expectations set out in key documents with one exception.”* – the final adoption of the PWQ. The Evaluation Team also concluded *“...that without a follow-up project, the achievements, outputs and long-term value of the WUP...will not be sustainable and have limited impact.”*

The main conclusions and recommendations of this evaluation are taken up in the draft WUP Completion Report.

3.5.3 WUP Workplan for 2008

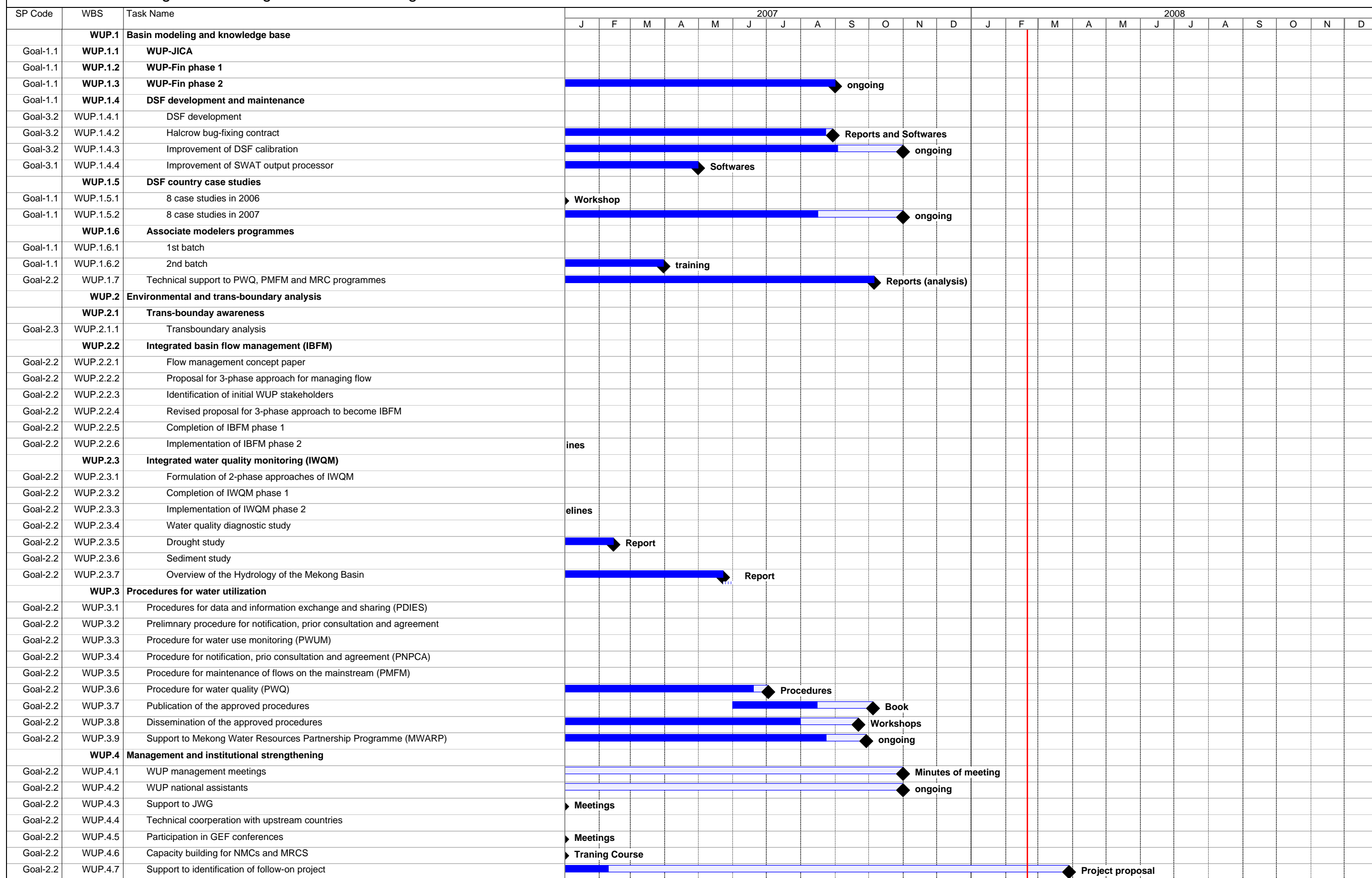
Activities in 2008 will be subject to new and additional funding becoming available

- Coordination and facilitation for the Mekong Water Resources Partnership Program (MWARP): WUP will hand over this activity to BDP in January 2008.
- Coordination and facilitation for the formulation of WUP 2 or Mekong Integrated Water Resources Management Support Project (M-IWRMSP): WUP in close collaboration with BDP, AusAID and the World Bank will organize a regional meeting in January 2008 to discuss and agree on a draft project scope, a proposed formulation plan, ToR for a consultant, and implementation arrangements for the countries and MRC for further preparation of the project. Subsequently, WUP will hand over this task to BDP in January 2008.
- Preparation and coordination for the preparation of WUP Completion Report and Final Workshop: WUP has employed a consultant to work out on the WUP Completion Report in December 2007 and plans to circulate the draft report to the countries in January 2008 and the Final Workshop in February or March 2008.
- Plan to hand over WUP activities to other relevant MRC Programs: WUP has prepared the plan to hand over WUP activities to other relevant MRC Programmes in November 2007. The hand over to other MRC Programmes will be completed in January 2008.

Donor reviews or appraisals planned in 2008

None

Water Utilization Programme - Progress and Work Programme 2007-2008



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. However, at the same time they also benefit most of national flood cycles in terms of subsistent livelihoods. Efficient flood management, also 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 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 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: Regional FMM Centre

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

This component will provide guidelines for structural measures and flood proofing, aimed at reducing the vulnerability of societies 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 and mitigation interventions will be developed and ranked in terms of most effective or most feasible.

Component 3: Enhanced Cooperation in Addressing 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, 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: Regional FMM Centre

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

Expected outputs are: (i) Identified impacts of hydraulic structure on flooding, (ii) Best practise guidelines for structural flood protection measures, and (iii) a basin-wide plan for structural flood protection measures.

Component 3: Enhanced Cooperation in Addressing Trans-boundary Flood Issues

Expected outputs are: (i) Information related to trans-boundary flood issues including a list of trans-boundary flood issues, and a set of best practice instruments and case studies, (ii) Raised awareness and skills, including a common understanding about MRC's mandate and better awareness knowledge and skill with respect to conflict management and resolution, and (iii) A Toolbox, including a list of tools needed for facilitating addressing differences and disputes; administrative tools; and technical tools.

Component 4: Flood Emergency Management

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

(US\$ 1,000)

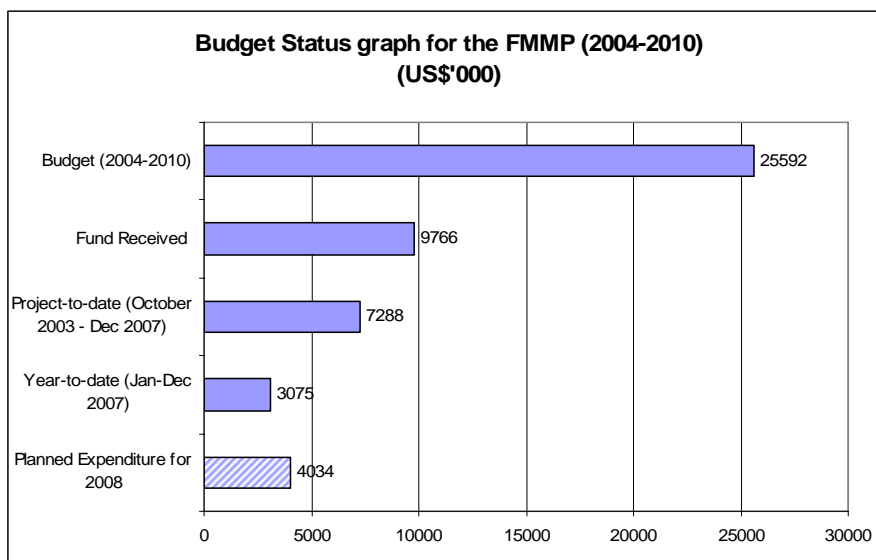
Project title	Start date	End date	Budget	Balance 2007 (*)	Donors
Active projects					
Dutch contribution to the RFMMC	01/06/05	31/12/10	8,211	4,423	Netherlands
Dutch contribution to the FMMP -NFUs	01/01/07	31/12/10	264	254	Netherlands
Danish contribution to FMMP - NFUs	01/01/07	31/12/10	211	176	
Danish contribution to FMMP coordination	01/01/05	31/07/09	605	305	Denmark
OFDA funding for provision of Flood Early Warning	01/01/03	31/12/08	1,250	27	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	2007	Netherlands
ADB contribution to Flood Proofing Measures	01/04/05	31/12/06	1,000	800	ADB
Dutch support to mediation of flood issues	01/06/05	31/12/10	1,565	1,283	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	291	0	EU
EC-ECHO contribution for support for implementation of the flood preparedness programmes	01/02/07	05/2008	375	193	EU
Japan contribution to the RFMMC	27/10/05	31/12/10	970	NA	Japan
GTZ project for land use and flood emergency management phase I	18/08/04	31/08/07	3,530	NA	Germany
GTZ support to the Disaster Prevention and Flood Protection Phase II	01/05/08	30/04/10	4,320 ^(a)	NA	Germany

(*) Balance as per end November 2007

^(a) Figure is calculated based on the exchange rate 1 EUR = 1.44 USD (15 December 2007)

3.6.2. Progress of FMMP for 2007

The three following graphs provide an overview of the budget status of the programme. It is noted that for the first graph the total budget of US\$ 25,592 mio, includes the support from all donors, the Programme Status information in the graph, however, include only the funds managed by FMMP, i.e., excluding the funds from GTZ and Japan



Planned and Achieved Outputs for 2007

Component 1: Regional FMM Centre

- FMMP1.1.1 Communication link between the MRCS and the RFMMC: has been put into operation with the video conference facilities being installed at RFMMC and MRCS.
- FMMP1.1.4 Roadmap for improved short-term and medium-term flood forecasting: Two institutional and technical reports describe the required overall and specific functionalities of the RFMMC and a framework for improving the short and medium flood forecasting system.
- FMMP1.1.5 Hydrological Condition Report for the LMB for 2006-2007: was presented to the Twenty-fifth Meeting of the MRC Joint Committee, May 2007.
- FMMP1.1.8 Annual flood report for 2006: emphasizes on data analysis and the temporal and spatial nature of floods and flooding in the Mekong region. This enables MRC to build up a complete picture of all aspects of the Mekong flood regime and becomes a valuable source of data for the FMMP and a solid source of information for all those involved in flood management and mitigation in the basin.
- FMMP1.3.1 Completion of OFDA funded projects "Provision of Flood Early Warning to the Flood Vulnerable Community in LMB, Cambodia.
- FMMP1.3.2 Assessment and inventory of flood vulnerable communities in the LMB: The report describes an overview of flood vulnerability of the LMB and its requirements in terms of provision of flood warning and dissemination; and an overview of institutional framework of member country agencies responsible for flood warning and dissemination and Regional Flood Management and Mitigation Center; and general requirements for

strengthening the flood early warning information and dissemination systems in the LMB.

