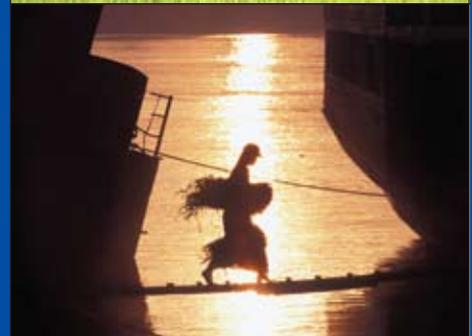




*Mekong River Commission*

# MRC Work Programme 2009



*December 2008*

## FOREWORD

On behalf of the Mekong River Commission (MRC), I have the pleasure to present the MRC Work Programme for the year 2009 to our Member Countries, development partners, agencies, and friends of the Mekong River Commission.

The structure of the programme is based on the MRC 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 2009 describes the supporting outputs MRC will produce in the course of the year to further the Mekong Programme.

As the MRC Strategic Plan 2006-2010 is reaching mid-point in its implementation, a mid-term review was initiated in 2008. This review involves Member States and Development Partners and sought inputs from MRC Dialogue Partners, Myanmar and China. The mid-term review provides an opportunity to review the scope of the MRC Work Programme and approach and orientation of its programme portfolio in light of the current accelerating water resources development in the Mekong Basin. Also to look forward to preparations for the next Strategic Plan period 2011-2015.

The Information and Knowledge Management Programme that started in 2007 is a core activity supporting other MRC programmes and after some initial delays, is now well on track. A conceptual framework for the Sustainable Hydropower Programme has been agreed and programme formulation is underway. A major multi-stakeholder regional consultation on the Hydropower Programme was held for September 2008. The BDP2 and Inception report was successfully organised in early 2008 and positively perceived by various stakeholders. A Drought Management Programme document was approved by the MRC Council for fundraising purposes. In addition, the MRC is also addressing emerging challenges such as Climate Change through new crosscutting initiatives.

The basic structure of the Work Programme 2009 follows that of last year. The output-oriented presentation is maintained and more linkages and improved coordination across programmes are presented. The Work Programme 2009 starts with a general introduction to the MRC. The second part of the Work Programme then presents the MRC integrated programme structure, with an overview of the programmes and their active agreements and funding sources. The third part provides the reader with concise information on the structure and goals for each programme. It provides the progress of the implementation per programme in 2008 with a chart on budget status and description of its output achievements. Planned outputs and activities per programme for the year 2009 are also described. In addition, a graphical illustration on the achieved outputs for 2008 and planned outputs for 2009 is provided for those Programmes that have already been funded.

Successful implementation of the Work Programme 2009 requires participation of the international development partner community and the continued contributions from the MRC Member Countries. I should therefore like to take the opportunity to convey our sincere gratitude to our development partners and colleagues for the sustained active involvement and support to MRC's work aimed at poverty reduction and sustainable development of the Mekong River Basin.



Jeremy Bird  
Chief Executive Officer  
MRC Secretariat



# PREFACE

The Work Programme 2009 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 2009 including a list of the active Programme and their budget. The Work Programme presents the status of activities carried out in 2008 including graphic presentations of output achievement indicators. 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<sup>1</sup>;
- 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 Programme Phase 1 was completed at the end of July in 2006. Phase 2 (2007-2010) started in January 2007 with the preparation of the inception report.

In line with the MRC mission, the BDP Programme Phase 2 (BDP2) aims 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 BDP2 main objective is to prepare and implement a Basin Development Plan based on Integrated Water Resources Management (IWRM) principles, building upon the participatory planning process, established in Phase 1. This objective is supported by other two objectives, which will update the knowledge base and upgrade assessment tools as well as strengthening IWRM planning capacity of MRCS, NMCs and line agencies.

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<sup>1</sup> The WUP start-up project was completed 30 June 2008. Follow up activities, tentatively entitled Mekong Integrated Water Resources Management Project (M-IWRM-P) are currently being developed in cooperation with Member States and the World Bank (cf. p.64)

## **Environment Programme**

Environment Programme will focus to continue 2009 activities with an aim to the achievement of the MRC Strategic Plan (2006-2010) in the remaining two years period. EP activities are prioritized towards key strategic outputs which the Programme has not yet fully achieved. However, most of 2009 EP activities are an on-going, continuing efforts based on the previous year activities.

To sustain a large number of EP activities, EP will seek for funding arrangements for both on-going and emerging activities. EP will collaborate closely with other MRC programmes especially for those activities aiming to support, cross-cut and integrate with others. In addition, programme communication and dissemination of completed and on-going results and outcomes will be emphasized targeting to a number of technical papers and reports.

With regard to Environmental Monitoring, water quality monitoring network will continue and be revised in accordance with Technical Guidelines for Implementation of the Procedures for Water Quality to protect human health and to protect aquatic life. Technical Guidelines will be developed and finalized. Quality assurance and quality control of riparian water quality laboratory will be strengthened. Also, Technical Guidelines for Water Quality Emergencies will be established. Ecological health monitoring will be upgraded to promote its use and practices. Social monitoring system and vulnerability assessment will be tested and proposed to set up. Technical Guidelines for social impact monitoring and vulnerability assessment will be finalized.

EP will continue to establish Environmental Decision Support for the Member Countries. Pilot study for revision of Transboundary EIA Framework will be implemented, with strengthening national capacities. TbEIA Guidance and Institutional support will be later drafted as decision support tool for transboundary issues. EP strategy with this regard in 2009 will be to promote case studies and pilot studies of transboundary issues to more learning and collaborative approach among the Member Countries. EP will develop MRC Sustainability Guidelines for Hydropower development in the Member Countries.

EP will try to revive our activities with respect to a relationship between People and Aquatic Ecosystem. EP will review a classification of Mekong wetland, wetland mapping and its valuation for sustaining the people livelihood.

EP will response to assist the Member Countries towards new emerging issue of climate change. The long-term and detailed workplan and programme activities will be established as MRC Climate Change and Adaptation Initiative in 2009.

## **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.

Major work with regard to consolidating modelling capacity, updating the knowledge base and improving data and information accessibility and quality assurance will be undertaken in 2009.

## **Integrated Capacity Building Programme**

The Integrated Capacity Building programme developed an ambitious strategy in 2003 but operated at very reduced level due to very limited funding. Recently, however, the funding outlook for ICBP has improved. With funding from Finland, a second phase for the Junior Riparian Professional (JRP) project has been secured (2008-2011). AusAID has agreed to support (i) the formulation of the ICBP programme document and development of the programme implementation plan, and (ii) the implementation of a priority capacity building plan (PCBP). These activities are planned to take place between July 2008 and June 2009. The PCBP will be complemented by the staff training activities funded by the OEB. These training activities aim to strengthen the capacity of the staff members at the MRC Secretariat as well as the staff at the National Mekong Committees and the Line Agencies.

The Gender Mainstreaming project is on-going as planned. A project review has provided useful recommendations for the remaining project implementation period until end 2008 as well as for a possible continuation of gender mainstreaming activities beyond 2008. A concept note in this regard has been prepared.

While funding for ICBP has been secured for the next year a funding gap still exists. Beyond securing from AusAID funding for the period after July 2009, attention will be given particularly towards gender mainstreaming.

## **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 capacity building, information dissemination, exchange visits among NMCs, and laboratory equipment for water quality. WUP also continued to provide financial support to the Decision Support Framework (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 in 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 Project (M-IWRM-P) formulation. WUP was successfully completed in mid 2008 and the programme is now closed.

## **Water Utilisation Programme Follow-up: Mekong Integrated Water Resources Management Project**

The programme ended in June 2008. Building on the work of WUP, and in close cooperation with Member Countries, a concept paper for a follow-up project, entitled Mekong Integrated Water Resources Management Project (M-IWRM-P) and involving a new concept combining regional, trans-boundary and national components has been developed. The preparation phase of the M-IWRM-P is carried out from mid 2008 to mid 2009 to further identify and prepare components and sub-components of the project. World Bank appraisal of the project is planned for May 2009, and the project is then envisaged to be implemented during 2009-2014.

## **Flood Management and Mitigation Programme**

The FMMP has gone through the preparatory phase in 2005 and since 2006 the programme is being fully implemented. After three years of implementation, the FMMP has made substantial progress. All the five components are fully operational. Under component 1, the construction of a new Regional Flood Management and

Mitigation Center building was completed and the FMMP was relocated to this new building. The enhancement of short-term flood forecast to medium term forecast is progressing well. The system was tested in the 2008 flood season. In component 2, an international consulting firm was retained to prepare technical documentation on structural measures and flood proofing. Under component 3, a number of documents on identification of the trans-boundary issues and mandate of MRC in addressing differences and disputes have been produced. The capacity building programme for the MRCS and member states on addressing the dispute and difference is also ongoing. Finally, the components 4 and 5 completed their first phase in July 2007 and started a second phase in August 2008.

### **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 at the highest political levels for national and regional action. In March 2005 the MRC Joint Committee approved the development of a Drought Management Programme (DMP) to be established within the MRC.

The formulation of the DMP 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.

At present, a DMP Start-up Project is proposed for immediate implementation applying more limited human and financial resources through coordinating and supplementing existing MRC programmes. It is hoped that a more focussed approach and reduced resource requirements will be more attractive to prospective donors and will put the drought management and mitigation clearly on the agenda of the MRC. The DMP Start-up Project may be considered as an initial phase leading towards implementation of a full DMP. As the DMP Start-up Project builds on the approved DMP, the overall objective remains the same.

### **Agriculture, Irrigation and Forestry Programme**

An initial concept paper for AIFP Phase 2 for 2006 – 2010 has been prepared and a proposal for programme formulation is being developed. Meanwhile there are three on-going projects within the programme: the Watershed Management Project (WSMP) funded by the Government of Germany; 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). Challenge Programme is reconsidering its approach for the next phase and so some delay in start-up is expected. The Japanese Government has pledged a continuous support to AIFP with similar theme as IIEPF. A three year follow up project was thus launched in 2008. The Evaluation report of the WSMP was finalised in early 2008. The Project Document and the agreement for the next phase are being prepared.

## **Navigation Programme**

The NAP has gone through a preparatory phase in 2005 and started its full implementation in August 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 the Programme as such 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 areas: navigation safety and efficiency, legal framework for cross-border transport (trade facilitation), and environmental sustainability.

## **Sustainable Hydropower Programme**

The planning of proposed hydropower developments on both the mainstream and tributaries is at an advanced stage. Although undertaking strategic environmental or sectoral assessments or developing guidelines will have a role to play for projects which are still at early concept stage, the outputs may come late to influence decisions on hydropower projects in later planning stages which are the ones where impacts on existing resource use in the basin will be the most significant. A multi-track approach is therefore proposed: (i) short term activities focused on understanding the regional implications of, and opportunities for, hydropower projects including related activities already being implemented by other MRC programmes; and (ii) medium to long term activities on capacity building and facilitating dialogue on regional hydropower development. Broad support for MRC's role in providing an integrated framework for hydropower development was voiced at the regional multi-stakeholder consultation held in September 2008.

## **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 FP2 has inbuilt flexibility to enable it to adapt to emerging issues. In this regard, the FP2 has initiated several new activities in 2008 in accordance with the renewed emphasis on hydropower development in the LMB and the associated risks to the existing fisheries industry.

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 outlines 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**

Additional copies of the MRC Work Programme 2008 can be made available to interested agencies upon request. It is also possible to provide copies of detailed comprehensive programme proposals upon request. For this purpose, kindly contact the MRC Secretariat's International Cooperation and Communication Section, at the following address:

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

Tel: +856 21 26 32 63  
Fax: +856 21 26 32 64  
E-mail: [mracs@mrcmekong.org](mailto:mracs@mrcmekong.org)

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

## Acronyms and Abbreviations

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

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

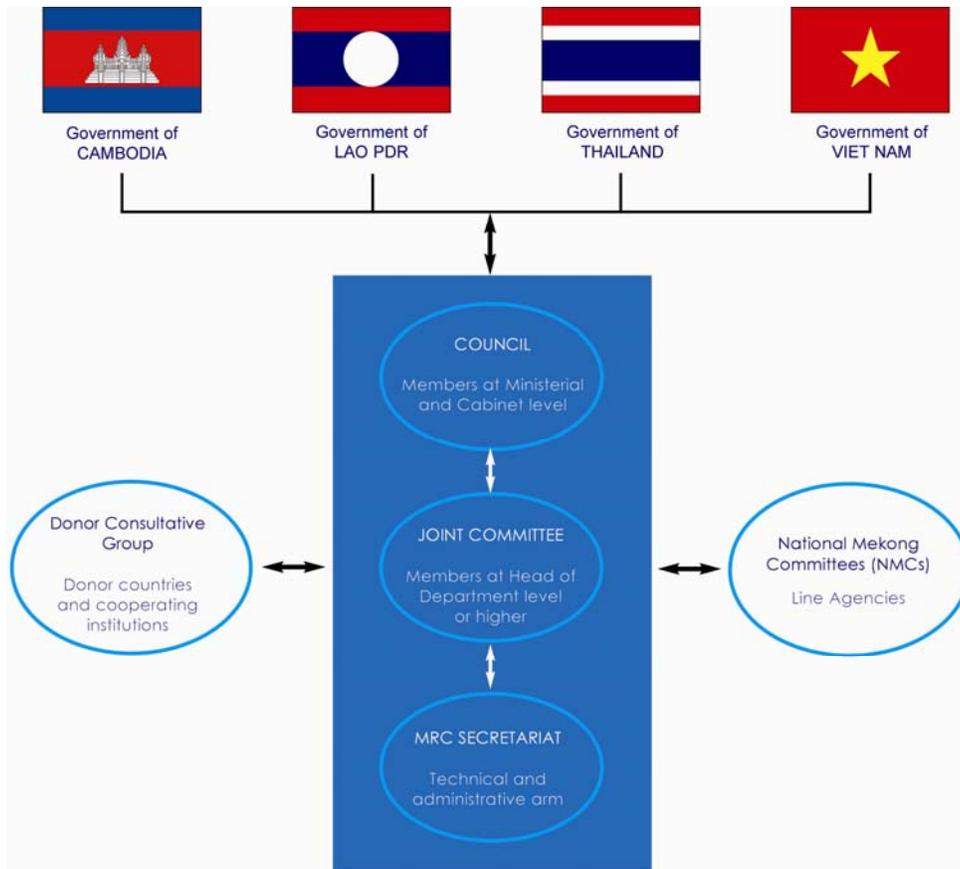
These three articles set the scope for the work of the Commission. Further details of the cooperation and its implementation framework are set out in the ensuing articles of the 1995 Mekong Agreement.