FMMP1.4.2 Fifth Annual Mekong flood forums for 2007: The proceedings for the AMFF-5 will be available. The theme of Forum was “Improving Data Inputs Towards Medium-term Flood Forecasting and Warning in the Lower Mekong Basin”.

FMMP1.5.1 Construction of the new building for the RFMMC: The new building is completed, the office subsequently relocated.

Component 2: Structural Measures and Flood Proofing

FMMP2.1.7 Framework for Integrated Flood Risks Management (IFRM) for LMB: The report enables BDP staff to understand, identify and broadly assess flooding impacts and considerations when evaluating water resource development and infrastructure projects proposed for inclusion in the BDP.

Component 3: Enhanced Cooperation in Addressing Trans-boundary Flood Issues

FMMP3.1.1 National reports of perspectives on trans-boundary flood issues: identifies and prioritizes the key issues at the national level to enhance the MRC capacity in addressing trans-boundary flood issues.

FMMP3.1.2 Regional report on trans-boundary flood issues of the LMB: provides a list of regionally concerned trans-boundary flood issues, which will be compiled to set out at a general level the key issues of focus for the FMMP-Component 3. This will be done through bilateral / regional discussions between the NMCs and concerned National Line Agencies.

FMMP3.2.1 Report on Mandate of MRC in addressing differences and disputes: A comprehensive analysis on the prevention, mitigation and resolution of differences and disputes between the Member Countries, as well as review of key provisions of general international law and of practices adopted by the international community, which may apply to relations between the Member Countries as well as all riparian Countries, or which may facilitate and/or support the interpretation and application of the relevant provisions of the 1995 Mekong Agreement.

Component 4: Flood Emergency Management

FMMP4.1.1 Flood Preparedness Programmes in selected provinces and districts of Cambodia and Vietnam: The programmes capture all system needs at this level for improving flood preparedness and mitigation together with an implementation plan, which identifies i) consolidation of

response capacities and actions; ii) activities oriented to enhancement of response capacities in the short and medium term; and iii) activities oriented towards implementation of mitigation measures in the short and medium term.

Component 5: Land Management

- FMMP5.1.1 Flood probability information available for selected pilot area in Cambodia: The flood probability data sets and the maps at a suitable scale are available for land use planning purposes.
- FMMP5.1.2 Guidelines and training modules in using improved flood probability information for land use planning will be available.

Significant Problems Encountered, Corrective Action Taken

The problems encountered were (i) the delay of the component 2 due to the complex process of contract negotiation with the consulting firm on the budget and ToRs; (ii) the delay of component 3 due to the complexity and sensitivity of the flood trans-boundary issues; and (iii) no river monitoring during 2006-2007 due to unavailability of the water level data at Ubon station. All these delays, however, have been solved successfully, namely (i) the implementation of component 2 started in late September 2007 with the launching workshop and followed by an inception phase; (ii) the regional consultation meeting on Component 3 document has been conducted on 14 September 2007. the FMMP team will accommodate all the comments and recommendations from the meeting into a final version. FMMP will work closely the Member Countries and MRCS management to finalise the documents and submit to JC members for approval during the next reporting period; and (iii) the FMMP team has conducted a meeting with TNMC to discuss and find a solution. The meeting suggested that a long-term average of water level at Ubon station would be taken for flood forecasting and river monitoring purposes.

Donor reviews or appraisals

OFDA has carried out the evaluation of the project "Provision of Early Warning Systems to Flood Vulnerable Communities in the Lower Mekong River Basin". The MRC-GTZ joint progress review of the projects under FMMP component 4 and component 5 was completed.

Relevant JC and Council decision taken in 2007

The Twenty-fourth Meeting of the Joint Committee decided to further clarify the co-management concept. The FMMP Coordinator should be responsible for the overall management and performance of the programme, while the Chief Technical Advisor ensures the quality of FMMP outputs in terms of technical requirements and reporting standards. The JC Preparatory meeting for Fourteenth MRC Council Meeting approved the revised document of Component 3 of the Flood

Management and Mitigation Programme. The revised document should be shared with donors of the FMMP. The implementation mechanism of Component 3 should be further clarified with Member States. The meeting also acknowledged the completion of the working document on the mandate paper of 1995 Agreement in addressing the trans-boundary flood issues.

3.6.3. FMMP Workplan for 2008

Total planned expenditure of the programme for 2008 is 4,034,000 USD which has been shown in the Budget status graph for the FMMP in section 3.6.2.

Component 1: Regional FMM Centre

FMMP1.1.2 Database for river flood forecasting and monitoring: An operational database mainly for water level and rainfall data will be set up at RFMMC for the flood forecasting purposes. This output needs engagement of the Member Countries in sharing and exchanging the data for medium flood forecasts.

FMMP1.1.9 Annual flood report for 2007: The theme has not been determined yet, but could possibly be the socio-economic benefits and costs of the flood regime, meteorological aspects and the potential consequences of climate change, including links with ENSO.

FMMP1.7.1 Flood risk maps for a part of Chiang Rai province: A set of maps, animations and time series to present flood extent and mechanism will be produced.

FMMP1.7.2 A set of guidelines and recommendations for flood mapping and forecasting in the LMB.

The above two outputs require (i) on time delivery and installation of the equipment, such as satellite internet telemetry devices, equipment for water level stations etc; and (ii) good results of hydrological and topographical surveys.

Component 2: Structural Measures and Flood Proofing

FMMP2.1.1 Nature and character of flooding of the Mekong River Basin: The report will contain a description of flooding for the Mekong River and its tributaries.

FMMP2.1.2 Best practice guidelines for flood proofing building and infrastructure in urban and rural areas.

FMMP2.1.3 Best practice guidelines for the use, design, construction, O&M of major infrastructure.

FMMP2.1.4 Best practice guidelines to assess the significance of environmental and ecological impacts of infrastructure.

- FMMP2.1.5 Best practice guideline to select and integrate 'hard' and 'soft' management measures to achieve maximum effective flood risk reduction.
- FMMP2.1.6 A Prioritized FMM 'Project Development and Implementation Plan (ProDIP): A prioritized list of potentially effective 'hard' and 'soft' projects, and their rank in terms of socio-economic and environmental benefits.
- Achievement of the above outputs under this component needs (i) full engagement of the Member Countries in sharing and delivering the data; and (ii) their participation and guidance during the implementation period.
- FMMP2.2.1 Guideline on Best Practices for the Design of the Roads in Floodplain Areas in Cambodia and Vietnam.

Component 3: Enhanced Cooperation in Addressing Trans-boundary Flood Issues

- FMMP3.1.3 Report on best practices and instruments: A compilation of documents and materials reflecting the laws, regulations, agreements, and practices currently applied by the governments of the four MRC Member Countries as well as those practices of regional organizations other than the MRC such as ASEAN to address trans-boundary differences and disputes directly and indirectly related to natural resource management.
- FMMP3.3.2 Improved Hydraulic Model for Mekong Delta: An improved ISIS model will be available as a technical tool for the impact assessment of structural measures on flood conditions.
- Achievement of the outputs under this component needs the inputs from the international, regional and national consultants. The delay of recruiting the consultant would lead to the delay of achieving the outputs.

Component 4: Flood Emergency Management

- FMMP4.4.1 Flood Preparedness Programmes in selected provinces and districts of Cambodia, Lao PDR and Vietnam implemented: The programmes capture all system needs at this level for improving flood preparedness and mitigation together with an implementation plan, which identifies i) consolidation of response capacities and actions; ii) activities oriented to enhancement of response capacities in the short and medium term; and iii) activities oriented to implementation of mitigation measures in the short and medium term.

Donor reviews or appraisals planned in 2008

USA and Netherlands will have the financial audits by the end of 2007 and mid of 2008, respectively. Germany will develop the documents for the Phase II of the projects under FMMP component 4 and component 5.

Flood Management and Mitigation - Progress and Work Plan 2007 - 2008

SP Code	WBS	Task Name	2007												2008											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	FMMP.1	Regional flood management and mitigation centre																								
	FMMP.1.1	Institutional and operational development of the RFMMC																								
Goal-4.1	FMMP.1.1.1	Communication link between the MRCS and the RFMMC	Communication link																							
Goal-1.4.4	FMMP.1.1.2	Database for river flood forecasting and monitoring																								
Goal-1.4.4	FMMP.1.1.3	Routine short-term river flood forecasting and monitoring																								
Goal-1.4.4	FMMP.1.1.4	Roadmap for improved flood forecasting																								
Goal-1.4.4	FMMP.1.1.5	Hydrological Condition Report for the LMB for 2006-2007	Institutional and Technical Reports																							
Goal-1.4.4	FMMP.1.1.6	Advanced medium-term river flood forecasting and monitoring	Report																							
Goal-1.4.4	FMMP.1.1.7	Annual flood report 2005																								
Goal-1.4.4	FMMP.1.1.8	Annual flood report 2006	Report																							
Goal-1.4.4	FMMP.1.1.9	Annual flood report 2007	Report																							
	FMMP.1.2	Coordination of the MRC FMMP																								
Goal-4.2	FMMP.1.2.1	Programme, component and project documents	ts																							
Goal-4.2	FMMP.1.2.2	Periodic progress reporting																								
	FMMP.1.3	Provision of flood early warning to flood vulnerable communities in the LMB, Phase I, Cambodia and Lao PDR (OFDA)																								
Goal-1.4.4	FMMP.1.3.1	Provision of flood early warning to vulnerable communities, phase 1, Cambodia	Report																							
Goal-1.4.4	FMMP.1.3.2	Assessment and inventory of flood vulnerable communities in the LMB	Reports																							
	FMMP.1.4	Annual Flood Forum																								
Goal-1.4.4	FMMP.1.4.1	Annual Mekong flood forum 2006																								
Goal-1.4.4	FMMP.1.4.2	Annual Mekong flood forum 2007	Proceedings																							
Goal-1.4.4	FMMP.1.4.3	Annual Mekong flood forum 2008	Proceeding																							
	FMMP.1.5	Construction of the Regional Flood Centre																								
Goal-4.1	FMMP.1.5.1	New building of the RFMMC	Building																							
	FMMP.1.6	Asian flood network (AfN)																								
Goal-1.4.4	FMMP.1.6.1	Regional flash flood guidance system																								
	FMMP.1.7	Strengthening of the flood management capacity for the Kok River in Chaing Rai province, Thailand																								
Goal-4.6	FMMP.1.7.1	Flood risk maps for a part of Chiang Rai Province	Maps																							
	FMMP.1.7.2	Guidelines for flood mapping	Guidelines																							
	FMMP.2	Structural measures and flood proofing																								
	FMMP.2.1	Structural measures and flood proofing																								
Goal-1.4.4	FMMP.2.1.1	Nature and character of flooding in the LMB	Report																							
Goal-1.4.4	FMMP.2.1.2	Best practice guidelines for flood proofing in urban and rural areas	Guideline																							
Goal-1.4.4	FMMP.2.1.3	Best practice guidelines for the use, design, construction, O&M of infrastructure	Guideline																							
Goal-1.4.4	FMMP.2.1.4	Best practice guidelines to assess environmental impacts of infrastructure	Guideline																							
Goal-1.4.4	FMMP.2.1.5	Best practice guideline to select and integrate management measures for flood risk reduction	Guideline																							
Goal-1.4.4	FMMP.2.1.6	Prioritized FMM Project Development and Implementation Plan																								
Goal-1.4.4	FMMP.2.1.7	Framework for integrated flood risks management	Framework																							
	FMMP.2.2	Roads and floods project																								
Goal-1.4.4	FMMP.2.2.1	Best practice guidelines for design of roads in floodplains	Guideline																							
	FMMP.3	Enhanced cooperation in addressing trans-boundary flood issues																								
	FMMP.3.1	Information																								
Goal-2.3	FMMP.3.1.1	National reports of perspectives on transboundary flood issues	Reports																							
Goal-2.3	FMMP.3.1.2	Regional report on transboundary flood issues in the LMB	Report																							
Goal-2.3	FMMP.3.1.3	Report on best practices and instruments	Report																							
	FMMP.3.2	Awareness and skills																								
Goal-2.3	FMMP.3.2.1	Report on mandate of MRC in addressing differences and disputes	Report																							
Goal-2.3	FMMP.3.2.2	Report of implementation of pilot study																								
	FMMP.3.3	Toolbox																								
Goal-2.3	FMMP.3.3.1	Administrative tools for addressing differences																								
Goal-2.3	FMMP.3.3.2	Improved hydraulic model for Mekong delta	Improved model																							

Flood Management and Mitigation - Progress and Work Plan 2007 - 2008

SP Code	WBS	Task Name	2007												2008											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	FMMP.4	Flood emergency management																								
	FMMP.4.1	Flood emergency management strengthening																								
Goal-1.4.4	FMMP.4.1.1	Flood preparedness programmes in selected provinces and districts of Cambodia and Vietnam	→ Reports																							
	FMMP.4.2	Capacity building for preparedness planning and response through the use of flood information products in LMB (ECHO-I)																								
Goal-1.4.4	FMMP.4.2.1	Trainings for selected provinces of Cambodia, Lao PDR and Vietnam in use of MRC flood management products																								
	FMMP.4.3	Capacity building for preparedness planning and response through the use of flood information products in LMB (ECHO-II)																								
Goal-1.4.4	FMMP.4.3.1	Capacity building in selected provinces and districts of Cambodia and Vietnam																								
	FMMP.4.4	Support to implementation of flood preparation programme in LMB (ECHO-III)																								
Goal-1.4.4	FMMP.4.4.1	Implementation support in selected provinces of Cambodia, Lao and Vietnam	→ Reports																							
	FMMP.5	Land management																								
	FMMP.5.1	Land management																								
Goal-1.4.4	FMMP.5.1.1	Flood probability information available for selected pilot area in Cambodia	→ GIS-database,MapStats software,MapWindowSoftware																							
Goal-1.4.4	FMMP.5.1.2	Guidelines for improved flood probability information	→ Userguide																							

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 Countries 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 Countries (Cambodia, Lao PDR, Thailand and Viet Nam), during the period May 2006 to October March 2007.

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

The DMP comprises five components. Component 1 "Drought Forecasting" deals with data, forecasting, assessment and early warning. Component 2 "Drought Impact Assessment" deals with drought risk and vulnerability indicators and thresholds. Component 3 "Drought Management Policy" provides the regional enabling institutional and policy environment for cooperation with relevant agencies and organizations within the Mekong Countries. Component 4 remains the core of the programme – "Drought Preparedness and Mitigation Measures" where all activities directed at defining specific and tangible drought mitigation mechanisms and interventions – structural and non-structural – will be carried out. Component 5 "Programme Management" supports the overall management of the programme.

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. 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.

Main outputs

Component 1 - Drought Forecasting

Expected outputs are: (i) Data acquisition: established new and/or strengthened existing hydro-meteorological and other drought-related data acquisition networks; (ii) Data sharing: strengthened regional cooperation mechanisms for sharing drought-related data and information – e.g. MRCS data sharing agreements and mechanisms; (iii) Data analysis: strengthened drought forecasting data analytical capacity for relevant drought-related data; (iv) Drought forecasting: improved drought forecasting techniques and capacities developed and implemented; (v) Early warning: 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) Drought risk and vulnerability indicators: appropriate drought indicators/indices established integrating both probability and vulnerability; (ii) Drought impacts: economic, social and environmental impacts of vulnerable people and water related resource systems assessed; (iii) Drought indicator thresholds: critical regional and local thresholds reflecting increasing levels of risk and vulnerability to drought agreed by stakeholders.

Component 3 - Drought Management Policy

Expected outputs are: (i) Drought management policy: MRC drought-related policies and procedures developed and agreed, including sector policy analyses and advice completed enabling rationalisation of sector policies in Member Countries with particular emphasis on trans-boundary drought management issues; (ii) Capacity of partners: 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) Networking with related institutions, organisations and civil society: 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) Cooperation with upstream riparians: technical cooperation with up-streams riparian countries strengthened - especially China - on drought-related issues.

Component 4 - Drought Preparedness and Mitigation Measures

Expected outputs are: (i) Planning mechanisms: regional and local drought awareness, 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) Preparedness and mitigation strategies: drought awareness, preparedness and mitigation strategies formulated addressing economic, social and environmental impacts to vulnerable people and water related resource systems; (iii) Scenario analysis: drought mitigation scenarios, comprising both structural and non-structural interventions (e.g. infrastructure programmes and projects, and policies), 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 5 – Programme Management

Expected outputs are: (i) Programme Implementation Plan: the PIP is the first document that is produced once programme funding is assured. It is based on the up-to-date reality found in the field at start-up. An approved PIP provides confirmation that all implementing partners are in agreement with respect to programme design, management, operational details, responsibilities, schedules and finances. The process of preparing a PIP may be seen as essentially a process of validation and consensus building; (ii) Annual work planning: annual work planning effectively updates the PIP through reviewing actual progress and revising future plans in accordance with the up-to-date reality. The annual workplans provide an opportunity for the project partners to validate and maintain consensus in project implementation; (iii) Programme management: these activities are on-going throughout the life of the programme, reflecting the human and financial resources required to implement agreed activities; (iv) Financial management: human and financial resources required to assure transparent and accountable management of financial resources; (v) Monitoring and reporting: on going monitoring and reporting to programme stakeholders in accordance with procedures and criteria agreed in the PIP and successive workplans; (vi) Communication and liaison: on-going communications and liaison activities with programme stakeholders as agreed in the PIP and successive workplans; (vii) DMP steering committee: support for the joint management of the programme through a Drought Management Programme Steering Committee or other such multi-stakeholder management body.

3.7.2 Progress of DMP for 2007

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 and intensifying the fundraising with donors and development partners.

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.

Planned and achieved outputs for 2007

The programme document is finalized.

The fundraising activity for the programme implementation continued throughout 2007.

Significant problems encountered, corrective action taken

The Programme is not funded yet. There is therefore no responsible Programme Officer available to manage the programme, possible cooperation from other MRC Programmes to share the activities for the programme start-up review and revision of the programme budget as advised by the Joint Committee.

Donor reviews or appraisals

None

3.7.3 *DMP Workplan for 2008*

The fundraising activity for the programme implementation will be continued.

Depending on above, the following further activities may be conducted:

- Drought report: compilation of a concise report on the hydrologic characteristics of Mekong basin droughts, as well as their socio-economic dimension. This document would provide background information for fundraising activities. It is based on a previous internal report of the MRCS, more recent research presented at the regional consultation workshop on the programme as well as a research collaboration with IWMI.
- Donor appraisal of programme document, funding agreement.
- Start-up activities, including set up of programme management structure, drafting of PIP, and identification and start up of priority (quick impact) activities.

Donor reviews or appraisals planned in 2008

None.

3.8. Agriculture, Irrigation and Forestry Programme (AIFP)

3.8.1 Programme Overview

As per the current programme document, the programme was concluded at the end of 2005. A concept paper for an AIFP Phase 2 has been developed, which takes into account continuing activities from Phase 1.

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 harvest 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 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 the 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. The intrusion of seawater into the Delta is becoming an increasing 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 nutrient leaching, erosion and the sedimentation of rivers and reservoirs. The forests of the lower Mekong provide habitats for a wide variety of animals, which, apart from their intrinsic and cultural values, can provide the basis for 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: "Planning and coordination of sustainable management of resources in watersheds by selected relevant organisations of the four Lower Mekong Basin riparian countries are improved at national and regional levels."

Eventually this will contribute to the overall goal of the watershed management component:

"The watersheds of the Lower Mekong River Basin fulfil their ecological, economical and social functions and provide a sustainable basis for improved livelihood of the population."

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. Demonstration of Multi-Functionality of Paddy Fields (DMPF) and Improvement of Irrigation Efficiency on 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 Program 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 programme, 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 CGIAR-CPWF.

Main Outputs

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

Component 1: Watershed Management (WSM)

1. First draft of a Watershed Management Blueprint based on policy and institutional development made available in all Pilot Watersheds. Watershed Management decrees has been under development in two of the four Countries.
2. The information, data and knowledge management on the national and regional level improved. The projects' information and knowledge management tool Mekonginfo fully integrated into the MRCS system and managed by IKMP. A concept for integrating climate change adaptation into the activities of the WSMP developed.
3. Six capacity building packages carried out in three of the four Countries. Learning and information centers were established and functioning properly in pilot watersheds in all four countries.

Component 2: Irrigation and Agriculture

1. Demonstration of multi-functionality of paddy fields, paddy fields' non-production functions demonstrated through the quantified analysis of selected functions.
2. Improvement of irrigation efficiency on paddy fields, a practical guidance to improve irrigation efficiency produced.
3. MRC support to Challenge Program on Water and Food, network among related projects/institutions established.