## **1.3 Structure**

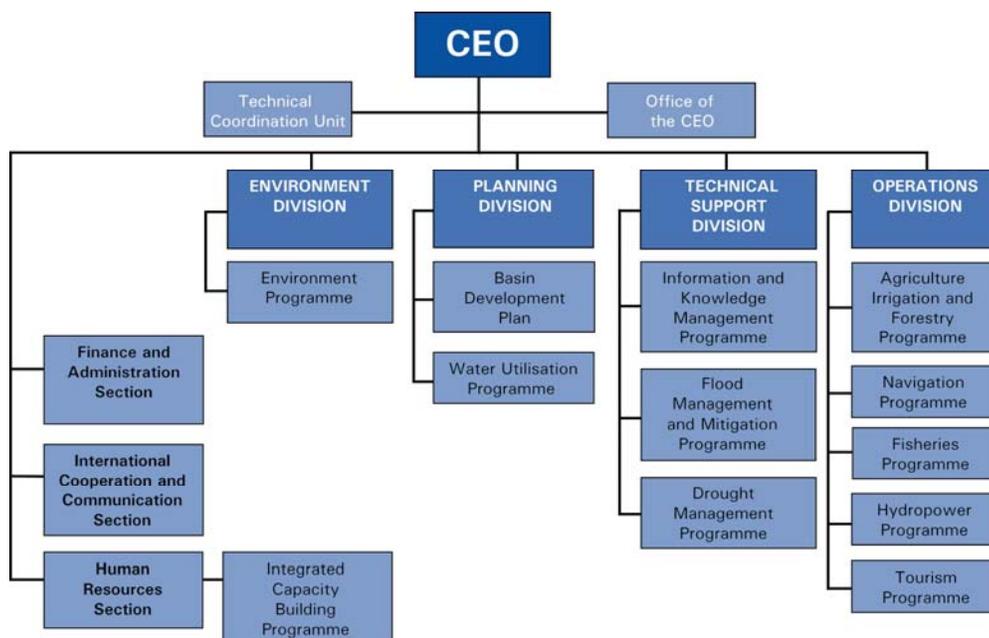
The MRC enjoys the status of an international body. It has signed several agreements and holds obligations with its development partners and the international community. The Commission also has formal agreements for cooperation with a range of regional and international organisations. The MRC consists of three permanent bodies: Council, Joint Committee and Secretariat (see Figure 1). As the National Mekong Committees (NMCs) are the focal points for the Commission in each of the Member Countries.

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 Member States and the Development Partner community. Formal consultations with the Development Partners 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 wider sustainable 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 and across sectors, as this will yield better results than independent planning at national levels. 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. The issue remains current in the first months of the flood season, the Mekong hydrograph of 2008 is tracking the flood year 2000. 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\$ 2 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, economic development and accelerating water resources development, in particular hydropower, 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 km<sup>2</sup> during the dry season to a maximum of up to 14,500 km<sup>2</sup> 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 third year of its five-year strategic planning cycle. The Strategic Plan 2006 – 2010 retained the fundamental strategic direction of MRC, its vision statement, remained. The Strategic Plan 2006-2010 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.

As 2008 marks the mid-point in the current strategic planning cycle, MRC Member Countries, together with MRC Development Partners and Dialogue Partners, are undertaking a mid-term review of the Strategic Plan 2006-2010. This process will also allow for framing the process and broad strategic elements of the Strategic Plan for 2011-2015.

Figure 4: MRC Vision



## 1.6 Goals and Objectives<sup>2</sup>

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:<sup>3</sup>
  - 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;

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<sup>2</sup> MRC Strategic Plan 2006-2010, approved in principle by the MRC Council at its Twelfth Meeting

<sup>3</sup> 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.

Further prioritisation of activities for the 2009-2010 period will be considered as part of the on-going Mid-term Review of the Strategic Plan 2006-2010.

### **Strategic directions for IWRM at the basin scale<sup>4</sup>**

- 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.

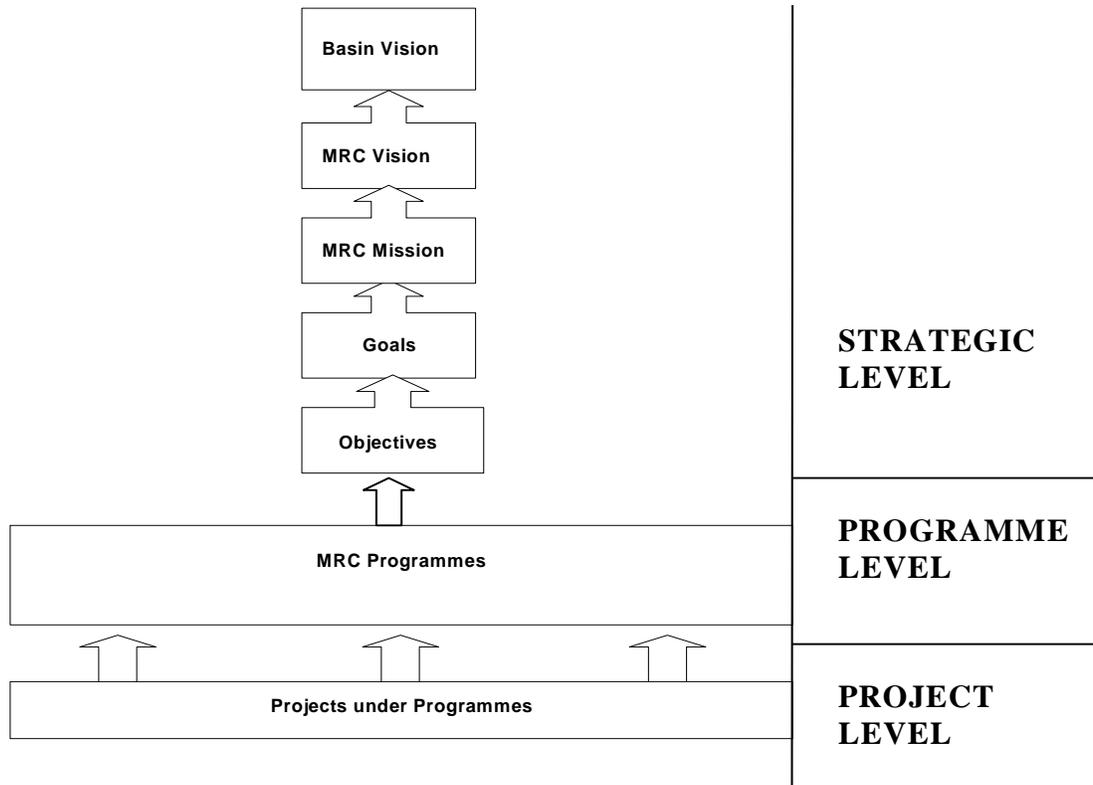
## **1.8 Implementation of the Strategic Plan**

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

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<sup>4</sup> 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. The BDP phase 2 will review and update these strategic directions in light of a more in-depth understanding of the current status and plans for the LMB.

**Figure 5: Links between the Basin Vision, MRC Vision and Programmes Development**



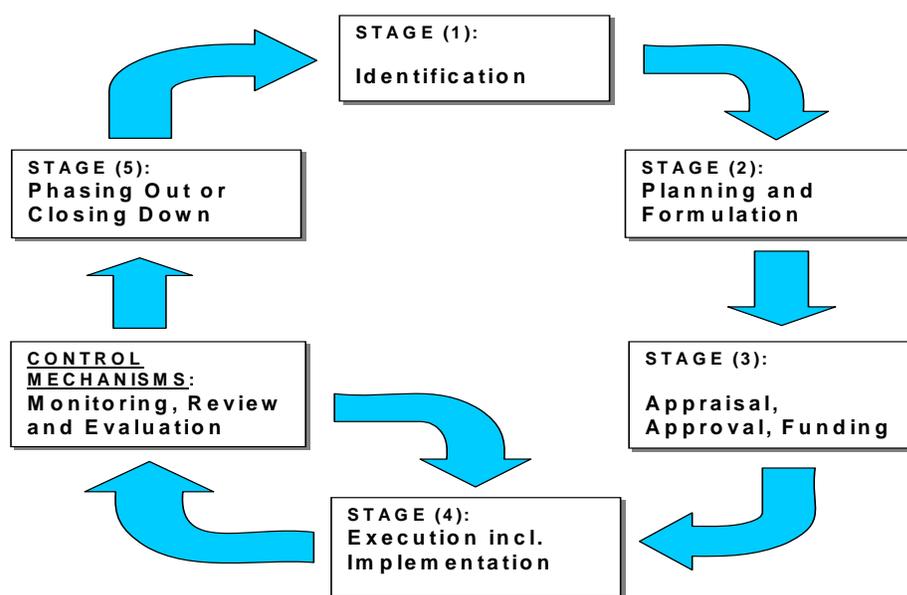
Progress towards the achievement of the goals is accomplished through achieving objectives. Progress towards objectives is monitored through indicators, which measure achievements and results made through various activities.

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 in close cooperation with NMCs and other national or international partners (Figure 6). For projects of the BDP Projects Database, the role of the MRC is more limited. However, MRC can provide 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**



With the implementation of the Strategic Plan 2006-2010, the MRCS is providing 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.

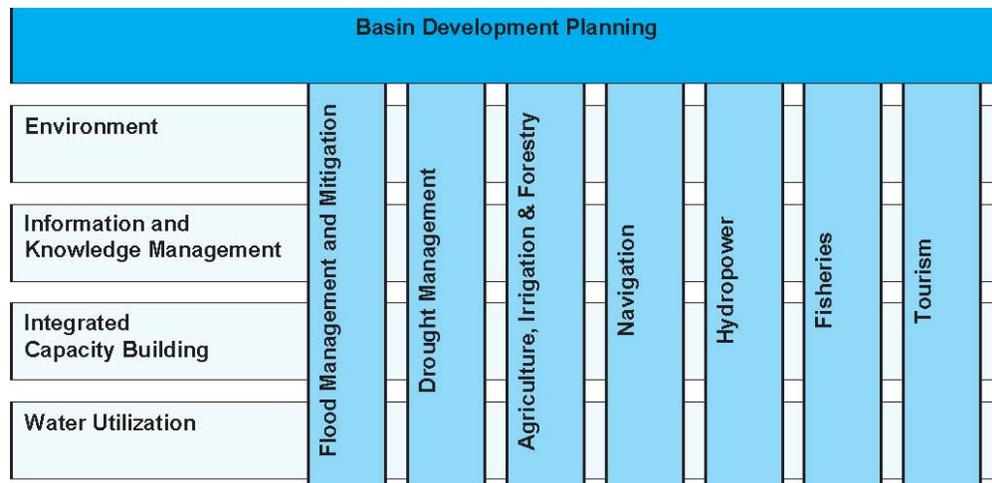
The Work Programme is being prepared as a monitoring tool with an annual perspective to present the outputs derived from the logical framework of the MRC programmes. All these programmes contribute to the achievement of the MRC Strategic Plan 2006-2010.

## 2 The MRC Integrated Programme

### 2.1 Programme Structure

The portfolio of programmes implemented by the MRC covers the sectors Flood Management and Mitigation, Drought Management, Agriculture, Irrigation and Forestry, Navigation, Hydropower, Fisheries and Tourism, and cross-cutting themes such as Basin Development Plan, Environment, Integrated Capacity Building, Information and Knowledge Management, and Water Utilisation.

Figure 7: MRC Programme Structure<sup>1</sup>



### 2.2 Integration and Coordination of Programmes

Applying the principles of IWRM, the MRC Strategic Plan 2006-2010 calls for a stronger integration of the various programmes within the Secretariat. Such integration requires increased communication and collaboration among the programmes and occurs at several levels:

- *Basin-wide planning.* The most obvious level of integration and coordination occurs at the level of basin-wide planning, where the BDP uses acquired knowledge and services of the MRC programmes to build a basin-wide perspective of sustainable development options. Important elements for MRC are: developing a common understanding of development needs; crafting a planning framework and setting of procedures within which cumulative and trans-boundary aspects of individual projects can be assessed.

<sup>1</sup> Details of MRC Programmes are developed through national and regional consultations with NMCs, and approved by the Council.

- *Cross-sector collaboration.* Coordination mechanisms are in place to ensure complementarities and synchronised delivery of contributions of MRC programmes to joint initiatives across sectors, for instance under the 'MRC climate change and adaptation' initiative or joint work relating to hydropower development.
- *Information and knowledge management.* The MRC is a knowledge based organisation, it undertakes important, and often applied research on many subjects of direct relevance to water resources and their development. Much of this research is interdisciplinary by its nature, requiring collaboration across sectors and integration at the Secretariat level, resulting in a joint research agenda and publication pipeline.

## **2.3 Programme Costs and Funding**

The Work Programme for 2009 provides a table on MRC programmes costs and funding. The presentation covers the total budget, funding needs and funded agreement or funding pledged for each programme and their components. Therefore, programmes which are currently being developed, such as the Drought Management Programme and the Tourism Programme do not yet indicate funded/pledged amounts.

The multi-year total budget for MRC Programmes amounts to US\$ 192.5 million. The total funding, either signed or committed stands at US\$ 84.7 million in addition to US\$ 50.4 million associated technical cooperation (GTZ, KfW). The total funding needs thus are US\$ 57.4 million.