List of agreements/projects

(US\$ 1,000)

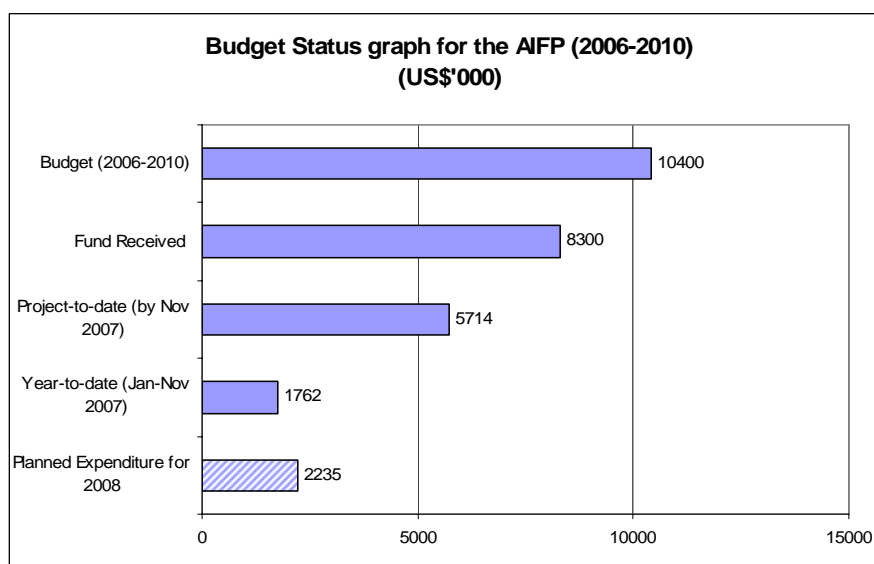
Project title	Start date	End date	Budget	Balance 2007 (*)	Donors
Active projects					
GTZ project on watershed management (TA)	01/12/05	30/11/08	5,000	2,250	Germany
Japan contribution to Demonstrate the Multi-Functionality of Paddy Fields	Feb/03	Nov/07	1,227	16	Japan
Japan contribution to Improvement of irrigation Efficiency	15/06/05	14/6/08	1,010	206	Japan
Challenge Program on Water and Food	Jan/03	Dec/08	1,129	72	CGIAR-IWMI
Projects in preparation					
Contribution to Improvement of irrigation Efficiency	mid/08	mid/11	1,000	N/A	N/A
KfW contribution to Sustainable Watershed Management project	N/A	N/A	800(**)	N/A	Germany (KfW)

(*) Balance as per end November 2007

(**) This figure covers only technical support portion provided by the MRC Secretariat. Whole package of the project is estimated 6.18 million USD.

3.8.2 Progress of AIFP for 2007

The following graph provides an overview of the budget status of the Programme for the year 2007 which includes budget for the Programme period, total funds received and expenses on the Project-to-date and Year-to-date.



Planned and achieved outputs for 2007

Component 1: Watershed Management (WSM).

MRC-GTZ Watershed Management Project (WSMP):

AIFP1.1.1.1 Policy Analysis in MRC countries, and regional consultation on policy analysis and institutional development

- AIFP1.1.2.1 Mekong Info Maintenance
- AIFP1.1.2.2 Watershed Management Resource Kit Version 1.0 finalized, main parts translated into riparian languages and operational as a draft working document for capacity building.
- AIFP1.1.2.3 Database and information system needs assessment in Thailand and Laos.
- AIFP1.1.2.4 Watershed Management learning centers in all four pilot watershed established. Database and information system needs assessment in Thailand.
- AIFP1.1.3.2 Approximately thirty capacity building workshops conducted.

Component 2: Irrigation and Agriculture.

Demonstration of Multi-functionality of Paddy Fields (DMPF):

- AIFP2.1.3 Analysis of several paddy fields' functions (i.e. Flood mitigation, Soil conservation, Nurturing aquatic ecosystems and Socio-economic issues) has been nearly completed and its summary result has been presented at the Symposium of International Network for Water and Ecosystem in Paddy Fields (INWEPF) in July and the fourth regional workshop of DMPF.

The fourth regional Workshop to summarize DMPF activities and to complete DMPF was organised in August 2007.

Improvement of Irrigation Efficiency on Paddy Fields (IIEPF):

- AIFP2.2.2.1 Intensive dry season data collection at field level in four pilot sites has been completed, and interim reports from most of the member countries are also completed.

Another series of field level observations covering rainy season is on-going and will be completed in early 2008. The report will be published in 2008.

- AIFP2.2.2.2 A brief technical report focusing on dry season water balance analysis is planned to be published to 3rd Southeast Asia Water Forum and the Paddy and Water Environment (PWE) Journal.

Challenge Program on Water and Food (CPWF):

The CPWF Mekong Basin Focal Project were completed by the end of 2007. The three CPWF Small Grants for Impact Projects in the Mekong were completed by August 2007.

- AIFP2.3.1.1 Key on-going activities for the AIFP research coordinator are monitoring and evaluation of eight first call projects in the basin. This includes evaluation of reports and site visits, two of which have been carried out in 2007. The CPWF's second open call has been completed, and depending on

results, it is likely that additional projects will commence in the Mekong.

AIFP2.3.1.6 An additional key continuing task is the Research Coordinator's contributions to the CPWF Management Team. This year has been dominated with designing a proposal for the CPWF's Second Phase, and, the drafting of its mid-term plan.

The CPWF has undergone an external review, the results of which were presented to the programme in August 2007.

The CPWF held its consortium steering committee (of which the MRC is a member) meeting in Davis, California in March, 2007. The Director of the Operations Division attended on behalf of the MRC.

Significant problems encountered, corrective action taken

As the AIFP phase II document is still being developed, AIFP faces substantive and process integration difficulties, in particular as regards its technical assistance. This is being addressed through regular management meetings.

While pursuing its work programme for the second phase, WSMP has realized that not all MRCS programmes are always well enough informed about its ongoing activities, which can lead to suboptimal results. To improve coordination and cooperation with MRC programmes WSMP has therefore committed itself to actuate a more proactive information policy. A first step on this path will be an information meeting regarding its policy analysis and development component that is going to be announced shortly.

Relevant JC and Council decisions

None.

3.8.3 AIFP Workplan for 2008

Component 1: Watershed Management (WSM)

AIFP1.1 Under this component the evaluation of second phase of WSMP and proposal for third phase will be conducted. A result-based Monitoring system for WSMP will be also established;

AIFP1.1.1.1 Final Policy Analysis Report;

AIFP1.1.1.2 Policy drafting process initiated; Watershed Committees initiated in Cambodia, Laos and Viet Nam.

AIFP1.1.2.2 Draft Watershed Management Resource Kit version 2.0 finalized and approved for publication, fully translated into riparian languages and used for Capacity Building;

AIFP 1.1.3 Capacity Building continued.

Component 2: Irrigation and Agriculture.

Improvement of Irrigation Efficiency on Paddy Fields (IIEPF):

AIFP2.2.4 Guidelines for efficient irrigation water use is to be drafted and presented to Member Countries for their review at the wrap-up workshop in the middle of 2008, which also completes this three-year project.

Challenge Program on Water and Food (CPWF):

AIFP2.3.1.1 Continuous monitoring and evaluation of CPWF projects within the Mekong River Basin.

AIFP2.3.1.3 The CPWF Basin Coordinator will identify key collaborators in the basin and extend the CPWF's network of influence within the region. Identified contacts, and the relationships nurtured, will (a) help to facilitate CPWF research activities in the basin; (b) are potential end users of CPWF end products, carrying these forward and delivering development and research-related impact.

AIFP2.3.1.5 The CPWF Basin Coordinator will identify key basin data sets to input into the CPWF Data and Information System.

AIFP2.3.1.9 The CPWF Basin Coordinator will contribute to the CPWF's synthesis research process as and when requested by the CPWF Benchmark Basin Coordinator.

Donor reviews or appraisals planned in 2008

IIEPF plans annual donor consultation meeting to review the project progress in early 2008.

A project progress review of the WSMP will be undertaken in March 2008.

Agriculture Irrigation and Forestry Programme - Progress and Work Programme 2007-2008

SP Code	WBS	Task Name	2007												2008											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	AIFP.1	Watershed management																								
	AIFP.1.1	MRC-GTZ watershed management project (WSMP)																								
	AIFP.1.1.1	Policy analysis and advice																								
Goal-1.4.1	AIFP.1.1.1.1	Policy analysis and report in 4 countries																								
Goal-1.4.1	AIFP.1.1.1.2	Instruments and processes for improved stakeholder coordination in WSM																								
Goal-1.4.1	AIFP.1.1.1.3	Concept for policy drafting in countries																								
	AIFP.1.1.2	Information management																								
Goal-1.4.1	AIFP.1.1.2.1	MekongInfo maintenance																								
Goal-1.4.1	AIFP.1.1.2.2	Watershed management resource kit																								
Goal-1.4.1	AIFP.1.1.2.3	Information needs assessment																								
Goal-1.4.1	AIFP.1.1.2.4	Existing experiences on WSM in Thailand documented																								
Goal-1.4.1	AIFP.1.1.2.5	WSMP information and knowledge management fully integrated into the MRCS system																								
Goal-1.4.1	AIFP.1.1.2.6	Climate change adaptation mainstreamed into information management																								
	AIFP.1.1.3	Capacity Building																								
Goal-1.4.1	AIFP.1.1.3.1	Documentation training needs assessment																								
Goal-1.4.1	AIFP.1.1.3.2	6 capacity building packages																								
Goal-1.4.1	AIFP.1.1.3.3	Impact monitoring assesses significance of conducted trainings																								
	AIFP.1.2	KfW Nam Ton watershed management project																								
Goal-1.4.1	AIFP.1.2.1	MRC support to project formulation																								
	AIFP.2	Irrigation and agriculture																								
	AIFP.2.1	Demonstration of multi-functionality of paddy fields																								
Goal-1.4.1	AIFP.2.1.1	Project preparation																								
	AIFP.2.1.2	Updating of irrigation database																								
Goal-1.4.1	AIFP.2.1.2.1	Irrigation scheme database																								
Goal-1.4.1	AIFP.2.1.2.2	Rice cultivation spatial information																								
Goal-1.4.1	AIFP.2.1.2.3	Irrigation water use assessment																								
Goal-1.4.1	AIFP.2.1.3	Analysis of paddy fields' multiple functions																								
	AIFP.2.2	Improvement of Irrigation Efficiency on Paddy Fields																								
Goal-1.4.1	AIFP.2.2.1	Project Formulation																								
	AIFP.2.2.2	Appraisal of irrigation system and its performance																								
Goal-1.4.1	AIFP.2.2.2.1	Establishment of data set																								
Goal-1.4.1	AIFP.2.2.2.2	Assessment of water balance, etc.																								
Goal-1.4.1	AIFP.2.2.2.3	Appraisal of scheme management																								
Goal-1.4.1	AIFP.2.2.2.4	Rapid appraisal process (RAP)																								
	AIFP.2.2.3	Enhancement of stakeholders' capacity																								
Goal-1.4.1	AIFP.2.2.3.1	Backstopping note																								
Goal-1.4.1	AIFP.2.2.3.2	RAP training workshop and initial assessment																								
Goal-1.4.1	AIFP.2.2.3.3	Assessment of capacity building needs																								
Goal-1.4.1	AIFP.2.2.4	Guidance for efficient water use																								
	AIFP.2.3	MRC support to Challenge Programme on Water and Food (CPWF)																								
	AIFP.2.3.1	Coordination and communication																								
Goal-1.4.1	AIFP.2.3.1.1	M&E of CPWF projects in the Mekong River Basin																								
Goal-1.4.1	AIFP.2.3.1.2	Project leaders' workshops in the Mekong																								
Goal-1.4.1	AIFP.2.3.1.3	Networking																								
Goal-1.4.1	AIFP.2.3.1.4	Synthesis research																								
Goal-1.4.1	AIFP.2.3.1.5	Key basin data sets included in CPWF data and information system																								
Goal-1.4.1	AIFP.2.3.1.6	Preparation of proposal for 2nd phase of CPWF																								
Goal-1.4.1	AIFP.2.3.1.7	Coordination of CPWF basin coordinators																								
Goal-1.4.1	AIFP.2.3.1.8	Design and implementation of CPWF international forum on water and food (1 and 2)																								
Goal-1.4.1	AIFP.2.3.1.9	Coordination of the CPWF synthesis research process																								