**Table 1: MRC Programmes, Programme Costs and Funding - Multi-Year**

		WP 2009 Updated on 8 October 08			
Programme	Programme Components	Total Budget	Funding Needs	Funded/Committed	F/C ATC*
		(US\$ 1,000 ) (1=2+3+4)	(US\$ 1,000) (2 = 1-(3+4)	(US\$ 1,000 ) 3	(US\$ 1,000 ) 4
Basin Development Plan	BDP Phase 2 (2006-2011)	10,000	900	9,200	-
	Programme Management and Communication	4,100	-	4,100	-
	Rolling IWRM based Basin Development Plan	3,300	500	2,900	-
	Knowledge Base and Assessment Tools	1,500	200	1,300	-
	Capacity Building for IWRM	1,100	200	900	-
Environment Programme	Five Years (2006-2010)	16,200	7,400	8,800	-
	Programme Management	2,300	-	2,300	-
	Environmental Monitoring and Assessment	3,000	500	2,400	-
	Environmental Decision Support	2,900	2,200	800	-
	People and Aquatic Ecosystems	2,900	1,900	1,000	-
	Environmental Knowledge	1,400	1,300	100	-
	Environmental Flow Management	2,500	1,400	1,100	-
	Climate Change and Adaptation	1,200	-	1,200	-
Information and Knowledge Management Programme	Five Years ( 2006-2010)	25,000	11,600	13,400	-
	Programme Management	2,000	100	1,900	-
	Hydro-meteorological Data	6,500	1,400	5,100	-
	GIS & Databases	4,900	3,400	1,500	-
	Modeling	7,400	3,100	4,300	-
Integrated Capacity Building Programme	Communication and Knowledge Management	4,200	3,600	600	-
	Five Years (to be developed: 2006-2010)	5,800	3,700	2,100	-
	Programme Management and Communication	800	-	800	-
Mekong IWRM Project	Integrated Capacity Building	5,000	3,700	1,300	-
	M-IWRMP (2008-2014)	35,500	5,000	6,600	23,900
	Project Preparation	1,600	-	600	1,000
	Regional Component	6,000	-	6,000	-
Flood Management and Mitigation Programme	National Component	15,900	4,500	-	11,400
	Transboundary Project Component	12,000	500	-	11,500
	Six Years (2004-2010)	27,400	-	17,100	10,200
	Regional FMM Centre	11,900	-	10,900	1,000
	Structural Measures & Flood Proofing	4,300	-	4,300	-
Drought Management Programme	Transboundary Flood Issues	1,600	-	1,600	-
	Flood Emergency Management and Strengthening	4,100	-	200	4,000
	Land Management (TA)	5,500	-	200	5,300
	Five Years (2006-2010)	2,200	2,200	-	-
	Drought Forecasting	500	500	-	-
Agriculture Irrigation and Forestry Programme	Drought Impact Assessment	300	300	-	-
	Drought Management Policy	200	200	-	-
	Drought Preparedness and Mitigation Measures	900	900	-	-
	Programme Management	400	400	-	-
	Five Years (2006-2010)	22,000	-	5,800	16,300
	Watershed Management (TA)	9,800	-	900	9,000
	Demonstration of Multi-functionality of Paddy Fields	1,200	-	1,200	-
Navigation Programme	Improvement of Irrigation Efficiency on Paddy Fields	1,900	-	1,900	-
	Research Coordination in Challenge Programme	1,000	-	1,000	-
	Formulation of a new AIFP	100	-	100	-
	Technical Cooperation with KfW on Sustainable WS	8,000	-	700	7,300
	Six Years (2006-2010)	21,600	14,100	7,500	-
Hydropower Programme	Socio-economic Analysis and Planning	3,200	1,700	1,500	-
	Legal Framework for Cross-Border Navigation	1,600	1,000	600	-
	Traffic Safety and Environmental Sustainability	6,800	2,900	3,900	-
	Information, Promotion and Coordination	4,000	3,300	700	-
	Institutional Development	6,000	5,300	700	-
Fisheries Programme	Five Years (2007-2014)	5,900	3,900	2,000	-
	Track 1: Regional Implications and Opportunities	1,300	-	1,300	-
	Track 2: Capacity Building and Facilitating Dialogue	4,600	3,900	700	-
Tourism Program	Programme Management and Communication	5,100	1,100	4,000	-
	Fisheries Management and Governance	2,700	700	2,000	-
	Fisheries Ecology, Valuation and Mitigation	3,800	-	3,800	-
	Aquaculture of Indigenous Mekong Fish Species	1,600	1,100	500	-
	Five Years (2006-2010)	3,000	3,000	-	-
M&E	Five Years (2008-2010)	600	100	500	-
MRC Trust Fund	Five Years (2006-2010)**	3,000	1,500	1,500	-
<b>TOTAL</b>		<b>191,300</b>	<b>56,200</b>	<b>84,700</b>	<b>50,400</b>

\* Funded and Committed Associated Technical Cooperation. This includes Technical Assistance from Germany (GTZ, KfW); World Bank, and Japan support (through Bilateral Cooperation). These funds are leveraged by MRC, but not financially managed by the organisation.

\*\* Details on Trust Fund allocations to Programme are provided in Section 14

### 3. The MRC Programmes

This section provides a brief account of each programme on the progress of the activities in 2008 and the planned activities for 2009. 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 2008 and major planned activities and outputs for 2009.

The planned activities reported under this section can be found in more detail in the individual programme work plan for 2009 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 2008

- Funding status graph, providing the reader with funding and expenditures information for 2008 and an inclusion of the planned expenditure for 2009<sup>1</sup>;
- Planned outputs and achieved outputs for 2008;
- Significant problems encountered and corrective actions taken;
- Donor review or appraisals carried out in 2008;
- Relevant JC and Council decisions taken in 2008.

#### 3. Workplan for 2009

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<sup>1</sup> The Financial data included in these graphs present the best estimate on programme implementation at the time of the preparation of the Work Programme. Expenditure data will change as implementation progresses and are recorded in MRC Programme Progress Report.

- Planned outputs and activities for 2009: including the prerequisites and risks for output achievement; and the projects in preparation.
- Planned donor reviews or appraisals in 2009.
- Gantt Charts, presenting by programmes achieved output for the year 2008 and planned output for 2009.

## **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, urbanization and the global market dimensions. National policies will be the driving force for the Mekong Basin's water and related resources development. The MRC has a coordination and supporting role to ensure that the water and related development contributes to poverty reduction and mutual benefits of all riparian countries as well as the sustainable use of Mekong River's resources. Therefore, national policies and plans for water-related poverty alleviation measures synchronized with the sustainable management of the Basin as the whole 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 integrate resource development and 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 prepare a rolling IWRM-based Basin Development Plan in support of sustainable development in the Mekong Basin, as envisioned in the 1995 Agreement, building upon the participatory planning process established during BDP Phase 1. This main aim of the Programme is supported by the further development of the assessment tools and IWRM planning capacity. The IWRM-based Basin Development 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 into 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 elements of the Plan 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 Joint Committee in 2006.

### *Component 1: Programme Management and Communication*

In addition to 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 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 BDP2 team. The collaboration between the BDP2 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 national and international development banks 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

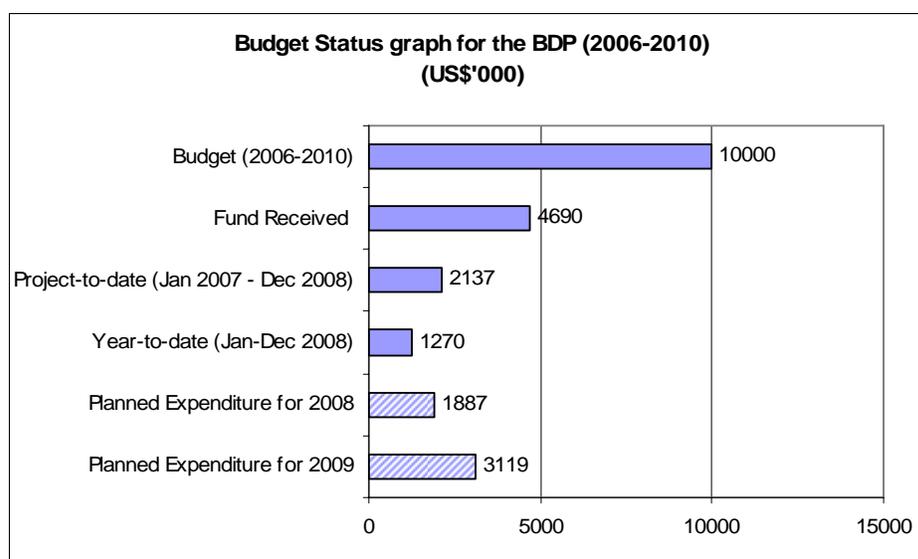
(US\$ 1,000)

	Start date	End date	Budget	Balance 2008 (*)	Donor(s)
<b>Agreements</b>					
Danish contribution to the Basin Development Plan (2006-2010)	12/2006	12/2010	7,720	5,900	Denmark
Swedish contribution to the Basin Development Plan Phase 2	01/2007	12/2009	1,000	878	Sweden
Australian contribution to the Basin Development Plan Phase 2 (2006-2010)	02/2008	12/2009	450	262	Australia
Japan contribution to Basin Planning	06/2006	05/2008	In kind from Japan Water Agency - JWA dispatched an expert	-	Japan

(\*) Balance as per end December 2008

### 3.1.2 Progress of BDP in 2008

The following graph provides an overview of the budget status of the BDP2. The planned output achievement for the Programme and the output achieved for the year 2008 are provided in the Gantt chart as supporting information to this Work Programme.



### Planned and Achieved Outputs for 2008

#### Component 1: Programme Management and Communication

**BDP 1.1.1** In addition to the programme management documents, a BDP stakeholder analysis will be conducted and the existing BDP (SPCP) has been prepared based on consultations at national and regional levels. The SPCP will guide the engagement of stakeholders and communications in the various activities

throughout the BDP planning process. In-depth BDP stakeholder analysis is being conducted in each of the Member countries to ensure the meaningful implementation of SPCP Country Stakeholder analysis reports will be discussed in National workshops for finalization in February 2009.

- BDP 1.1.3 The first Stakeholder consultation on BDP2 and Inception report was organized in early 2008 and positively perceived by various stakeholders.
- BDP 1.2.1 The first joint donor review of BDP2 was conducted in May 2008 with members from DANIDA, SIDA and AusAID. The review concluded with positive assessment on “solid footing” of the BDP2 despite its understandable delays.

### *Component 2: Rolling IWRM- based Basin Development Plan*

- BDP 2.1.1 The updating of sub-area reports has been on-going for the updated reports to be ready in 2009. The updated sub-area reports will include most of the additional information needed for the formulation and assessment 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. Hydropower and Irrigation sector reviews have been undertaken to provide an updated understanding of the sector development dimension and information on the significant projects. In parallel, the gaps in other sector knowledge are being addressed by the appropriate MRC Programmes such as FMMF, FP and NAP.
- BDP 2.1.2 A Regional Technical Working Group on scenarios and IWRM-based Basin Strategy (RTWG) with members from NMCs, national line agencies and MRC programmes has been established. The RTWG held several meetings to discuss and agree on important technical directions for the formulation and assessment of basin-wide water resources development scenarios, which are articulated in BDP Discussion papers “Approach and overall process to formulate and assess basin-wide development scenarios” and “BDP assessment framework”. The Twenty-eighth Meeting of the Joint Committee held on 27-28 August 2008 has agreed in principle the definition of basin-wide water resources development scenarios, the process to formulate and assess scenarios and the objective indicators for scenario assessment and evaluation. Fast-tracking of assessment of hydrological impacts of some BDP scenarios has been undertaken to contribute to early discussions and national decision making. The initial modelled results have been used to shape the definition of scenarios and scoping of hydrological changes assessment and the assessment of environmental, economic and social impacts, which has been discussed and agreed in principle by the RTWG in its 4<sup>th</sup> meeting in December 2008.
- BDP 2.2.1 The RTWG has also discussed a draft outline of the IWRM-based basin strategy that was prepared based on the existing Strategic Directions for IWRM in the LMB and other documents. The improvement of the outline and 1<sup>st</sup> draft Strategy would be prepared in early 2009 to facilitate early

discussions at national, sub-basin and basin levels. 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 has been improved to include the relevant data and information of all significant projects with potential transboundary implications, including newly identified projects through the above sector and sub-area activities.

BDP 2.4.1 A concept of the Project Portfolio with a classification and screening system has been prepared and discussed with Member Countries to support the BDP2 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 initial 2008 Project Portfolio. Some projects will be selected for further development and promotion.

### *Component 3: Knowledge Base and Assessment Tools*

BDP 3.1.1 National knowledge base will be updated and upgraded to support the planning process.

BDP 3.1.2 A draft Planning Atlas will be completed.

BDP 3.2.1 The BDP assessment framework for basin planning will be completed, incorporated the agreed scope for scenario assessment and agreed with the key stakeholders. The BDP Programme has been supporting 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 has been completed in some Member Countries. A regional training workshop on scenario-based planning and use of assessment tools that include IWRM principles and integrated river basin approaches has been designed and organized. Preparation has been undertaken for a Training of trainers on IWRM planning at sub-basin (sub-area) level to be organized in early 2009.

A high level study visit was organized to the Columbia River Basin to learn from both positive and negative outcomes of extensive water resources development. Useful experiences have been shared on developing multi-purpose water resources development projects, on the joint management of the Columbia river basin between the USA and Canada and the transparent process in handling the negative impacts of hydropower development.

BDP 4.4.2 Building on a training needs assessment, the National BDP units will prepare national training programme in each member country. Support will be provided to engage selected institutes in the adaptation of regional training modules to national languages and the development of 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. These selected training institutions will then deliver trainings to national and local stakeholders.

### **Significant Problems Encountered and Corrective Actions Taken**

The sector reviews started later than planned and with very different progress in the Member Countries. This has created a great challenge for data input into the formulation and assessment of basin-wide water resources development scenarios. The updating of Sub-area reports has experienced significant delays caused by difficulties in mobilizing national experts and in preparing quality preparation reports to start the work. On the other hand, major activities to set the approach, process and assessment framework for scenario formulation and assessment are well on track. The BDP2 team has worked closely with National BDP units to monitor the sector reviews including identifying country's specific solutions to accelerate the activities. Great efforts have been made to help National BDP units and national expert teams in improving the preparation reports to start updating the sub-area reports.

### **Donor Reviews or Appraisals in 2008**

A donor review of the Programme implementation, as well as initial outputs of the BDP Phase 2, took place in May 2008.

### **Relevant JC and Council Decisions taken in 2008**

The Twenty-eighth Meeting of the Joint Committee in August 2008 agreed in principle to the proposed definition of the basin-wide scenarios and the assessment framework. The Meeting however requested the Secretariat to relate the assessment criteria to appropriate direct and indirect impact indicators in close consultation with the NMCs. The nature of the Equitable Development criterion should be amended to Mutual Benefits or a similar phrase agreed in principle to the proposed definition of the basin-wide scenarios and the assessment framework. The Meeting requested the Secretariat to relate the assessment criteria to appropriate direct and indirect impact indicators in close consultation with the NMCs.

## **3.1.3 BDP Workplan for 2009**

### *Component 1: Programme Management and Communication*

BDP 1.1.1 Stakeholder analysis reports will be finalized for use by National BDP units and other stakeholders in the BDP process.

BDP 1.1.3 The Second BDP Stakeholder Consultation that will build a common understanding and facilitate dialogues amongst diverse Stakeholder groups on appropriate water resources development options for the LMB and their impacts (hydrological and environmental, and social and economic) will be organized toward the end of second quarter of 2009.

Transboundary meetings between sub-areas will be organized for local stakeholders to discuss critical issues in managing transboundary river basins.

BDP 1.1.4 Partnerships will be built with organizations in the region to facilitate inputs, peer review and joint activities, especially on scenarios and the IWRM-based Basin Strategy.

BDP 1.2.1 The Second joint donor review of BDP2 may be conducted toward the third quarter of 2009, subject to decision by the Donors.

Two independent expert panel review of the use of assessment tools and the elements of the IWRM-based Basin Development Plans (results of scenario analysis, IWRM-based Basin strategy and Project portfolio).

#### *Component 2: Rolling IWRM-based Basin Development Plan*

BDP 2.1.1 Updated sub-area reports are finalized and sub-area development scenarios and IWRM strategies are initiated for discussions among relevant stakeholders. Hydropower and Irrigation sector reviews completed and results disseminated widely.

BDP 2.1.2 Assessment of environmental, social and economic impacts of basin-wide development scenarios is undertaken and results are widely discussed amongst the RTWG, Member Countries and other stakeholders to support decision making by the Joint Committee and the Council on selecting a basin-wide development scenario for LMB.

BDP 2.2.1 The draft IWRM-based Basin Strategy is widely discussed for the final draft to be submitted to the Joint Committee and subsequently to the Council.