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, developing skills, and improving the access facilities to the remote communities and the delivery of rural services.

Reflecting Article 9 in the 1995 Agreement, the development objective of the Navigation Strategy is to: “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 infrastructure 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: Socio-economic 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. The cooperation package with China for navigation coordination will be based on this component.

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. Coordination and cooperation with China on navigation matters form the catalyst for MRC's dialogue and collaboration with the Upstream Partners.

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) is the high-level body responsible to stimulate a more detailed input of the member Countries 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 advisor is not only formulating and supervising all activities necessary to implement the NAP, but it is also supporting 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 are important partners in developing and assisting in the implementation of the international standards for navigation safety and environmental protection measures. Actual implementation of the activities is done by the related line agencies in the countries with assistance from consultancy companies if required. Increasingly the private operators are becoming direct partners as they are among the beneficiaries of the programme.

Main Outputs

The main outputs of the NAP are the following:

1. Waterway and safety improvement designs and master plans (Component 1). Cooperation package with China.
2. An updated and harmonized legal regime legal to guarantee freedom of navigation consisting of legal and operational navigation agreements (Component 2).
3. Installation of aids to navigation. Environmental safeguards and emergency plans in place. (Component 3).
4. River Information Services, waterborne transport promotion and coordination (Component 4).
5. Strengthening of management capacities of national counterparts (Component 5).

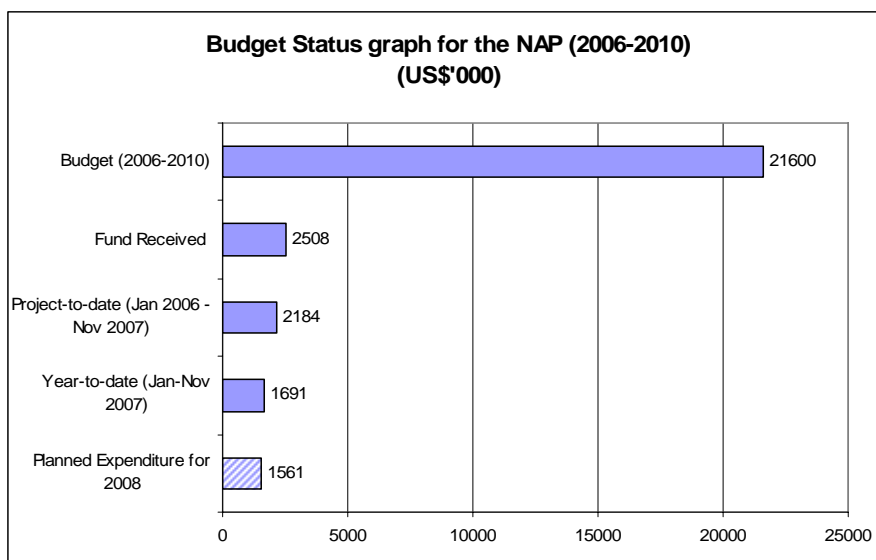
List of agreements/projects

(US\$ 1,000)

Project title	Start date	End date	Budget	Balance	Donors
Active Projects					
Belgium contribution to the Navigation Programme	04/10/05	04/10/10	6,700	4,600	Belgium

3.9.2 Progress of NAP for 2007

The following graph provides the Planned Expenditure for the year 2008 and an overview of the budget status of the Programme for the year 2007 which includes budget for the Programme period 2006-2010, total funds received and expenses on the Project-to-date and Year-to-date.



Achieved Outputs for 2007

The main outputs of the NAP in 2007 were the following:

Component 1 - Socio-economic Analysis and Transport Planning

- NAP1.1.1 Condition Surveys of Dangerous Areas for Navigation
- NAP1.1.2 Improvement (a) between Luang Prabang and Pakse in the Lao PDR and Thailand, tendering and contracting for these services are expected to complete by the end of 2007. And (b) from the Cambodia-Viet Nam border to Can Tho Port on the Mekong/Vam Nao/Bassac Rivers in Viet Nam, full set of bidding document is being prepared. The tendering process is expected to start by middle of March 2008. The outcome of the condition survey includes a detailed engineering design for the actual installation of channel markers and beacons (see component 3).
- NAP1.1.3 Feasibility Study on "Hydrodynamic and morphological impacts of channel dredging in Tonle Sap Lake" was completed in September 2007.

Component 2 - Legal Framework for Cross-border Navigation

- NAP2.1.1 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 was completed which resulted in a renewed draft Agreement for cross-border navigation. This draft Agreement is under negotiation between both countries. MRC has facilitated the discussions through regional meetings. A comprehensive comparison was made with the

Scheldt Cross-border Navigation Cooperation between Belgium and the Netherlands during a Working Visit to Europe in June 2007.

Component 3 - Traffic Safety and Environmental Sustainability

NAP3.1.1 A comprehensive aids to navigation system composed of 56 buoys and 8 lead structures was put in place along the Mekong River between Phnom Penh Port and the Cambodia-Viet Nam border. Navigation is possible 24 hours a day now that lighted buoys and beacons are installed. Excellent and timely results were obtained thanks to the technical co-management of the contractor and the Phnom Penh Autonomous Port and Waterway Department of Ministry of Public Works and Transport in Cambodia.

Component 4 – Information, Promotion and Coordination

NAP4.1.1 The Management Information System (MIS), Phase I, for Phnom Penh Autonomous Port was put in place through a joint project between the Cambodia-Belgium Consultancy Fund, MRC and Phnom Penh Autonomous Port. The MIS maintains a database of goods movement into, through and out of the port and is used by all port departments and related agencies such as customs, shipping lines, freight forwarders, shipping agents, trucking companies and others. All aspects of the port's commercial operation, environment, safety and security will be enhanced through the implementation and operation of the MIS. The next step is MIS II focusing more on container tracking and software applications for billing and tariff management.

NAP4.2.1 China has officially accepted a formulation mission by MRC navigation experts for the purpose of establishing a concrete cooperation project on navigation. One of the selected project proposals was accepted by China.

Component 5 – Institutional Development and Programme Management

NAP5.1.1 The Navigation Advisory Body (NAB), a high level body of NMCs and the national line agencies, responsible to stimulate a more detailed input of the Member Countries and to free the MRC Joint Committee from dealing with technical issues was established and the first two meetings have been held. NAB meets twice a year.

Management and Operational Support:

NAP5.1.2 The Inception Phase of the Project completed the establishment of the organisational structure of the project - NAP Office which consisted of the NAP Coordinator, the Chief Technical Advisor; Programme Officer and Programme Assistant.

NAP5.3.1 Project Implementation Plan (PIP) for the Belgian Contribution to MRC Navigation Programme 2006-2010: upon request by the Member Countries at the Navigation

Advisory Body Meeting in Phnom Penh, 3-4 October 2006, the NAP Work Plan has been converted into a PIP. The formulation of this PIP has been done through national consultations and regional consultation to once again reflect the true needs and the new transport trends in the countries. This process was completed with the approval on the PIP by all member countries on 28 March 2007.

Significant problems encountered, Corrective actions taken

The most significant problem of the NAP is lack of funds. 60% of the programme is still unfunded and development objectives can only be attained provided the programme is fully financed. MRC continues its fundraising for the NAP.

On an operational level, no significant problems have been encountered since the start of full implementation of the programme from August 2006. The progress is on track according to the plan of the PIP within the Belgium contribution to MRC NAP 2006-2010.

Donor reviews or appraisals planned in 2007

No donor review or appraisal has been planned

3.9.3 NAP Workplan for 2008

Component 1 - Socio-economic Analysis and Transport Planning

NAP1.1.2 Actual Condition Surveys of Dangerous Areas for Navigation Improvement (a) between Luang Prabang and Pakse in the Lao PDR and Thailand carried out, and (b) from the Cambodia-Viet Nam border to Can Tho Port on the Mekong/Vam Nao/Bassac Rivers in Viet Nam: tendering for these services will start at mid-March 2008. The outcome of the condition survey includes a detailed engineering design and preparation of full set of bidding document for manufacturing and installation of aids to navigation on priority areas (see component 3).

Component 2 - Legal Framework for Cross-border Navigation

NAP2.1.1 MRC will continue facilitating the negotiations between the legal task forces of Cambodia and Viet Nam in order to establish a legal framework for cross-border navigation for vessels of the member Countries and overseas ships visiting the ports in the delta. New agreement between the countries are envisaged to be signed by March 2008.

NAP2.1.2 During the formulation of the Project Implementation Plan, the Member Countries have asked MRC's assistance in conducting a study to provide recommendations for establishing a legal framework for cross-border navigation between Lao PDR and Thailand on the stretch down stream of Luang Prabang.

Component 3 - Traffic Safety and Environmental Sustainability

- NAP3.1.2 The condition survey of dangerous areas for navigation
NAP3.1.3 (Dangerous Areas) to be carried out in Component 1 will provide detailed engineering designs and full sets of bidding documents for manufacturing and installation of aids to navigation along priority areas. Upon selection of the contractors, the channel markers and beacons will be manufactured and installed.
- NAP3.2.1 Currently there are no environmental protection measures, no provisions for pollution mitigation, and no contingency plans in place for the Mekong River. This output will involve a risk assessment of major ports and waterway safety hazards, and an estimation of risk levels. The assessment will be formulated in such a way that it will be used to develop a scope for oil spill and accident prevention focusing on establishing rules, regulation, procedures and training. It will also cover contingency plans in case such accidents do happen.

Component 4 – Information, Promotion and Coordination

- NAP4.1.2 Development of MIS Phase II will be focusing on modules which have not been covered by Phase I, mainly on the development of software applications for billing and tariff management system, terminal operations, container tracking system, cargo management system, agent web interface, EDI messaging capability (UNEDIFACT), equipment utilization control, fuel usage control, gate control, dredging activity tracking, PDA and other activities as required. Finally, as also in phase I, it is foreseen that comprehensive training package will be provided.
- NAP4.1.4 Installation of Tidal Stations. So far, the ship masters and pilots at the estuaries do not have any feedback on the real time water levels at the estuaries. As the larger ships can only pass the bar at sea during high tide, the exact water level needs to be known to both the master of the incoming vessel and the pilots who will guide these larger vessels in. The Navigation Programme will assist in financially supporting the installation and hardware of two hydrological stations, one at Cua Tieu, the Mekong river mouth and one at Cua Dinh Anh, the Bassac river mouth. HYCOS will cover the first three years of the operations of the hydrological stations.
- NAP4.2.2 Cooperation between the Upper and Lower Mekong River navigation between MRC and its upstream dialogue partners: China and Myanmar. Based on the outcome of the expert mission, the concrete cooperation proposals developed in 2007 will be implemented.

Component 5 – Institutional Development and Programme Management

- NAP5.1.2 The NAP Office and NAB 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 line agencies and private sector, and coordination by the NMCs. 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.

Donor reviews or appraisals planned in 2008

Presently, no donor review or appraisal has been planned.

Navigation Programme - Progress and Work Programme 2007-2008

SP Code	WBS	Task Name	2007												2008											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	NAP.1	Socio-economic analysis and regional transport planning																								
	NAP.1.1	Studies and engineering designs for navigation improvements																								
Goal-1.4.3	NAP.1.1.1	Condition survey, Luang Phabang - Pakse																								
Goal-1.4.3	NAP.1.1.2	Condition survey, Cambodia/Viet Nam border - Can Tho Port on Bassac, Vam Nao, Mekong Rivers																								
Goal-1.4.3	NAP.1.1.3	Feasibility study: Sustainability of dredging of Tonle Sap for navigation																								
	NAP.2	Legal framework for crossborder navigation																								
	NAP.2.1	Preparatory work for legal framework																								
Goal-2.1	NAP.2.1.1	Legal study of current navigation regime in the Mekong Delta, draft protocol, Cambodia, Viet Nam																								
Goal-2.1	NAP.2.1.2	Legal study of current navigation regime, downstreams of Luang Phabang, Lao PDR, Thailand																								
Goal-2.1	NAP.2.1.3	Harmonised legal framework for navigation, Cambodia, Viet Nam																								
	NAP.2.2	Case studies, projects																								
Goal-1.4.3	NAP.2.2.1	Agreement on vertical clearance of planned Neak Leoung Bridge over Mekong, Cambodia																								
	NAP.3	Traffic safety and environmental sustainability																								
	NAP.3.1	Installation of aids to navigation																								
Goal-1.4.3	NAP.3.1.1	Aids to navigation installed, Phnom Penh Port - Cambodia/Viet Nam border																								
Goal-1.4.3	NAP.3.1.2	Aids to navigation installed, prioritised sections, Luang Phabang - Pakse																								
Goal-1.4.3	NAP.3.1.3	Aids to navigation installed, prioritised sections, Cambodia/Viet Nam border - Can Tho Port on Bassac, Vam Nao, Mekong																								
	NAP.3.2	Risk analysis and contingency planning																								
Goal-1.4.3	NAP.3.2.1	Risk assessment of oil spills, contingency plans																								
	NAP.4	Information, promotion and coordination																								
	NAP.4.1	Port and fairway information																								
Goal-1.4.3	NAP.4.1.1	MIS phase1 Phnom Penh Port, Cambodia operational																								
Goal-1.4.3	NAP.4.1.2	MIS phase2 Phnom Penh Port, Cambodia operational																								
Goal-1.4.3	NAP.4.1.3	MIS phase2 Phnom Penh Port, experience for other ports																								
Goal-1.4.3	NAP.4.1.4	Tidal monitoring stations at Bassak and Mekong, Viet Nam																								
Goal-1.4.3	NAP.4.1.5	Links to AHNIP and HYCOS water level stations for navigation																								
	NAP.4.2	Trade facilitation																								
Goal-2.4	NAP.4.2.1	Identification and formulation of cooperation with China and Myanmar on navigation issues																								
Goal-2.4	NAP.4.2.2	Cooperation project on navigation issues with China and Myanmar																								
	NAP.5	Institutional development and programme management																								
	NAP.5.1	Navigation Advisory Body (NAB)																								
Goal-1.4.3	NAP.5.1.1	NAB established																								
Goal-1.4.3	NAP.5.1.2	NAB operational																								
Goal-1.4.3	NAP.5.1.3	Networks with river basin organisations and transport related organisations																								
	NAP.5.2	Programme coordination and communication																								
Goal-1.4.3	NAP.5.2.1	with MRC units																								
Goal-1.4.3	NAP.5.2.2	with national agencies and others																								
	NAP.5.3	Planning, monitoring and reporting																								
Goal-1.4.3	NAP.5.3.1	Project implementation plan																								
Goal-1.4.3	NAP.5.3.2	Progress and other reports																								

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 for the formulation process have been secured.

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 programmes.

Approach

MRC's involvement in the hydropower sector shall focus on the strengthening of basin-wide cooperation between line agencies in the energy and water related sectors, and private sector actors as well as assisting the Member Countries to address issues by taking a broad perspective of all options, and sustainable development of water resources in general.

Strategy

In view of the above, the MRC has formulated a Hydropower Development Strategy in 2001 identifying roles of MRC concerning the hydropower sector. In December 2004, the MRC Council has approved a proposal on formulation of a Hydropower Programme and assigned the MRC Secretariat to process with fundraising for implementation of the

Programme. In pursuance of the decision, in 2005 the MRC Secretariat has established a LMB's hydropower project database and has prepared a concept paper for the MRC Hydropower Programme, which has been formulated in close consultation with the member countries, and was approved by the MRC Joint Committee in August 2005.

The MRC Strategic Plan 2006-2010 details MRC's IWRM approach for coordinating sustainable development and management of water and related resources in the basin, and among other issues highlights the importance of MRC's strategic partnerships with other regional initiatives and clarifies MRC's role in the project cycle of larger water sector investments.

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 systems 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, as applicable and relevant to the Mekong context will be taken into account.

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 for 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 HP for 2007

Funding for programme formulation and start-up of implementation was secured:

- A contribution of the MRC Water Management Trust Fund towards programme formulation.
- A Finnish contribution to the formulation and implementation of HP programme, covering the period 2008 to 2011.
- The project 'Initial Analysis of Hydropower Potential in the Lower Mekong Basin in Relation to Cumulative and Transboundary Impacts' funded by the Japan ASEAN Integration Fund (JAIF) which will support formulation and implementation of the programme.

In addition EP, BDP and FP are addressing some aspects of hydropower development and operation through their own programmes.

Significant problems encountered, corrective action taken

None.

Donor reviews or appraisals

None.

Relevant JC and Council decisions

None during reporting period.

Planned and achieved outputs for 2007

- The implementation of the 'Initial Analysis of Hydropower Potentials in the Lower Mekong Basin in Relation to Cumulative Trans-boundary Impacts' started in the second half of 2007 with action to recruit a riparian project manager and international technical advisor. Positions are, however, not yet filled.

Significant problems encountered, corrective action taken

No suitable candidates for riparian project manager were found. The position was re-advertised.

Donor reviews or appraisals

None.

3.10.3 *HP Workplan for 2008*

Programme formulation and start-up of implementation of the HP programme during 2008 will include:

- Refinement of the strategic orientation of the MRC HP programme, to be funded through the Water Management Trust Fund.
- Development of a HP programme document, to be funded through the Finnish contribution to the HP programme.
- Data collection and regional consultations with Member States to support the programme formulation, to be funded by the Japan ASEAN Integration Fund (JAIF) under the project 'Initial Analysis of Hydropower Potential in the Lower Mekong Basin in Relation to Cumulative and Transboundary Impacts'.
- Start-up of HP programme, including management, coordination and planning support.
- Maintenance and further development of the hydropower database.
- Initial analysis of cumulative and transboundary impacts, including interface and support to BDP.
- Technical assistance to Member States, project proponents and IFI, upon request.

Donor reviews or appraisals planned in 2008

None.

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

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

The programme implements its extensive field programme in conjunction with national fisheries agencies. That is, the work of the Fisheries Programme generates information for both MRCS and the line agencies. Work Agreements are developed with counterpart staff at the start of the year which outline the work content, outputs and respective responsibilities. Capacity development, formal and informal training, career support and gender awareness are inherent elements of the programme. The programme places a high priority on reporting its work in English and riparian languages, in many different formats (technical and non-technical publications, postings on web sites, films, books, brochures and posters).

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 Ecology, Valuation and Mitigation

This component will increase the capacity (knowledge, skills and tools) of fisheries managers and relevant stakeholders to sustainably manage the fisheries of the LMB in the context of the basin's integrated development.