BDP 2.4.3 2009 Project portfolio prepared, widely discussed and submitted to the Joint Committee.

BDP 2.5.3 Outline of the IWRM-based Basin Development Plan prepared and widely discussed.

#### *Component 3: Knowledge Base and Assessment Tools*

BDP 3.1.3 Updated State of the Basin Report published with the lead coordination by the Environment Programme.

#### *Component 4: IWRM-based Planning Capacity*

BDP 4.1.2 Updated BDP planning guides prepared and translated into riparian languages.

BDP 4.2-4.4 Training of trainers organized in cooperation with ICBP on Integrated river basin planning in support of sub-area activities.

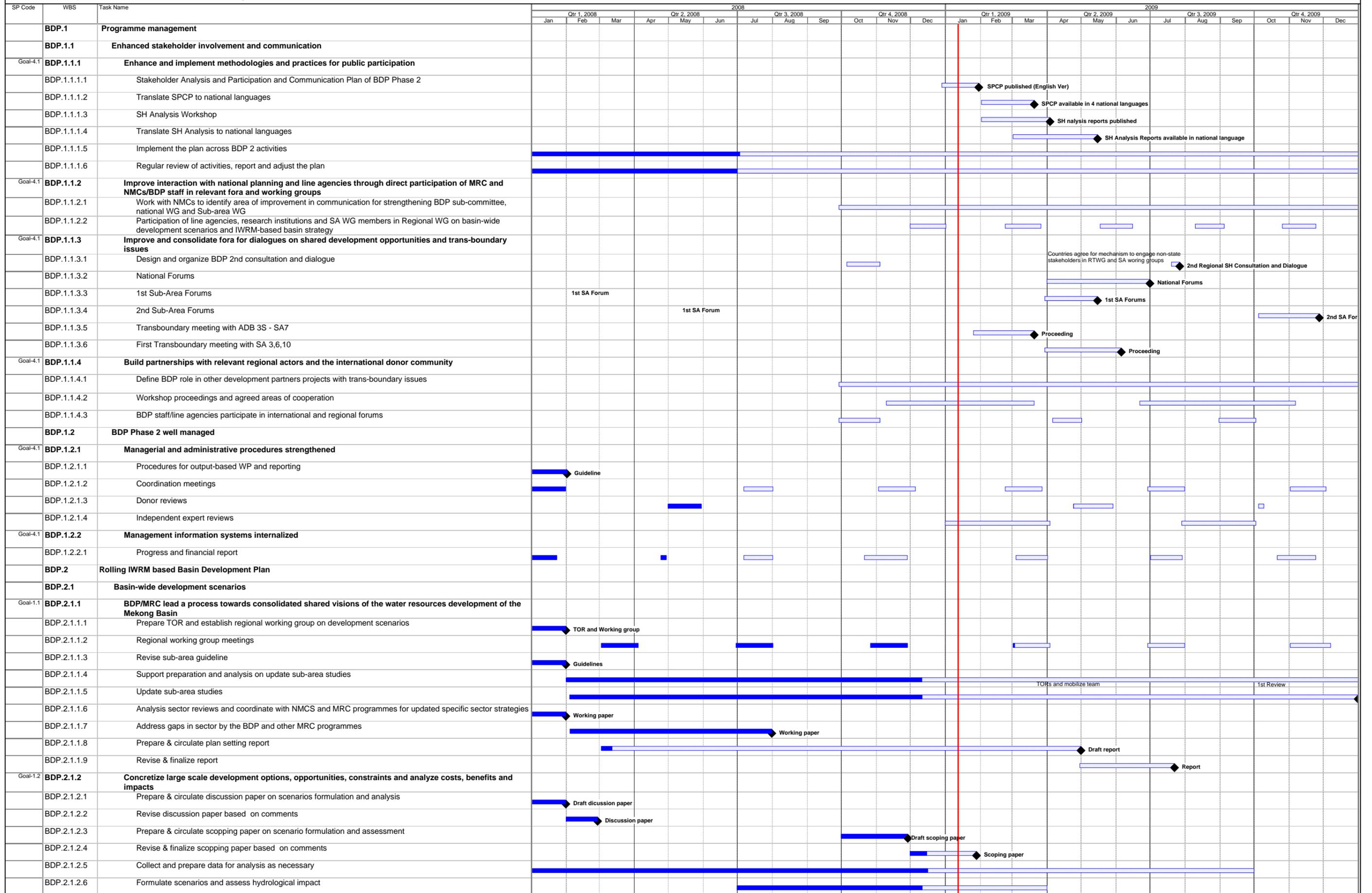
National training programmes developed and national training institutions engaged to adapt the regional training materials into national language, to develop country specific training modules and deliver training for sub-areas, national agencies and other stakeholders

BDPP 4.2.6 A regional training on trade-offs facilitation organized, building upon the scenario assessment and IWRM-based basin strategy

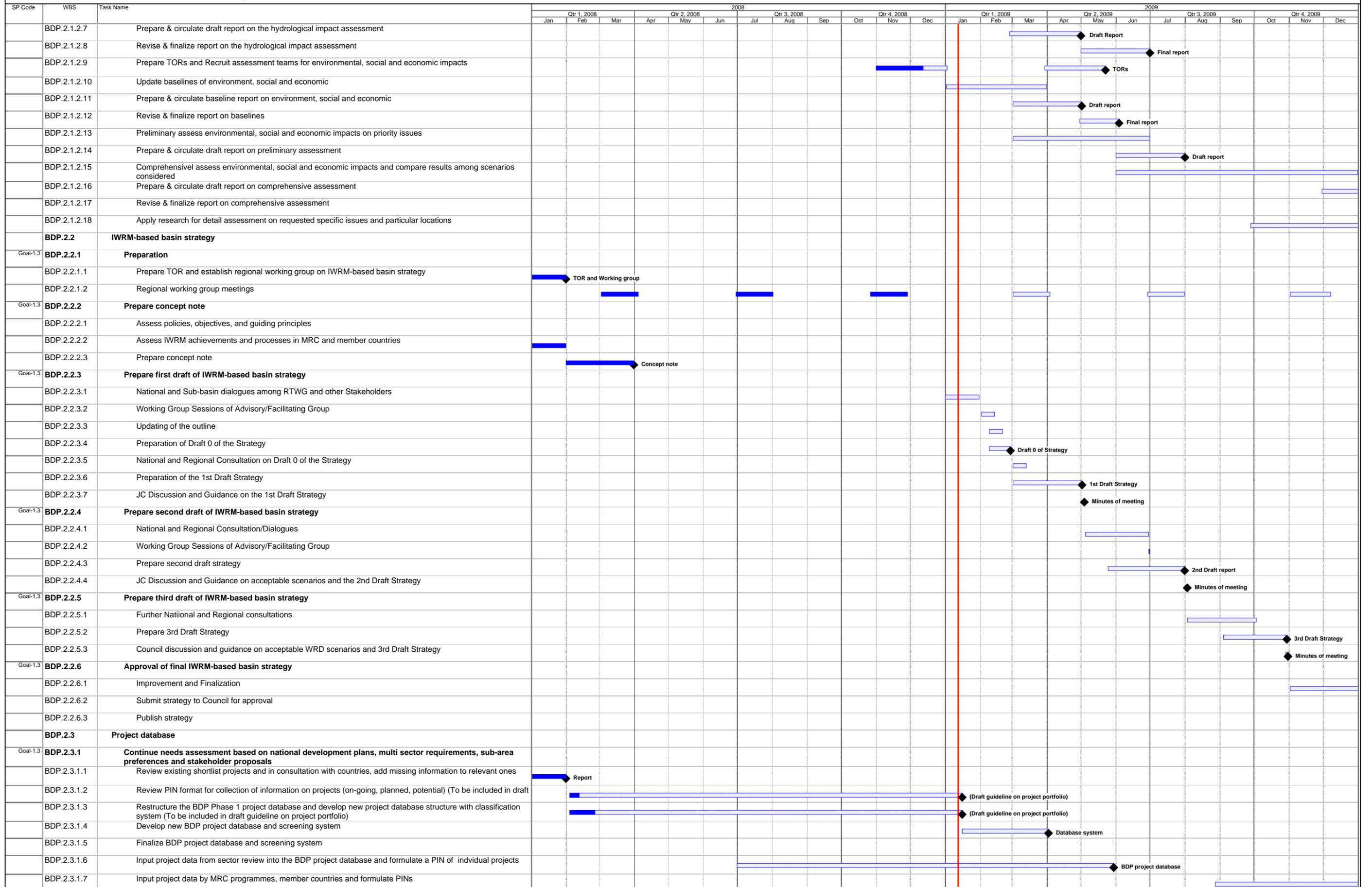
### **Donor Reviews or Appraisals Planned in 2009**

A second donor review of the Programme implementation is likely to take place in the third quarter of 2009 subject to decision by the Donors of the Programme.

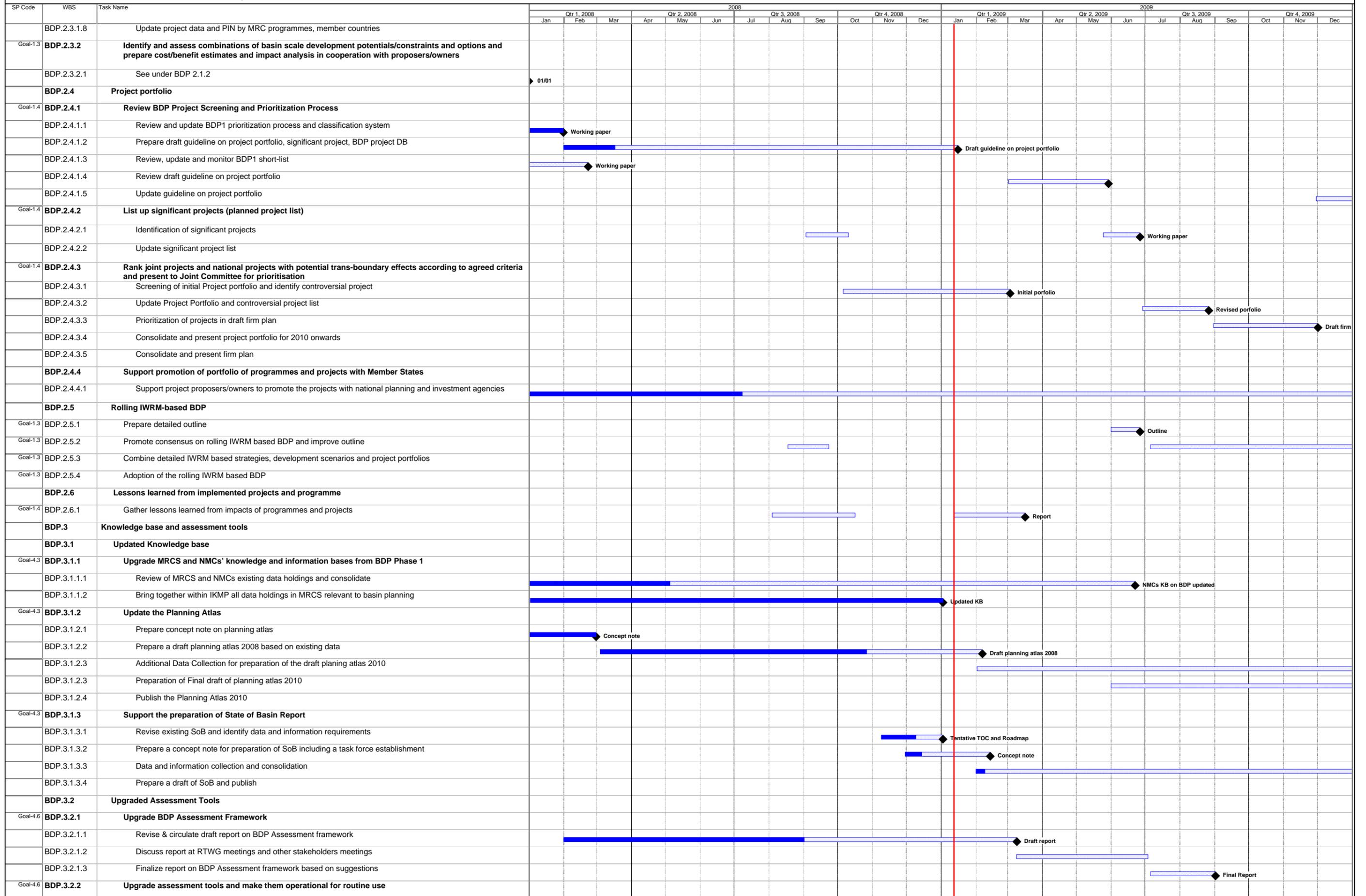
Basin Development Plan Phase 2 - Work Programme 2009



Basin Development Plan Phase 2 - Work Programme 2009



Basin Development Plan Phase 2 - Work Programme 2009



Basin Development Plan Phase 2 - Work Programme 2009

SP Code	WBS	Task Name	2008												2009											
			Qtr 1, 2008			Qtr 2, 2008			Qtr 3, 2008			Qtr 4, 2008			Qtr 1, 2009			Qtr 2, 2009			Qtr 3, 2009			Qtr 4, 2009		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	BDP.3.2.2.1	Review capability and procedure of assessment tools (DSF, Project Assessment and others)																								
	BDP.3.2.2.2	Upgrade and improve assessment tools as necessary for operational use																								
	BDP.3.2.2.3	Update user guides and organize workshops as needed																								
Goal-4.6	<b>BDP.3.2.3</b>	<b>International quality assurance of assessment tools and user guides</b>																								
	BDP.3.2.3.1	Mobilize International peer reviewer																								
	<b>BDP.4</b>	<b>IWRM based Planning Capacity</b>																								
	<b>BDP.4.1</b>	<b>IWRM-based planning guides</b>																								
Goal-4.5	<b>BDP.4.1.1</b>	<b>Review and Develop new planning guides</b>																								
	BDP.4.1.1.1	Update existing guides																								
	BDP.4.1.1.2	Use planning guides in Training of Trainers course (in English) for sub-area activities																								
	BDP.4.1.1.3	Improve the guidelines after ToT																								
	BDP.4.1.1.4	Translate all guides in riparian languages																								
	BDP.4.1.1.5	Disseminate guides to prospective users																								
	BDP.4.1.1.6	Training of National Stakeholders (in national languages)																								
Goal-4.5	<b>BDP.4.1.2</b>	<b>Ensure usefulness of planning guides beyond 2010</b>																								
	BDP.4.1.2.1	Interview users of planning guides																								
	BDP.4.1.2.2	Make appropriate improvements in the guides																								
	BDP.4.1.2.3	Publish and disseminate guides with other relevant outputs of BDP Phase 2																								
Goal-4.5	<b>BDP.4.1.3</b>	<b>Staff at MRCS and NMC levels skilled in scenario-based planning</b>																								
	BDP.4.1.3.2	Engage national trainers and train relevant staff at MRCS, NMC and WG members																								
	<b>BDP.4.2</b>	<b>Staff at MRCS and NMC levels skilled in the use of assessment tools</b>																								
Goal-1.3	BDP.4.2.1	Engage senior professionals with internationally recognised expertise in modeling in MRCS (through modelling team and IKMP)																								
	<b>BDP.4.3</b>	<b>Knowledge based decision support capacity enhanced at MRCS and NMC levels</b>																								
Goal-4.6	BDP.4.3.1	Relevant staff at MRCS and NMC levels select and apply information and tools on a routine basis																								
	<b>BDP.4.4</b>	<b>IWRM based planning principles and approaches internalized at MRCS and NMC levels</b>																								
Goal-4.5	BDP.4.4.1	Assess training needs and develop training packages for IWRM planning accordingly																								
Goal-4.5	BDP.4.4.2	Identify training institutions																								
Goal-4.5	BDP.4.4.3	High level study tour to another basin																								
	BDP.4.4.4	Develop national training program based on TNA																								
Goal-4.5	BDP.4.4.5	Adapt regional training modules to national language																								
Goal-4.5	BDP.4.4.6	Deliver training courses in countries and to local																								
Goal-4.5	BDP.4.4.7	Assess training impacts																								
	<b>BDP.4.5</b>	<b>Capacity built within MRC to assess value of water and sharing of benefits and costs</b>																								
Goal-4.6	BDP.4.5.1	Upgrade modeling skills and staff capabilities to value water in different uses																								
	<b>BDP.4.6</b>	<b>Capacity built within BDP to assist MRC and the Mekong Programme in trade-off facilitation and mediation</b>																								
Goal-2.3	BDP.4.6.1	Assess skills requirements																								
Goal-2.3	BDP.4.6.2	Train staff in principles of trade off facilitation																								
	BDP.4.6.3	National training on trade-off																								

## **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 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 currently has six operational components that reflect MRC's mission of promoting and coordinating sustainable management and development of water and related resources. In addition, a new programme component is planned in 2009 hosting a new cross-cutting issue: climate change and adaptation.

### *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. Efforts are made not only to produce monitoring data but also to improve quality of data by riparian countries and ensure that data will benefit the countries. This component continues to expand its scope to cover environmental problems and concerns of the LMB. An example is a joint plan with IKMP to develop a new activity on sediment monitoring.

### *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. Tools are introduced for the riparian countries such as Transboundary Environmental Impact Assessment, mechanism for conflict resolution and environmental considerations for sustainable hydropower development.

### *Component 4: People and Aquatic Ecosystems*

This component works to ensure that data and information on the basin's aquatic and related resources and on livelihood status is available for relevant stakeholders to use in improving planning and management. It focuses on how people use, benefit from and are affected by changes in these ecosystems. Wetland inventory and valuation for a better

understanding of how people of the LMB rely on aquatic ecosystems. Vulnerability of the people to aquatic ecosystem changes is also assessed.

#### *Component 5: Environmental Knowledge*

This component aims to identify the knowledge gaps and promotes research to fill these gaps, as well as to provide the information in a suitable format for planners and decision makers. 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.

#### *Component 6: Environmental Flows Management*

This component aims to improve management of water flows, maintaining the ecological balance of the Mekong River Basin. It conducts an Integrated Basin Flow Management (IBFM) together with development and management plans developed based on such an assessment and will ensure that longer term impacts are anticipated and a proper trade-offs analysis is performed contributing to sustainable development under the Mekong cooperation. This work is undertaken in close cooperation with BDP.

#### *Component 7: Climate Change and Adaptation*

This component is a new cross-cutting global and regional concern. It aims to initiate and stimulate people of the Lower Mekong Basin to be aware of an emerging global environmental issue. With a particular relevance for this region, climate change will have impacts on hydrology, ecology, agriculture, fisheries and hydropower development. Poor people are most likely to be impacted. Tools and an adaptation strategy and plan will assist the riparian countries to analyse and address future climate change scenarios.

All components incorporate capacity building and networking as well as promotion of good governance and public involvement in environmental issues. The Environment Programme supports the other MRC programmes with environmental data and tools for environmental planning and 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. Data on Water Quality and Ecological Health of the Mekong River will be collected effectively with a high quality in conjunction with line agencies. 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 communicate the results to facilitate an understanding and uptake. (Component 2)
2. Improved approaches, processes and tools for Environmental and Social Impact Assessment, focusing on transboundary environmental impacts and activities. In particular, a better understanding of conflict resolution in transboundary environmental matters and environmental considerations for sustainable hydropower development. (Component 3)
3. A realistic valuation of aquatic ecosystems and natural resources in relation to the benefits for the people of the Mekong River Basin. An assessment of vulnerability of the people to aquatic ecosystem changes. (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. Improved management of environmental flows by the riparian countries maintaining the ecological balance of the Mekong River basin through an Integrated Basin-wide Flows Management. (Component 6)
6. Assessment of potential climate change impacts on the Mekong River Basin and climate change adaptation strategy and action plan for future climate change scenarios (Component 7)

The Environmental 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

(US\$ 1,000)

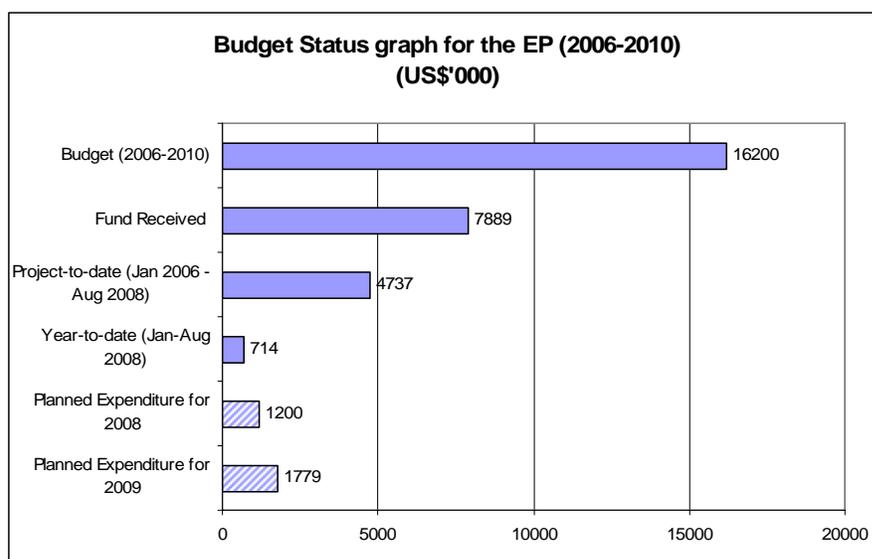
	Start date	End date	Budget	Balance 2008*	Donors
<b>Agreements</b>					
<i>Danish contribution to EP 2002-06</i>	<i>01/10/04</i>	<i>31/03/07</i>	<i>56</i>	<i>0</i>	<i>Denmark</i>
<i>Dutch support to Mekong wetland biodiversity programme</i>	<i>01/10/04</i>	<i>31/03/07</i>	<i>592</i>	<i>0</i>	<i>Netherlands</i>
<i>Participation in the UNDP Mekong wetland biodiversity programme</i>	<i>19/07/05</i>	<i>31/03/07</i>	<i>81</i>	<i>0</i>	<i>UNDP</i>
<i>Swedish contribution to EP 2004-06</i>	<i>01/01/04</i>	<i>31/03/07</i>	<i>1,825</i>	<i>0</i>	<i>Sweden</i>
Swedish contribution to EP 2007-09	01/01/07	31/12/09	2,560	1,042	Sweden
Danish contribution to EP 2007-2010	01/01/07	31/12/10	1,305	508	Denmark
Australian contribution to EP 2008-2012	01/06/08	30/05/12	1,235	1,105	Australia
MRC Water Management Trust Fund for 2008-2009	01/08/08	31/12/09	235	235	Finland and France
<b>Total value of current agreements</b>	<b>2006</b>	<b>2012</b>	<b>7,889</b>	<b>2,890</b>	<b>All</b>

(\*) Balance projected by the end of December 2008

Note: Completed Agreements indicated in red italics.

### 3.2.2 Progress of EP for 2008

The following graph provides an overview of the budget status of the Environment Programme which includes the budget for the Programme period of 2006-2010, total funds received so far and expenses on the Project-to-date (January 2006 – December 2008) and Year-to-date (January - December 2008). The expected expenditure for 2009 is planned for 1,779,000 US\$.



### Planned and Achieved Outputs for 2008

#### Component 1: Programme Management

EP 1.1.3 The new Funding Arrangement between AusAID and MRC was signed in June 2008 to support the Climate Change and Adaptation Initiative for the year 2008-2012.

The first phase (July 2008 - March 2009) will be the formulation of Climate Change and Adaptation Framework for the LMB. It will initiate considerations of a new cross-cutting issue which is of global and regional interest to the LMB. It is hoped that the full Climate Change and Adaptation proposal will be co-funded by a number of different development partners.

An agreement to conduct a joint project on Climate Change Vulnerability in Mekong River Basin in collaboration with the Commonwealth Scientific and Industrial Research Organization (CSIRO), supported by AusAID was signed in February 2008. In addition, MRC Water Management Trust Fund gave a financial support for the activity on a development of Technical Guidelines to Implement the Procedures for Water Quality in November 2008.

In order to manage both existing programmes and activities, the Environmental Programme filled a number of vacancies in the year 2008 namely Chief Technical Advisor (August 2008), Senior Environmental Specialist (February 2008), Environmental Programme Coordinator (June 2008), a Wetlands Programme Officer (October 2008) and a Climate Change Programme Officer (October 2008).

All reports of the Environment Programme were completed as required. An Environment Programme Management Meeting which is a core mechanism for follow up the progress of programme activities was convened this year in December 2008. The meeting also considered and agreed with the workplan of Environment Programme of year 2009.

## *Component 2: Environmental Monitoring*

- EP 2.1.2 The technical support to riparian laboratories under the Quality Assurance/Quality Control has progressing according to the plans. All national laboratories are now able to analyze two additional water quality parameters (chrophyll-a and faecal coliform). A laboratory audit for the year 2008 was completed in August 2008 for the four designated laboratories. Proficiency Testing of laboratories indicates an improvement of laboratory competence to standard. The documentation has become more complete, and the activities are more systematic. The laboratories have applied internal QC for all parameters, but still need some time and practice before the internal QC will a part of the daily routines.
- EP 2.1.2 Work on the water quality monitoring network continues  
EP 2.1.3 for 2008 with improved quality and high efficiency. Water  
EP 2.1.4 quality data of 87 sampling stations were collected, analysed and reported by the four member countries for the period of January to December 2008. Data was checked and entered into the EP database.

- EP 2.1.5 MRC Technical paper “The Lower Mekong River Basin – Water Quality Data Assessment from 1985-2005, has been prepared during 2007 and 2008. The MRC Technical paper No. 19 was published in November 2008.
- EP 2.1.7 Activities related to developing technical guidelines to implement Procedures on Water Quality (PWQ), were handed over to EP from WUP in early 2008. Based on a regional meeting with NMCs and national experts in March 2008 the draft guidelines have been further revised. Workplan and activities for the three components of Technical Guidelines has been produced in 2008 considering in a first step guidelines on protection of human health.
- EP 2.1.8 Development of a sediment monitoring project lead by IKMP was initiated in the second half of 2008. The project tries to integrate with other existing environmental monitoring programmes like water quality and ecological health monitoring. Workplan 2009 is proposed for the next step.
- EP 2.2.1 Ecological health monitoring reports for both 2006 and 2007 have been completed and will be published as MRC Technical paper in early 2009.
- EP 2.2.3-2.2.4 The Ecological Health Monitoring completed the first 4-year monitoring cycle in 2008. A first round of samples at selected sites is complete at the beginning of 2008. The training on macro-invertebrates identification was held for riparian staffs in June 2008. The ecological health riparian expert teams performed sample taxonomic identification and further data analysis and assessment to produce their 2008 national reports by early 2009.
- EP 2.3.1 The regional workshop and technical meeting on social impact monitoring and vulnerability assessment were held in August 2008 followed by field work on pre-test of methodology on social impact monitoring for four riparian sites since August to September 2008. Revision of questionnaires for pre-test exercises will continue to 2009.
- EP 2.4.1 A report card for water quality was presented to the Regional Technical Advisory Group (RTAG) members for comments in early 2008. Recommendations were given on the further development of the river report card and water quality report card was finalized for publication in December 2008.
- EP 2.4.2 A report card on aquatic ecological health of the Mekong River Basin is finalized through country reviews and comments and is planned to be published by early 2009.

*Component 3: Environmental Decision Support*

- EP 3.1.1 The transboundary environmental impact assessment framework continues to be revised in consideration of

Member States' concerns. A better understanding of the TbEIA tool by learning and sharing experiences with other basins was promoted in February 2008 at a regional seminar. In March 2008 at a regional meeting, it was agreed that a detailed implementation plan based on TbEIA capacity building and framework revision shall be developed. Seven transboundary critical areas/issues of the Mekong River Basin are identified providing a basis for initiating capacity building for the year 2008. Capacity building on TbEIA is emphasized. A roundtable discussion meeting on approach for development of the TbEIA Guideline with the Member Countries took place in September 2008. This will be followed by a pilot study for TbEIA framework revision.

EP 3.2.1-3.2.2 A concept note on identification of transboundary of critical areas was drafted in late 2007. The 3<sup>rd</sup> regional meeting on identification of critical areas was held in February 2008. Since then, a set of standardized terminology for conflict prevention and mediation has been drawn up and translated into riparian languages. Training modules for capacity building of dispute prevention and mediation were partly completed in the first half of 2008. A regional training on Transboundary Waters Dispute Prevention and Management was held in May 2008 and was repeated in September 2008. An effort to incorporate the training on collaborative learning approach is introduced. Pilot area chosen (Champasak-Strung Treng) will be used in a learning and information exchange process on dispute prevention.

EP 3.3.6 The project formulation of Environmental Considerations of Sustainable Hydropower Development (ECSHD) has started in January 2008, based on the result of previous national consultations. In May 2008, project formulation was accelerated with the assistance of an international expert to more closely define the scope of this sustainability assessment tool. A brainstorming meeting with stakeholders and experts was held in June 2008 to prepare the ECSHD project proposal. The Joint Committee then considered and commented on the proposal in August 2008. The regional consultation on MRC Hydropower programme in September 2008 included a presentation on the ECSHD process.

EP 3.4.1 Discussions have been held with BDP and HP on how Strategic Environmental Impact Assessments (SEA) can be applied to support the Basin Development Planning. The discussion will continue depending on the needs of BDP and HP.

#### *Component 4: People and Aquatic Ecosystems*

EP 4.1.1-4.1.2 Field training on wetland mapping for the Member Countries was conducted in four selected country wetland sites in the beginning of 2008. This was followed by training on data processing of wetland mapping in August

2008. Participants worked with their wetland data using different GIS softwares, creating draft wetland maps of the four selected wetland sites and checking data. The activity succeeded to hand over the methodology to Member States.