Component 3: 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 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

(US\$ 1,000)

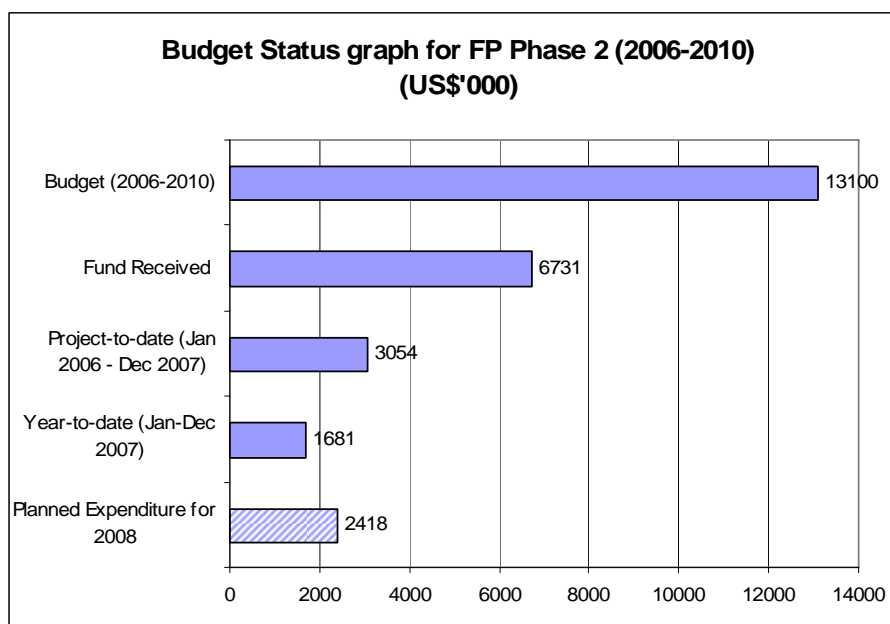
Project title	Start date	End date	Budget	Balance 2007 (*)	Donors
Projects signed					
Swedish contribution to the Technical Advisory Body	01/01/04	31/12/06	159	0	Sweden
Swedish contribution to FP2 (MK 2004/06)	01/01/06	31/12/06	180	0	Sweden
Denmark support to FP2	01/01/06	31/12/08	5,000	2,220	Denmark
Swedish contribution to FP2 (MK 2007/03)	01/01/07	31/12/09	1,610	1,456	Sweden

(*) Balance as per end December 2007

3.11.2 Progress of FP for 2007

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

The following graph provides an overview of the budget status of the programme.



Planned and achieved outputs for 2007

Publications

- FP1.2.1.1 Conference Series – 8th Mekong Fisheries Technical Symposium 2006; Proceedings of the 7th Mekong Fisheries Technical Symposium 2005. (30 papers);
- FP1.2.2.3 MRC Technical Paper No 14 – Triggers for fish migration in the Mekong;
- FP1.2.2.4 Technical Series paper - Consumption and yield of fish and other aquatic animals from the Lower Mekong Basin;
- FP1.2.2.5 Technical Series paper – Importance of fisheries in the Mekong delta in Viet Nam;

- FP1.2.3.1 Mekong Development Series – An Introduction to the Mekong Fisheries of Thailand;
- FP1.2.4.1 Catch and Culture newsletter, two issues.
- FP1.2.4.2 Lao – Omnibus edition of “Catch and Culture” for 2006; Catch and Culture, omnibus editions for 2006 in Thai and Vietnamese;
- FP1.2.5.1 Vietnamese – A book on “Fishing gears of the Mekong delta in Viet Nam”;
- FP1.2.5.12 A film on the fisheries of Lao PDR – in English and Lao;
- FP1.2.5.13 A film on the fisheries of the Mekong in Thailand in English and Thai;
- FP3.2.3.2 Mekong Fisheries Management Recommendation, 1 issue – Triggers for fish migration;

Training

- FP3.1.1.4 About 650 farmers from 11 farmer organizations in Soc Trang, Viet Nam, were trained in approximately 90 formal events and a great number of exchange visits, focusing on multiple water-uses and good governance in mixed rice-shrimp farming areas.
- FP3.2.3.1 The Technical Advisory Body for Fisheries Management (TAB) promoted a regional workshop on management and conservation of Mekong Giant Fish Species. The TAB also undertook a study tour to the inland fisheries of Myanmar.

Management and Development

A major field study on compiling statistics and information on fisheries production in the Mekong delta was completed.

- FP4.2.2-4.2.4 Research and development on artificial propagation and husbandry techniques for 9 priority fish species has yielded positive results. Cooperative work with CIRAD (the French international agricultural agency) has improved fish breeding capability, particularly in Lao PDR.

Significant problems encountered, corrective action taken

The Fisheries Ecology, Valuation and Mitigation component was without technical direction for the most of 2006, as a consequence of the resignation of one advisor and then the sudden death of the replacement. Obviously this negatively impacted on the outputs of the component. A new advisor took up duties in January 2007. He has quickly come to appreciate the outputs required from the component, and subsequently refocused the work programme of the component.

Sida has agreed to fund the FP for the three years 2007-09. These funds did not become available to MRC until late June 2007. One important element of the FP work programme being funded by Sida is the fisheries valuation study – a three year project to define the value of the fisheries of the Mekong. A fisheries economics Advisor is required to oversee the work. The position could not be advertised until the funds were available.

The selection process and time required for the appointee to relocate has meant that the appointee will start work on 8 October 2007. Consequently, this project is almost one year behind schedule. The end result is likely to be that MRC will have to request that the Sida grant be extended to 2010.

Several important activities planned as part of the FP Phase 2 have not been able to be initiated because of the funding gap (the FP Phase 2 has funding to approximately 52% of the full budget). MRC continues to work to attract further donor support for the Fisheries Programme.

Donor reviews or appraisals

None for 2007.

3.11.3 FP Workplan for 2008

Component 1: Programme Management and Communication:

- FP 1.2.1.1 Technical Symposium on Mekong Fisheries: papers will be published in the MRC Conference Proceedings.
- FP1.2.4.1 Communication products will be a photographic book on the
- FP1.2.4.2 "Fisheries of the Mekong River"; a book titled "Atlas of
- FP1.2.5.2 Fishes of the Mekong"; an English version of the book
- FP1.2.5.3 "Fishing Gears of the Mekong Delta in Vietnam"; CD titled
- FP1.2.5.6 "Fisheries Information in the LMB, Version3"; and Catch and
- FP1.2.5.10 Culture newsletter, 3 issues in English, riparian language omnibus editions

Component 2: Fisheries Ecology, Valuation and Mitigation

- FP2.2.1 Establishment of data collection procedures for fisheries valuation studies.
- FP2.3.1 Analyses data in fisheries databases, publish results
- FP2.4.1 Publish a catalogue of water management projects in the LMB.
- FP2.4.2 Symposium on mitigation measures for large rivers conducted in conjunction with FAO.

Component 3: Fisheries Management and Governance

- FP3.1.1.4 Further development and expansion of localized IWRM in the Mekong delta (Soc Trang Province, Viet Nam)
- FP3.1.3.1 Documentation of lessons learned from participatory fisheries management on local, provincial and national levels from more than 80 sites in 4 riparian countries.
- FP3.2.1.1 Preparation and implementation of about 25 capacity-building events on local and national levels (all four countries)
- FP3.2.3.3 Support to implementation of TAB 2 Work Plan (2007-2009), such as implementation of two regionally coordinated strategies for improved transboundary fisheries

management (deep pools; giant catfish); commissioning of 2 studies on regional fisheries issues; preparation and implementation of 3rd TAB Management Workshop; preparation of 2nd study tour for the TAB for Fisheries Management (possibly Lake Victoria Management Commission, with a report to be published in Catch and Culture)

Component 4: Aquaculture of Indigenous Mekong Fish Species

- FP4.2.2 Genetic inventory of two species of indigenous Mekong fish will be completed – this will provide the basis for selective breeding programmes.
- FP4.5.1 Propagation techniques of at least two Mekong indigenous fish species will be defined and published.
- FP4.5.1 Biological synopses of nine indigenous Mekong fish species will be published, providing essential background for further development of aquaculture techniques for the species.

Donor reviews or appraisals planned in 2008

A mid-term review of the FP Phase 2 will be conducted jointly by Danida and Sida in January 2008. The review is background for Danida's consideration of renewed funding for FP in 2009-2010, and possible funding from Sida for 2010.

Fisheries Programme - Progress and Work Programme 2007-2008

SP Code	WBS	Task Name	2007												2008											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	FP.1	Programme management and communication																								
	FP.1.1	FP 2 is financed and implemented in coop with MRC programmes and line agencies																								
Goal-4.4	FP.1.1.1	Interaction with donors																								
Goal-4.4	FP.1.1.1.1	Sida agreement (2007)	Document																							
	FP.1.2	Fisheries information published and distributed																								
Goal-3.2	FP.1.2.1	Fisheries technical symposium and MRC conference proceedings																								
	FP.1.2.1.1	Publication of technical symposium proceedings (December 2007, 2009, 2010)																								
Goal-3.2	FP.1.2.2	Publication and further development of MRC Technical Report Series																								
Goal-3.2	FP.1.2.2.1	Report on hydroacoustic survey of deep pools, N Cambodia, S Lao																								
Goal-3.2	FP.1.2.2.2	Tagging fish - a case study from Tonle Sap, Cambodia																								
Goal-3.2	FP.1.2.2.3	Fish migration triggers in the Mekong River and other tropical freshwater systems																								
Goal-3.2	FP.1.2.2.4	Fish consumption and yield of fish and other aquatic animals from the LMB (report)	Fisheries Management Recommendation												Reports											
Goal-3.2	FP.1.2.2.5	Importance of fisheries in the Mekong Delta, Viet Nam																								
Goal-3.2	FP.1.2.3	Publication and further development of MRC Development Series																								
Goal-3.2	FP.1.2.3.1	Thailand's inland fisheries	MRC Development Series																							
Goal-3.2	FP.1.2.4	Production and enhancement of "Catch and Culture" newsletter																								
	FP.1.2.4.1	Catch and Culture (three issues per year 2006, 2007,2008,2009, 2010)																								
Goal-3.2	FP.1.2.4.2	Catch and culture, omnibus edition, 4 languages, 2006, 2007, 2008, 2009, 2010																								
Goal-3.2	FP.1.2.5	Ad hoc production of information materials																								
Goal-3.2	FP.1.2.5.1	Fishing gears of Viet Nam, Vietnamese version	Book																							
Goal-3.2	FP.1.2.5.2	Fishing gears of Viet Nam, English version																								
Goal-3.2	FP.1.2.5.3	Field guide to fishes of the Mekong Delta																								
Goal-3.2	FP.1.2.5.4	Fisheries co-management in Thailand	Book																							
Goal-3.2	FP.1.2.5.5	Fisheries co-management in Cambodia	Book																							
Goal-3.2	FP.1.2.5.6	Photographic Book-Fisheries of the Mekong																								
Goal-3.2	FP.1.2.5.7	Atlas of deep pools in the LMB																								
Goal-3.2	FP.1.2.5.8	Fisheries information in the LMB, v2	CD																							
Goal-3.2	FP.1.2.5.9	Photographs of fisheries activities in the LMB	CD																							
Goal-3.2	FP.1.2.5.10	Fisheries information in the LMB, v3																								
Goal-3.2	FP.1.2.5.11	The Mekong Delta, fish, farms and families																								
Goal-3.2	FP.1.2.5.12	Fisheries of Lao	Film												Film											
Goal-3.2	FP.1.2.5.13	Fisheries of Thailand																								
	FP.2	Fisheries ecology, valuation and mitigation																								
	FP.2.1	Status and trends of fisheries in the LMB																								
Goal-1.4.5	FP.2.1.1	Monitoring of abundance and diversity of fish stock	Reports																							
Goal-1.4.5	FP.2.1.2	Report on dai fisheries monitoring (2006, 2007, 2008, 2009, 2010)																								
Goal-1.4.5	FP.2.1.3	Monitoring of Lee trap and gill net fisheries in Lao PDR																								
Goal-1.4.5	FP.2.1.4	Fish larvae monitoring in Cambodia and Vietnam																								
Goal-1.4.5	FP.2.1.5	Methodology to generate routine basin-wide estimate of fish yield																								
	FP.2.2	Quantitative information on the socio-economic value of fisheries																								
Goal-1.4.5	FP.2.2.1	Establish methodology for determining value of the Mekong fisheries																								
Goal-1.4.5	FP.2.2.2	Progress and final report on value of fisheries resources																								
	FP.2.3	Information on ecology of the fisheries, models for basin planning purposes																								
Goal-1.4.5	FP.2.3.1	Analyse and report information from fisheries databases																								
Goal-3.4	FP.2.3.2	Contribute fisheries inputs to IBFM project within EP																								
Goal-1.4.5	FP.2.3.3	Develop deep pool research proposal, produce reports																								
	FP.2.4	Potential impacts of projects on fisheries resources																								
Goal-4.3	FP.2.4.1	Develop a topology of water management projects, produce report	Reports																							
Goal-1.4.5	FP.2.4.2	Symposium on mitigation of developments on fisheries, in coop with FAO																								
	FP.2.5	Improved stakeholder and institutional capacity																								
Goal-4.5	FP.2.5.1	Training course on project proposal wrting and the logical framework	Training, 50 counterpart staff												Training for database manager at IFRDI Cambodia											
Goal-4.5	FP.2.5.2	ARC GIS software training																								
	FP.3	Fisheries management and governance																								
Goal-3.3	FP.3.1	Awareness raising on co-management initiatives																								
Goal-3.3	FP.3.1.1	Applied research on fisheries management issues																								
Goal-3.3	FP.3.1.1.1	Socio-economic assessment of co-managed fisheries																								
Goal-3.3	FP.3.1.1.2	Improved marketing																								
Goal-3.3	FP.3.1.1.3	Deep-pool/conservation zone management																								
Goal-3.3	FP.3.1.1.4	Participatory water management																								
Goal-3.3	FP.3.1.1.5	Community fish culture																								