EP 4.2.1 Technical guidelines for vulnerability assessment were discussed and revised by the expert team in February 2008. This activity is linked to social impact monitoring (EP 2.3.1). Cooperation and alignment between EP and BDP on social impact assessment and vulnerability assessment was initiated in June 2008. The progress is reported under EP 2.3.1.

EP 4.4.1 The last pending national report on Environment Impact Assessment of Tourism in Thailand was finalized in July 2008. All four national reports are expected to be completed and approved by the end of 2008. Subsequently, a regional synthesis report, based on the four national reports is expected to be completed by early 2009.

#### *Component 5: Environmental Knowledge*

EP 5.1.2 EP together with BDP initiated a process to produce the second State of the Basin Report. A detailed outline of the State of the Basin Report will be drafted riparian expert by early 2009 in consultation with the Member Countries.

#### *Component 6: Environmental Flows Management*

EP 6.1.2 The Integrated Basin Flow Management work (phase 3) has continued during 2008. Part of this work includes an intensified dialogue on the potential to use of IBFM as a tool for the BDP scenarios.

EP 6.1.3 A technical report on the assessment methodology for environmental flows was ready in 2008 for testing and adoption under the IBFM process and for further evaluation. Work on the social assessment component of IBFM has been initiated together with social impact monitoring and vulnerability.

EP 6.1.4 Reports on flows assessment under BDP scenarios have continued in order to refine IBFM in order to integrate into the BDP.

#### *Component 7: Climate Change and Adaptation Strategies*

EP 7.1.1 The Study on Climate Change Vulnerability in the Mekong River Basin in collaboration with the Commonwealth Scientific and Industrial Research Organization (CSIRO), Australia and supported by AusAID started in 2007. The project has worked with the hydrological models of the DSF to enable Climate Change assessments on the hydrological regime. It has further worked on preparation

of climate change scenarios for the LMB including initial analysis of downscaling global scenarios review of climate change issues in LMB. Further development of the DSF to cover Climate Change and ways to assess impacts on fisheries will be undertaken.

EP 7.2.1 The MRC Climate Change Initiative was launched in July 2008 for the period of 2008-2012 (financially supported by AusAID). This built on the on-going work with CSIRO (referred in EP. 7.1.1) is a basis for the new initiative on Climate Change and Adaptation for the LMB. The first step is to formulate a comprehensive proposal on Climate Change and adaptation to be ready by March 2009 for donor consideration and taking into account initiations already being undertaken at national level and by other organisations. The first national consultation meetings were accomplished in July-August 2008. The national reports on climate change adaptation strategies and activities in the riparian countries were initiated to be finalised by the end of 2008. National expert teams of the four Member Countries were formulated in October 2008. National expert teams meetings were convened twice in November and December 2008 and having a discussion with international experts. A regional Climate Change Workshop involving all relevant stakeholders will be held in February 2009 to discuss approaches, interfaces with other Climate Change initiatives and activities in the region and how to best explore the value added of the MRC Climate Change and Adaptation initiative.

### **Significant Problems Encountered, Corrective Action Taken**

A number of activities under the Environmental Programme in 2008 have encountered budget constraints and time limitations. Some activities, such as ecological health monitoring, integrated basin flows management, wetland mapping, are at risk of termination after the activities in 2008 are completed, even though there are a number of next-steps and follow-up activities which would benefit and support the Member Countries.

Some activities such as the Transboundary Environmental Impact Assessment framework and the Integrated Basin Flows Management are difficult to agree upon and to be taken up by the Member Countries partly due to of the need for capacity building. Further efforts are considered to emphasize national capacity building and further integration of Environment Programme activities into riparian country activities e.g. through pilot studies and case studies.

In order to continue a support for the member countries, EP will seek for funding arrangements as a priority of programme management in 2009.

Promote an ownership of EP activities for the Member Countries with emphasis on country participation, learning and collaboration approach through Pilot studies and case studies.

Accelerate a communication and dissemination of EP outputs from a number of completed and on-going activities for the public and the Member Countries.

Prioritization of EP activities to meet country needs and to the basic criteria will assist EP towards an achievement of MRC Strategic Plan (2006-2010) in the remaining two years period.

### **3.2.3 EP Workplan for 2009**

The work plan under the various activities of the EP during 2009 is shown schematically in the attached Gantt Chart and is briefly described below.

#### *Component 1: Programme Management*

EP 1.1.3 The new funding arrangement with AusAID signed in mid of 2008 provides initial financial support for MRC Climate Change and Adaptation Initiative for the period of 2008-2012. Preparation of a detailed full proposal will be finalised in March 2009. As available funding for 2008-2012 is about 30% of the required funding for the project, fundraising will continue in 2009.

EP will submit a proposal to seek a continued financial support to Sida as the current phase of agreement will end in 2009. Also, EP will continue seeking for AFD support which was postponed in 2008.

#### *Component 2: Environmental monitoring*

EP 2.1.2 The work under the Quality Assurance/Quality Control (QA/QC) system for water quality sampling and analysis of the four riparian countries will be reported and completed in 2009. The work includes technical support to Member Countries' laboratories to further develop techniques and procedures for environmental analysis and monitoring.

EP 2.1.4 Technical support to an operational water quality monitoring network will continue for the whole period of 2009, with an aim to support and encourage line agencies of the Member States to take more actions and responsibilities to operate the current water quality monitoring network, both in technical and financial terms.

EP 2.1.7 Activities related to developing technical guidelines to implement Procedures on Water Quality (PWQ), was handed over to EP from WUP in early 2008. Workplan and activities for the three components of Technical Guidelines will be developed and completed by the end of 2009. The expected outcomes include Technical Guidelines to protect human health and aquatic life and to address water quality management in case of emergencies, particularly oil spill emergency response.

EP 2.1.8 The EP will provide further inputs to the development of the sediment monitoring project started in 2008 and lead by IKMP in order to integrate it into other existing environmental monitoring programmes such as water quality and ecological health monitoring.

- EP 2.2.4 Development of an ecological health monitoring (EHM) system has been completed. A number of annual technical reports and a synthesis report will be published and distributed in 2009. If new financial support is available, the EHM programme will continue by transferring its activities to NMCs and line agencies during 2009. The EHM activities will be reviewed and upgraded for its use and practices.
- EP 2.3.1 A technical guideline for social impact monitoring has been developed in consultation with NMCs since 2008. Fieldwork for social impact monitoring aiming to test local social indicators for specific study sites will continue for 2009. The social impact monitoring system, consisting of a set of indicators relating the changes in water resources with social impacts, will be implemented and further developed through fieldwork in early 2009. Technical guideline will be finalized in 2009.
- EP 2.4.1 The first Report Card describing water quality of the Lower Mekong Basin on the basis of time series data up to 2006 was published in 2008. The second Report Card will be published in 2009 in order to update water quality data up to 2008.
- EP 2.4.2 The first Report Card describing an evaluation of the aquatic ecological health will be drafted and finalised in 2009 and followed by a second report card, based on data collection of the period 2008-2010, if fund is available.
- EP 2.4.3 The Report Card describing socio-economic conditions of the Lower Mekong Basin will be developed during the second half of 2009 aiming to disseminate it as an easy-to-read document for the people of the Lower Mekong Basin with regard to the relationships between socioeconomic conditions and basin-wide water resources management.

*Component 3: Environmental Decision Support*

- EP3.1.1 The draft Framework/Guidelines for Transboundary Environmental Impact Assessment (TbEIA) for the Lower Mekong Basin will be further revised in 2009. Taking into consideration potential transboundary impacts of some pilot sites, Member Countries will learn how to deal with the activities through dialogue, exchange of information and capacity building. The experiences and procedures from the pilot site works are expected to improve the draft Framework for TbEIA, for Member States.

In addition, new areas for cooperation on management of transboundary wetlands, as well as development of management actions and areas for potential agreements will be identified during 2009.

- EP 3.1.2 Subject to availability of funds, EP and BDP will jointly seek opportunities to develop procedures for cumulative impact assessment in the BDP process during 2009.

- EP 3.2.1 Principles and mechanisms for conflict mediation and resolution will continue for 2009, if funds are available. The activities will mainly focus on capacity building and awareness raising on conflict mediation and resolution among Member Countries, based on experience gained from pilot studies on transboundary critical areas/issues.
- EP 3.3.1 The development of indicators and performance assessment systems has been discussed with the Environmental Operations Centre of ADB and will be followed up in 2009 including an establishment of some environmental performance assessment indicators with EP monitoring data.
- EP 3.3.6 The Environmental Considerations for Sustainable Hydropower Development (ECSHD) project formulation will be completed in 2008. Project implementation is planned to start in 2009 by a production of MRC Sustainability Guidelines in consultation with the Member Countries.
- EP 3.4.1 The Strategic Environmental Assessment provides a framework that can be useful to address environmental issues under the BDP process. In 2009, EP and BDP will jointly seek opportunities to apply SEA procedures in the BDP process and opportunities to link up to the SEA work of ADB's Environmental Operations Centre.

*Component 4: People and Aquatic Ecosystems*

- EP 4.1.2 Wetland classification of Mekong will be developed and standardized for the Member Countries. Wetland mapping will also be reported in 2009.
- EP 4.1.4 Wetland Valuation planned for 2009 includes a number of activities: improving and filling spatial and thematic gaps in the set of wetlands values already available and identified; collecting reliable primary data on poorly represented freshwater habitats and further standardizing data collection and processing; and linking the existing wetland map database to a wetland valuation database.
- EP 4.2.1 Vulnerability assessment in selected pilot sites in Member Countries will be initiated during 2009. The expected outputs are vulnerability information and data to support BDP and vulnerability mapping under the Climate Change and Adaptation Initiative.
- EP 4.2.2 Risk assessments of different development interventions on important wetlands will be initiated during 2009.
- EP 4.3.1 In close cooperation with IKMP, making wetland and water quality information accessible over the internet will be taken further in 2009.

*Component 5: Environmental Knowledge*

- EP 5.1.2 The MRC State of the Basin Report will be drafted during 2009. EP is taking a lead together with BDP to produce the

State of the Basin Report to convey knowledge, facts and findings to Member States and the people of the LMB.

#### *Component 6: Environmental Flows Management*

- EP 6.1.2 Draft booklets on IBFM have been sent to NMC for comments, and are awaiting NMC's approval for publishing. In total, four booklets on hydrology, biophysical assessment and social assessment (outcomes of IBFM 1-3 studies) will be published by in 2009 and provide an important tool for capacity building and awareness raising about the IBFM methodology among NMCs, line agencies and other stakeholders in the Member Countries.
- EP 6.1.3 During 2009, the IBFM Predictive Tool will be developed. The social assessment under IBFM will be closely linked to the development of a Social Impact Monitoring Vulnerability Assessment System. Work will also focus on how to integrate the IBFM Predictive Tool into the DSF.
- EP 6.1.4 During 2009 it is expected that BDP together with EP will use the IBFM for flow assessments of BDP scenarios.
- EP 6.1.5 Capacity building and technical assistance on holistic flow  
EP 6.1.7 assessments will be undertaken throughout 2009 to equip NMCs and line agencies with knowledge on how scenario assessments carried out and how holistic flow assessment is conducted taking into account the environment and social aspects. This will also improve their understanding on how the flow change may impact different parts of the river.
- EP 6.1.6 An IBFM stakeholder consultation will be conducted during 2009 to further increase the awareness on the IBFM among different stakeholders and strengthen their capacity for trade-off discussions on different water resource development scenarios. This work will be implemented in collaboration with BDP.

#### *Component 7: Climate Change and Adaptation Strategies*

- EP 7.1 During 2009 work on a Basin-wide Integrated Assessment on Impact and Adaptation to Climate Change will be initiated. Activities will primarily focus on the development of an integrated regional climate-land-use-hydrologic analysis system, and to undertake a review of existing tools and data available at MRCS as well as within the region.
- EP 7.2 In 2009, the initial phase of the MRC Climate Change and Adaptation Initiative aims to formulate a detailed project document, including activities, milestones, budget and an indicative implementation schedule. The project document will be the basis for fundraising with donors related to implementation of the next phases of the MRC initiative. The implementation phase will commence by mid of 2009.

### **Donor Reviews or Appraisals Planned in 2009**

AusAID plans the review and an appraisal on the Climate Change Initiative in March 2009. The SIDA Annual consultation is planned for November 2009.

# Environment Programme - Progress and Work Programme 2008-2009

SP Code	WBS	Task Name	2008												2009											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	<b>EP.1</b>	<b>Programme management</b>																								
<b>Goal-3.1</b>	<b>EP.1.1</b>	<b>Coordination and communications</b>																								
	EP.1.1.1	With MRC units																								
	EP.1.1.2	With national line-agencies and other national units																								
	EP.1.1.3	With academia, international NGO, etc																								
<b>Goal-3.1</b>	<b>EP.1.2</b>	<b>Preparation of management information</b>																								
	EP.1.2.1	Progress and other reports																								
	<b>EP.2</b>	<b>Environmental monitoring</b>																								
<b>Goal-3.2</b>	<b>EP.2.1</b>	<b>Water and sediment quality</b>																								
	EP.2.1.1	Diagnostic study on water quality																								
	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																								
	EP.2.1.4	Monitoring network operational																								
	EP.2.1.5	Technical paper on water quality assessment																								
	EP.2.1.6	Training of laboratory staff in analytical techniques																								
	EP.2.1.7	Technical guidelines to implement Procedures on Water Quality (PWQ)																								
	EP.2.1.8	Sediment monitoring																								
<b>Goal-3.2</b>	<b>EP.2.2</b>	<b>Aquatic ecological health</b>																								
	EP.2.2.1	Bio-monitoring of the Lower Mekong River and selected tributaries																								
	EP.2.2.2	Technical report on aquatic ecological health																								
	EP.2.2.3	Identification of freshwater invertebrates of the Mekong River and its tributaries																								
	EP.2.2.4	Transformation of EHM to NMCs and line agencies																								
<b>Goal-3.2</b>	<b>EP.2.3</b>	<b>Livelihoods dependent on aquatic systems</b>																								
	EP.2.3.1	Development of social impact monitoring system																								
<b>Goal-3.2</b>	<b>EP.2.4</b>	<b>Basin wide environmental monitoring</b>																								
	EP.2.4.1	Indicative / Basin Report Card - water quality																								
	EP.2.4.2	Indicative / Basin Report Card - ecological health																								
	EP.2.4.3	Indicative / Basin Report Card - socio-economic conditions																								
	<b>EP.3</b>	<b>Environmental decision support</b>																								
<b>Goal-3.4</b>	<b>EP.3.1</b>	<b>Environmental and social impact assessment</b>																								
	EP.3.1.1	Guidelines for trans-boundary environmental impact assessment system																								
	EP.3.1.2	Cumulative impact assessment system for BDP																								
<b>Goal-3.3</b>	<b>EP.3.2</b>	<b>Trans-boundary environmental issues</b>																								
	EP.3.2.1	Principles and mechanisms for conflict mediation and resolution																								
	EP.3.2.2	Priority areas for environmental conflict prevention																								
<b>Goal-3.3</b>	<b>EP.3.3</b>	<b>New environmental concepts, techniques and tools</b>																								
	EP.3.3.1	Indicators and performance assessment systems																								
	EP.3.3.2	Tran-boundary environmental risk assessments, Thai/Lao and Cambodia/Viet Nam																								
	EP.3.3.3	Environmental risk assessment tools																								
	EP.3.3.4	Analysis of risks for oil spills and other related navigation hazards (coop with NAP)																								

# Environment Programme - Progress and Work Programme 2008-2009

SP Code	WBS	Task Name	2008												2009											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	EP.3.3.5	Environmental Considerations for Sustainable Hydropower Development (ECSHD), proj	<b>ECHD Project Formulation</b>																							
	EP.3.3.6	ECSHD project formulation	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.4</b>	<b>EP.3.4</b>	<b>Strategic environmental assessment (SEA)</b>	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.3.4.1	SEA procedures applied in BDP	[Progress bar from Jan 2008 to Dec 2008]																							
	<b>EP.4</b>	<b>People and aquatic ecosystems</b>	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.5</b>	<b>EP.4.1</b>	<b>Valuation of aquatic ecosystems</b>	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.1.1	Wetlands data base	[Progress bar from Jan 2008 to Dec 2008] ◆ <b>SWAMP data base updated</b>																							
	EP.4.1.2	Wetlands maps	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.1.3	Wetlands atlas	▶ <b>Book</b>																							
	EP.4.1.4	Wetlands valuation	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.2</b>	<b>EP.4.2</b>	<b>Vulnerability and dependence on aquatic ecosystems</b>	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.2.1	Report on people vulnerable to changes in aquatic resources	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.2.2	Risk assessment reports for important wetlands	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.2</b>	<b>EP.4.3</b>	<b>Wetlands management systems</b>	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.3.1	MRC-IS Portal - wetland and water quality information now accessible over the internet	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.3.2	Ramsar sites established	▶ <b>Site in Lao PDR established</b>																							
	EP.4.3.3	Guidelines for regional wetlands management	▶ <b>Documents in riparian languages</b>																							
	EP.4.3.4	Trans-boundary wetlands management projects identified	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.3.5	Biomonitoring information added to the portal	▶ <b>Models and data bases</b>																							
	EP.4.3.6	Capacity development of government staff in field survey and GIS wetlands	[Progress bar from Jan 2008 to Dec 2008] ◆ <b>Training</b>																							
<b>Goal-3.2</b>	<b>EP.4.4</b>	<b>Environmental Impact of Tourism in the LMB</b>	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.4.4.1	National reports environmental impacts of tourism	▶ <b>Reports (analysis)</b>																							
	EP.4.4.2	Environmental impact of tourism	[Progress bar from Jan 2008 to Dec 2008] ◆ <b>Regional synthesis report</b>																							
	<b>EP.5</b>	<b>Environmental knowledge</b>	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.2</b>	<b>EP.5.1</b>	<b>Environmental information sharing</b>	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.5.1.1	Proceedings from EP Annual Technical Meetings	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.5.1.2	State of the Basin Report (in coop with BDP)	[Progress bar from Jan 2008 to Dec 2008] ◆																							
	<b>EP.6</b>	<b>Environmental flows management</b>	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.5</b>	<b>EP.6.1</b>	<b>Support to basin development plan</b>	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.6.1.1	Specialist reports for the improvement of the IBFM predictive tool	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.6.1.2	IBFM transformation process	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.6.1.3	Environmental flows assessment methodology	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.6.1.4	Reports on flow assessments of BDP scenarios	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.6.1.5	Capacity building in flow assessment	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.6.1.6	Awareness raising through stakeholder consultations	[Progress bar from Jan 2008 to Dec 2008]																							
	EP.6.1.7	Technical assistance, pilot flow initiatives	[Progress bar from Jan 2008 to Dec 2008]																							
	<b>EP.7</b>	<b>Climate change and adaptation strategies</b>	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.5</b>	EP.7.1	Basin-wide assessment of impact and adaptation to climate change (in coop with CSIRO)	[Progress bar from Jan 2008 to Dec 2008]																							
<b>Goal-3.5</b>	EP.7.2	Formulation of MRC climate change initiative	▶ <b>Project document</b>																							

### **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 by the Steering Committee in February 2008. 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 co-ordinate 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 US\$ 13 million.

#### **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, forecasting, and 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 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 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 other programmes to form the MRC IS. 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 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 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 included in the Master Catalogue. 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

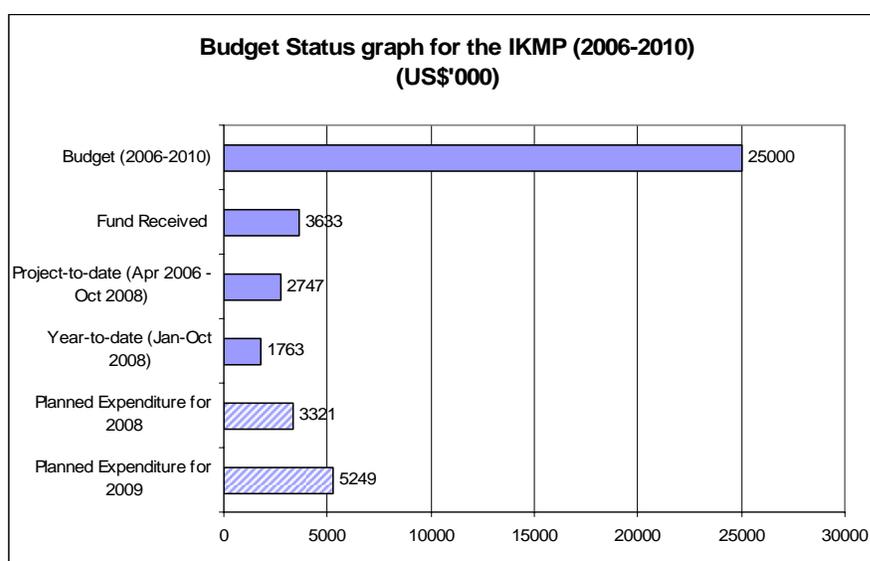
(US\$ 1,000)

	Start date	End date	Budget	Balance 2008 (*)	Donors
<b>Agreements</b>					
Australian contribution to AHNIP Extension 3	Oct 2006	Dec 2009	186	169	Australia
IKMP Formulation, remaining funds	Mar 2008	Jun 2009	56	43	Finland
Support to Senior Modelling Adviser, extension	Jul 2008	Jun 2009	286	220	Finland
AFD support to Mekong Hycos –Project Management Unit –Other programme activities	Jan 2006 May 2006	Jan 2012 May 2012	600 3,000	516 2,456	France France
Finnish contribution to the IKMP implementation	Jan 07	Dec 2010	8,706	6,683	Finland

(\*) Balance as per end October 2008

### 3.3.2 Progress of IKMP for 2008

The following graph provides an overview of the budget status of the 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 2008

#### Component 1: Programme Management

- IKMP 1.3.2 Designing data, information and knowledge products are partly done including data catalogue, metadata, geo-network.
- IKMP 1.5.2 National IKMP Units have been functioning with their work plan 2008.
- IKMP 1.7.2 Two IKMP Steering Committee meetings, DSF TCG, PCC and first IKM TACT meeting carried out.

### *Component 2: Hydro-meteorological Data*

Component 2 provides primary data necessary for all 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:

- IKMP 2.1.2 AHNIP: operational and maintained AHNIP hydro-met network (17 stations);
- IKMP 2.2.1 Mekong-HYCOS: finalizing hydro-met observation network, hydro-met equipment and civil works: equipment
- IKMP 2.2.5 installation of first priority stations (10) under step1;
- IKMP 2.3.4 Developing a discharge-sediment monitoring project proposal;
- IKMP 2.4.3 Data base system and audit report.
- IKMP 2.4.2 The medium priority is to have upgraded AHNIP technology to HYCOS-WMO standards.

### *Component 3: GIS and Database*

- IKMP 3.1.2 The first priority is auditing existing data holdings. The
- IKMP 3.1.4 second high priority is to develop a manual of standards
- IKMP 3.3.1 and guidelines for data and information management. The
- IKMP 3.4.6 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.
- IKMP 3.3.3 Kok river study project with new data acquired and generated. Support is given to river cross-section surveys in Cambodia and soil mapping in Laos.

### *Component 4: Modelling*

- IKMP 4.2.1 Modelling services – capability building is on-going to end in August.
- IKMP 4.1.2 DSF partly upgraded with reporting tools has finished.
- IKMP 4.2.2 Tender for DSF modelling services has been prepared
- IKMP 4.2.3 Tender for WUP-FIN modelling services has been completed.

### *Component 5: Communications and Knowledge Management*

- IKMP 5.4.2 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.

## **Significant Problems Encountered and Corrective Actions Taken**

Under IKMP Component 4: delays have occurred with two international tenders due to technical complexity of tendering. It is expected to be resolved early October 2008.

The lack of qualified applicants is a concern and to fulfil the objectives of IKMP and will need assistance by consultancies. The unsuccessful recruitment of the modelling component manager (2<sup>nd</sup> round), the asset manager (3<sup>rd</sup> round) and the Programme Coordinator (1<sup>st</sup> round) is a concern. Attracting qualified staff will still be a challenge for the next period of 3-5 months. Countries will be requested to assist in mobilising qualified candidates for the selection through specialized recruitment companies and websites.

The technical team composition may in some cases not reflect the requirements in the TORs. This makes technical work difficult. To compensate for the lack of qualified staff, consultants have been hired to assist in modelling, data audit and interface programming. This is recognised as a short-term solution and efforts are being made to improve the resources and capacity of IKMP team.

### **Relevant JC and Council decisions:**

1. Requested to accelerate the implementation emphasising to enlarge and update the database;
2. The Kok river study was valuable and could also be used as a basis to develop digital elevation maps, which would be required in future as flood risk maps. In addition, this project offered cooperation potential with Myanmar;
3. To initiate support to the national level IKMP units on a country-by-country basis through appropriate mechanisms and to ensure all countries are fully informed of initiatives under IKMP.

### **3.3.3 IKMP Workplan for 2009**

#### *Component 1: Programme Management*

IKMP 1.4.3 Development of IKM Guidelines is considered a high  
IKMP 1.4.4 priority. The Guidelines together with IKM operational manuals (business processes), designing data, information and knowledge products to ensure that water resources management decisions are based on best available information. Some products have been developed under the Technical assistance Coordination Team (TACT). In 2009, the products are to be updated.

#### *Component 2: Hydro-meteorological Data*

IKMP 2.1.2 Operational and maintained AHNIP hydro-met network to provide primary data necessary for all functions of the MRC: flood management, basin planning, fisheries

management, navigation, environmental monitoring and other purposes.

- IKMP 2.2.2 Mekong-HYCOS: hydro-met equipment and civil works: equipment installation for priority 2 stations (9);
- IKMP 2.2.5 Operational hydro-met observation network including regional hydro-met information system;
- IKMP 2.3.1 Hydro-met data services will be improved. Discharge
- IKMP 2.3.4 sediment monitoring project implemented

#### *Component 3: GIS and Database*

- IKMP 3.3.1 The first priority is data acquisition and generation plan
- IKMP 3.3.3 following data needs assessment done in 2008. Some new data will be acquired and generated then integrated into MRC-IS.

#### *Component 4: Modelling*

- IKMP 4.1.2 Priority is to upgrade DSF to meet different requirements from MRC programmes and member countries.
- IKMP 4.2.2 Implementation of two international tenders including DSF
- IKMP 4.2.3 modelling services and WUP-FIN modelling services, are high priorities. The former are for basin-wide studies and the latter for national and trans-boundary ones.

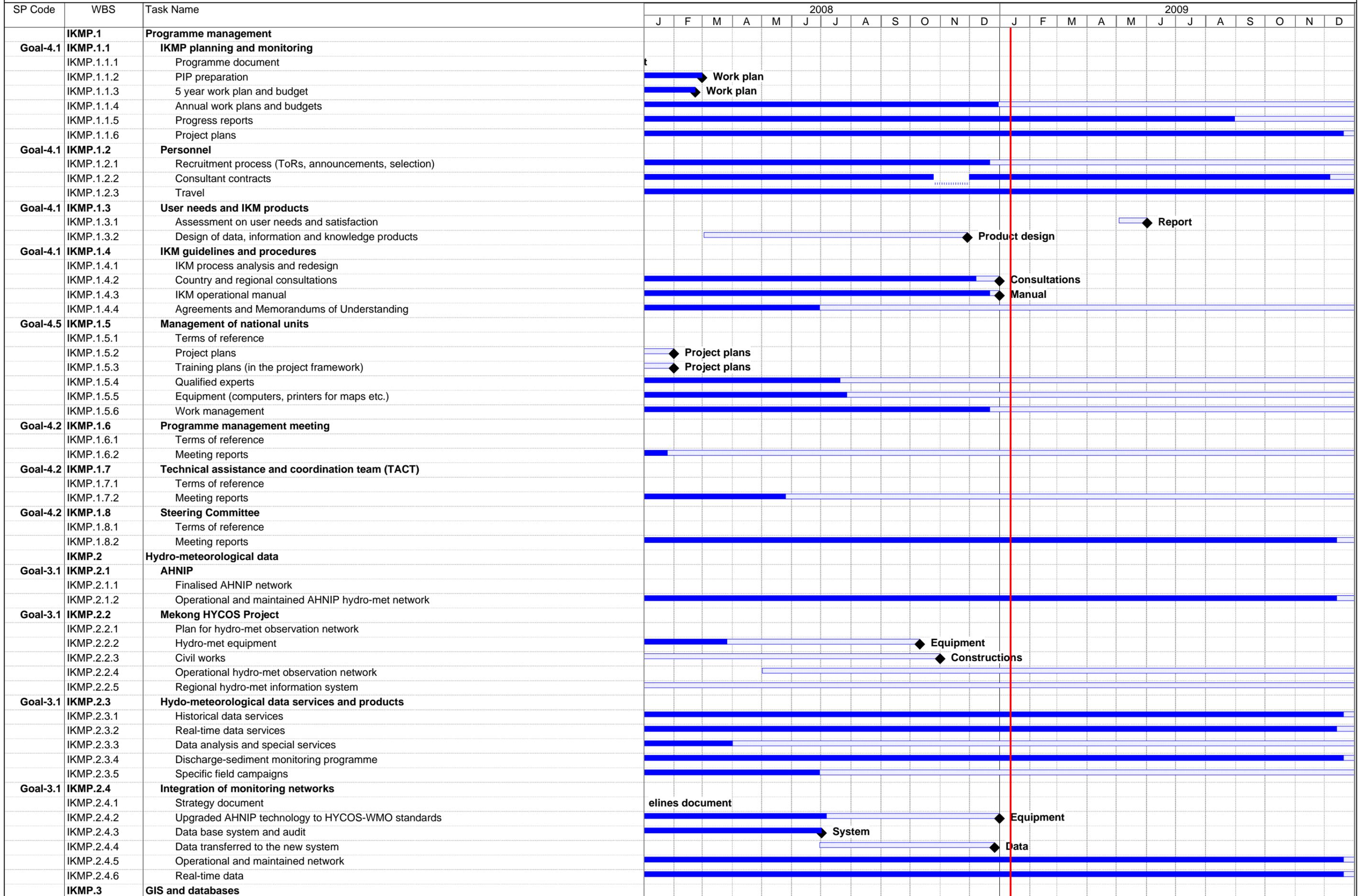
#### *Component 5: Communications and Knowledge Management*

- IKMP 5.3.1 Cooperation with international and regional agencies on data, information and knowledge.
- IKMP 5.4.1 High priority is to implement the MRC Portal.