Fisheries Programme - Progress and Work Programme 2007-2008

SP Code	WBS	Task Name	2007												2008											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Goal-3.3	FP.3.1.1.6	Conflict management/improvd regulations and enforcement	[Blue bar]																							
Goal-3.3	FP.3.1.2	Stakeholder information visits and meetings	[Blue bar]																							
Goal-3.3	FP.3.1.2.1	Participatory water management	[Blue bar]																							
Goal-3.3	FP.3.1.2.2	River and reservoir fisheries co-management	[Blue bar]																							
Goal-3.3	FP.3.1.3	Dissemination and promotion of results among stakeholders	[Blue bar]																							
Goal-3.3	FP.3.1.3.1	Manuals on fisheries co-management	[Blue bar]																							
Goal-3.3	FP.3.1.3.2	Technical manuals on fish production	[Blue bar]																							
Goal-3.3	FP.3.1.3.3	Guidelines in management issues	[Blue bar]																							
Goal-3.3	FP.3.1.3.4	Fisheries sector presentations	[Blue bar]																							
	FP.3.2	Capacity building	[Blue bar]																							
Goal-4.5	FP.3.2.1	Human capacity development	[Blue bar]																							
Goal-4.5	FP.3.2.1.1	Training/learning events	[Blue bar]																							
Goal-4.5	FP.3.2.1.1.1	Fisheries legislation	[Blue bar]																							
Goal-4.5	FP.3.2.1.1.2	Business management skills	[Blue bar]																							
Goal-4.5	FP.3.2.1.1.3	Environmental conservation	[Blue bar]																							
Goal-4.5	FP.3.2.1.1.4	Fish production and processing	[Blue bar]																							
Goal-4.5	FP.3.2.1.1.5	Financing	[Blue bar]																							
Goal-4.5	FP.3.2.1.1.6	Data collection and analysis	[Blue bar]																							
Goal-4.5	FP.3.2.1.1.7	Conflict management	[Blue bar]																							
Goal-3.3	FP.3.2.2	Institutional capacity development	[Blue bar]																							
Goal-3.3	FP.3.2.2.1	Fisheries management planning	[Blue bar]																							
Goal-3.3	FP.3.2.2.2	Support to institutional functioning	[Blue bar]																							
Goal-3.3	FP.3.2.2.3	Upscaling of management organizations and institutions	[Blue bar]																							
Goal-3.3	FP.3.2.3	Support to implementation of TAB work plans	[Blue bar]																							
Goal-3.3	FP.3.2.3.1	Preparation and implementation of TAB meetings	[Blue bar]																							
Goal-3.3	FP.3.2.3.2	Preparation/dissemination of TAB publications	[Blue bar]																							
Goal-3.3	FP.3.2.3.3	Support to implementation of other TAB activities	[Blue bar]																							
Goal-3.3	FP.3.2.3.3.1	TAB presentations at international meetings and conferences	[Blue bar]																							
Goal-3.3	FP.3.2.3.3.2	Capacity-building in regional fisheries management	[Blue bar]																							
Goal-3.3	FP.3.2.3.3.3	Implementation of regional fisheries management	[Blue bar]																							
Goal-3.3	FP.3.2.3.3.4	Institutional strengthening of TAB	[Blue bar]																							
	FP.3.3	Fisheries development strategy	[Blue bar]																							
Goal-3.5	FP.3.3.1	Formulation of plans and scenarios, best practice	[Blue bar]																							
	FP.3.4	Fund raising for organizational, legal and technical measures at local and national levels	[Blue bar]																							
Goal-1.4.5	FP.3.4.1	Description and scoping of projects	[Blue bar]																							
Goal-3.3	FP.3.4.2	Identification and operationalization of funding sources	[Blue bar]																							
Goal-1.4.5	FP.3.5	Fisheries development activities at all levels	[Blue bar]																							
Goal-1.4.5	FP.3.5.1	Support to implementation of new co-management activities at 30 sites in 4 countries	[Blue bar]																							
Goal-1.4.5	FP.4	Aquaculture of indigenous Mekong fish species	[Blue bar]																							
Goal-3.3	FP.4.1	Risks and benefits from movement and culture of alien and indigenous species	[Blue bar]																							
	FP.4.1.1	Coordinate and contribute to development of regional code of practice for movement of aquatic organisms	[Blue bar]																							
Goal-1.4.5	FP.4.2	Propagation techniques for indigenous Mekong fish species	[Blue bar]																							
Goal-1.4.5	FP.4.2.1	Develop brood stock culture technique	[Blue bar]																							
Goal-1.4.5	FP.4.2.2	Develop breeding techniques	[Blue bar]																							
Goal-1.4.5	FP.4.2.3	Develop nursing techniques	[Blue bar]																							
Goal-1.4.5	FP.4.2.4	Develop culture techniques	[Blue bar]																							
Goal-4.5	FP.4.2.5	Prepare and arrange short-term training	[Blue bar]																							
Goal-2.1	FP.4.2.6	Carry out component coordination meetings	[Blue bar]																							
Goal-4.5	FP.4.2.7	Prepare and implement technical workshops and study tours	[Blue bar]																							
Goal-1.4.5	FP.4.2.8	Participate in technical symposium and other technical symposia and meetings	[Blue bar]																							
Goal-2.1	FP.4.3	Aquaculture and stocking strategies	[Blue bar]																							
Goal-2.1	FP.4.3.1	Participate in national and regional/international meetings and workshops	[Blue bar]																							
Goal-2.1	FP.4.3.2	Recommend protocols for enhancement and mitigation	[Blue bar]																							
Goal-1.4.5	FP.4.4	Fund raising for aquaculture, fisheries enhancement and mitigation projects	[Blue bar]																							
Goal-1.4.5	FP.4.5	Improved aquaculture, stock enhancement and mitigation using indigenous species	[Blue bar]																							
Goal-1.4.5	FP.4.5.1	Prepare extension messages	[Blue bar]																							
Goal-1.4.5	FP.4.5.2	Cooperate with extension agents in preparing extension materials	[Blue bar]																							

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 TP for 2007

An environmental impact assessment of tourism was undertaken under the Environment Programme. The regional inception report, completed in August 2006, highlights the tourism context in the Lower Mekong Basin, the project objectives, conceptual approach and time scale for the study. Three draft national reports have been completed and being under the review of the national Mekong Committees (NMCs); and One national

report is currently being drafted. The Comments from NMCs on the three National reports are expected by September 2007.

The National reports cover the tourism development context in each country, including the current and anticipated environmental impacts of tourism and prioritized actions and tourism development alternatives. Consideration of the role and responsibility of the MRC to address the impacts is covered and recommendations for further actions are provided.

Relevant JC and Council decisions

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

Donor reviews or appraisals

None.

3.12.3 *TP Workplan for 2008*

The main activities under the assessment on environmental impact of tourism, under EP Component 3 People and Aquatic Ecosystems, for the year 2008 relates to the national and regional reports. One remaining national report would be drafted and reviewed by the NMC by the first quarter of 2008. The activity will be completed when the regional report on environmental impacts of tourism in the LMB is finalized in June 2008.

The regional report will synthesize the findings of the national reports. It will highlight at regional scale aspects of tourism development in the LMB, current and anticipated environmental impacts of tourism sector, prioritized actions. Recommendations will be made on, alternative approaches for the development of an MRC tourism programme, and the role and responsibility of the MRC as the River Basin Organization to address impacts.

Donor reviews or appraisals planned in 2008

None

3.13 MRC Water Management Trust Fund

3.13.1 Programme Overview

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 was 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 works 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 Countries; and
- Facilitation of Member Countries 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 to be 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 is to be applied, namely that no advance of funds is 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 Water Management Trust Fund for 2007

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). At the Informal Donor Meeting of 27-28 June 2007, Finland has pledged a € 250,000 contribution (about USD 325,000) to the MRC Water Management Trust Fund.

Two requests to mobilize the Trust Fund were sent and considered by the AFD: (i) 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; (ii) a contribution to the formulation of the MRC Hydropower Programme Document.

On the former, the AFD provided its non-objection on a US\$ 75,000 budget for the recruitment of eight national consultants to work under the supervision of the World Bank international consultant team. The national consultants were mobilised from February to April 2007. The study is expected to be finalised in October 2007.

As regards the Hydropower programme, the AFD agreed to a US\$ 25,000 contribution to the MRC proposal on the refinement of the strategic orientation of the MRC Hydropower Programme. This short term consultancy will be undertaken in the 2007 second semester under the supervision of the MRC Operation Division. It will contribute to the formulation of the Hydropower Programme.