#### **Donor Reviews or Appraisals Planned for 2009**

One donor appraisal mission from the Government of Finland is planned in late 2009.

Information and Knowledge Management Programme - Progress and Work Programme 2008-2009





## **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 capacity building programme which integrates the various MRC capacity building initiatives, 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 representatives of 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**

During the formulation of ICBP the programme structure will be reviewed. The following structure is therefore provisional:

##### *Component 1: Programme Management and Communication*

This component provides 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, to provide methodological support, and to integrate and consolidate MRC's training activities in priority areas. The component includes four activity lines/projects namely (i) MRCS, NMCs, and Line Agencies' staff training activities, (ii) Junior Riparian Professional project, (iii) Gender Mainstreaming Project, and (iv) Integrated Training Project.

### **Implementation arrangements**

The implementation arrangement of related activities under the integrated capacity building programme (ICBP) has been carried out as of a cross-cutting programme. Major tasks of the ICBP aim to strengthen capacity of the human resources under the MRC's umbrella. The donor support to the ICBP includes the Governments of Australia, Finland and New Zealand. In addition to external support, the MRC also allocates funds from the Operating Expenses Budget (OEB) to support the capacity building and training activities for its staff members at the MRC Secretariat as well as at the national Mekong committees and line agencies.

### **Main Outputs**

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.
2. Capacity is built to promote IWRM principles and organizational development needs. Skills relevant to IWRM among young Riparian Professionals are improved. All the MRC capacity building opportunities are provided equally to men and women, according to their different needs. The riparianisation process of the MRC is actively supported by all capacity building initiatives.

### **List of projects**

- *MRC, NMC and Line Agencies' Staff Training Activities*

This project hosts all training activities funded by MRC's Operating Expenses Budget (OEB). It not only targets staff members of the MRC Secretariat but also those of the NMCs and the line agencies. The ICBP programme formulation will realign these activities to make them fully complementary to the other projects under this component as well as with 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 capacity building of forty promising young professionals from the Lower Mekong Basin organized into five batches of eight JRPs.

- *Gender Mainstreaming Project*

The GMP facilitates the operationalisation and effective implementation of MRC's Gender Policy through implementation of all six components of the MRC Gender Strategy: (i) application of gender sensitive policies, (ii) obtaining commitment and support of top level MRC officials and managers, (iii) creation of gender awareness in organizational culture, (iv) capacity building in gender and development, (v) institutionalization of gender responsive organizational structures and procedures and (vi) provision of necessary tools for implementing gender responsive development practices.

- *Integrated Training Project*

MRC has secured funding from AusAID for (i) formulation of the ICBP programme document and development of the programme implementation plan, and (ii) implementation of the priority capacity building plan. These two activities will be implemented by the ICBP management team in collaboration with the National Mekong Committees.

### List of agreements

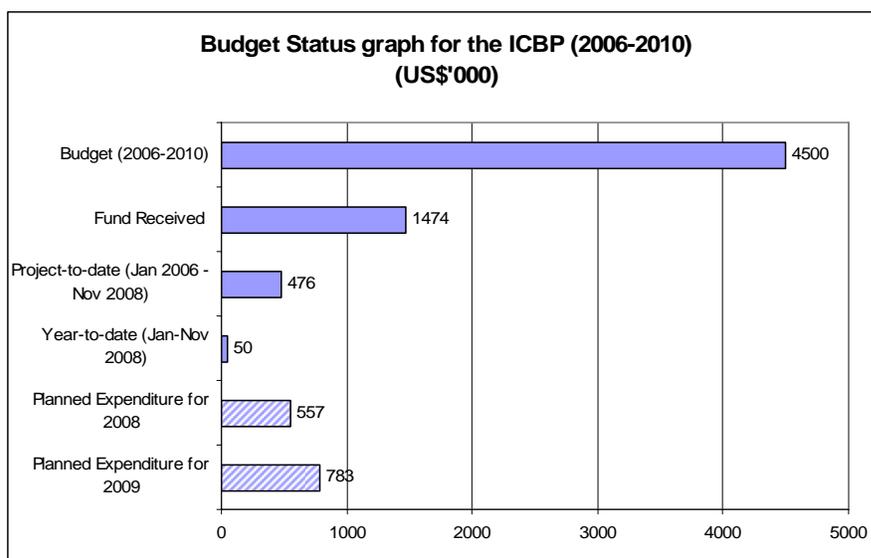
(US\$ 1,000)

Project title	Start date	End date	Budget	Balance 2008 (*)	Donors
<b>Active projects</b>					
MRCS staff training	Jan 2008	Dec 2008	75	62	OEB
New Zealand contribution to Gender Mainstreaming Project	Dec 2004	Dec 2008	280	17	New Zealand
Junior Riparian Professional (JRP) project	Jan 2008	Dec 2011	1,000	960	Finland
MRC ICBP step 2	Jan 2008	Dec 2011	784	687	Australia

(\*) Balance as per end November 2008

### 3.4.2. Progress of ICBP for 2008

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 2008**

### *Component 1: Programme Management and Communication*

ICBP 1.1.1 With AusAID funding support, the ICB programme document and the programme implementation plan (PIP) for the ICBP have been developed in consultation with the NMCs and line agencies. In addition, linkages to academia and training institutions have been explored.

### *Component 2: Integrated Capacity Building*

ICBP 2.1.1 As in the previous years capacity building activities for MRC staff and NMC's were provided through OEB as an integral part of the ICBP.

ICBP 2.2.1 The first of four priority capacity building activities identified during the ICBP preparatory phase was implemented. An Executive Seminar for decision makers on Leadership was carried out very successfully. The IRBP training of trainers is now under preparation together with BDP.

ICBP 2.3.1 The JRP preparatory activities, which included updating the training material and reviewing the recruitment process, were completed. The first eight JRP's were recruited and started their assignment in November 2008.

ICBP 2.4.1 The Gender Mainstreaming Project focused mainly on capacity-building on gender and development concepts and frameworks at the MRC Secretariat, NMCs, and line agencies. All activities of the current project will be completed in December 2008. Funding for the sixth month bridging phase Jan – Jun 2009 has been agreed with NZAID and proposals have been submitted to GWA for a ToT and NZAID for Phase III to commence in July 2009.

ICBP 2.4.2 National consultation workshops were organized with each of the NMCs to reassess the current status and the priority objectives for future phases of the GMP.

ICBP 2.4.3 Networking with gender activities and projects in other international organisations, agencies, and institutions was also undertaken.

ICBP 2.4.4 Three training courses on Gender Mainstreaming in Project Cycle Management were implemented with NMCs.

## **Significant Problems Encountered and Corrective Actions Taken**

Lack of funding restricted the work of ICBP in 2007 and part of 2008 but with the support of AusAID from July 2008 the resources have increased considerably.

### **Donor Reviews or Appraisals in 2008**

No donor review or appraisals are planned in 2009. The formulation of ICBP and the development of the PIP will be done in collaboration with all stakeholders, including AusAID. It is hoped that based on the above mentioned documents AusAID will continue its yearly funding to ICBP.

### **Relevant JC and Council Decisions**

The final report for the ICBP formulation and the ICBP programme document will be submitted for the MRC Joint Committee's endorsement in March 2009.

#### **3.4.3. ICBP Workplan for 2009**

##### *Component 1: Programme Management and Communication*

- ICBP 1.1.1 Coordinate the formulation of the ICBP and the drafting of the PIP.
- ICBP 1.1.2 Collaborate with ICCS to acquire additional funding from AusAID and other Development Partners.

##### *Component 2: Integrated Capacity Building*

- ICBP 2.1.1 Implement the training plan funded by OEB and the priority capacity building activities funded by AusAID.
- ICBP 2.2.1 Formulation of ICB programme document and development of programme implementation plan.
- ICBP 2.3.1 Sixteen Junior Riparian Professionals (batch 1 and 2) will have been recruited and trained.
- ICBP 2.4.1 Gender mainstreaming project phase II reached its completion in December 2008. The NZAID has agreed to fund the bridging phase from Jan – Jun 2009 to formulate the Phase III proposal which will also be submitted to NZAID. GWA is also considering a proposal for collaboration on training-of-trainers.

### **Donor Reviews or Appraisals Planned in 2009**

No donor review or appraisals are planned in 2009. The formulation of ICBP and the development of the PIP will be done in collaboration with all stakeholders, including AusAID. It is hoped that based on the above mentioned documents AusAID will continue its yearly funding to ICBP.



## **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. The Programme was completed in June 2008 and it is expected that accounts successfully closed in October 2008.

#### **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.

**Balance:**

Final budget balance after the planned expenditure as of 14 July 2008 was approximately US\$ 47,500.

**3.5.2 Progress of WUP for 2008**

**Planned and Achieved Outputs for 2008**

- Independent Evaluation of the WUP: The final Report of the Independent Evaluation of the WUP was completed by the Consultants and presented in the final workshop of the WUP on 16 June 2008 in Vientiane Lao PDR.
- WUP Implementation Completion Report: The official completion date for the WUP is 31 December 2007. The final report of the WUP Implementation Completion Report also presented in the WUP on 16 June 2008 in Vientiane Lao PDR.
- As recommended by the Twenty-seventh Meeting of the Joint Committee the MRCS (WUP) had submitted the WUP Completion Implementation Report and Report of the Independent Evaluation of the WUP to NMCs on 8 April 2008.
- Completed discussion meeting for finalize the WUP at MRCS on 6 May 2008

- Cleared all outstanding advances with NMCS, particularly with TNMC
- Completed compilation all documents produced by the WUP since 2000-2008. The documents had been stored on the share drive of MRCS computer network and the DVDs of the documents had been distributed to the member countries and relevant user during the final Workshop.
- Completed WUP final workshop on 16 June 2008
- Completed World Bank supervision on 18 June 2008, the aide memoire had been circulated to all NMCs.
- WUP regional consultant and WUP assistance had finished contract with MRCS on 30 June 2008, currently no WUP staff at MRCS
- Cleared all outstanding contracts for all international consultant
- All achieved activities of the WUP had been transferred to the relevant programme and section of the MRCS for continuing implementation and application
- The uncompleted activities of the WUP also made clear transferred to the relevant programme and section of the MRCS for follow up and further development

### **3.5.3 WUP On-going Work for 2008**

A final workshop provided the opportunity for MRC Member Countries, the World Bank and MRCS to jointly review main achievements, discussed the countries' perspectives captured in four Country Winding Down Reports, lessons learnt by the World Bank, and the MRCS Implementation Completion Report. There was general acknowledgement that WUP has been successful in establishing the MRC Procedures under the 1995 Agreement. Also the establishment of the MRC modelling capacity under the Decision Support Framework was an important outcome.

These processes however required further follow-up at the technical level to support implementation and continuous updating.

A timely financial closure by October 2008 was ensured. Close coordination with Member States on the development of the WUP follow-up initiative was undertaken. This included the preparatory work for the relevant components of the Mekong-IWRM-P (regional, transboundary and national pillars). As WUP is closed there will be no WUP activities in 2009.

## **3.6. Mekong Integrated Water Resources Management Project (M-IWRM P)**

### **3.6.1. Project Overview**

#### **Purpose**

Recently water resources development in the LMB is being accelerated, in particular for the generation of hydro-electricity, driven by markets and the private sector. This process needs to be complemented by effective basin-wide management of water resources to ensure that the development of the water resources is sensitive to the maintenance of vital ecosystems and capture fisheries productivity on which most of the poor population depend for their livelihoods. Therefore, the development of the Basin becomes a balancing act, which should synthesize the differing positions and conflicting interest of the various countries, sectors and the public. This will require the improvement of the application of IWRM principles and practices at the basin, national and project level.

The proposed project will strengthen the enabling framework and capacity for IWRM in the Lower Mekong Basin, and strengthen MRC's role as a facilitator of significant water resources development projects, guided by IWRM principles. The objective of the proposed project is to assist the MRC and its Member Countries to strengthen IWRM while realizing some of the large untapped potential of the Basin's land and water resources. The three immediate objectives of the project are defined as follows:

- Strengthen the regional enabling framework for the implementation of IWRM in the LMB countries through the development and implementation of procedures, guidelines, tools and processes to capture the added value that can be created through cooperation under the 1995 Mekong Agreement and the sharing of experiences and lessons learned.
- Contribute to the implementation of IWRM at the national and sub-basin levels through institutional development, training, sub-basin planning and pilot projects, within the context of sharing of expertise and joint learning.
- Demonstrate mechanisms for the implementation of IWRM at the transboundary project level through the joint planning and implementation of projects identified through the BDP process.

The project will be implemented at regional, national and transboundary levels, which form the three components of the project.

#### **Approach**

The above immediate objectives will be achieved by implementing a number of activities that address priority areas and subjects of particular relevance to sustainable development of the Basin's land and water resources in the near term.

At the basin (regional) level, there is a need to support the stepwise implementation of the water utilization procedures and guidelines, developed under the WUP, in each of the LMB countries to maximize the socio-economic benefits for all countries and their people, and minimize any adverse effects of projects in one country on any other country. The BDP2 will support this process by providing the planning information needed to improve the enabling and facilitating mechanisms of the procedures and guidelines, so that the riparian countries will appreciate their added value for the preparation and implementation of sound national policies, plans and projects.

At the national level, there is a considerable scope for institutional development and capacity building for IWRM, which would facilitate the implementation of IWRM at the basin level. This is especially timely for the recently established water and (related resources) management agencies at the national and sub-basin levels. The aim would be to strengthen their coordination, steering and monitoring role for IWRM, while the long-established line agencies (and provinces) do most of the on-the-ground planning, but in a way that maintains the most acceptable balance between resource development and resource protection. One of the vehicles to achieve this aim is to develop sub-basin IWRM strategies or plans, and the implementation of priority projects, with coordination and guidance by RBCs or another river basin coordination mechanism. The strengthened resource management agencies will assist the MRC and its member countries in the appropriate implementation of the above water utilization procedures and other guidelines, methods, tools and processes developed under BDP2 and other MRC Programmes.

At the project level, there is a need to increase capacity of line agencies and provinces to appreciate the benefits of multi-purpose project identification and assessment, as opposed to the traditional single purpose planning of infrastructure projects that reduces the efficiency of investments in infrastructure, and increases the adverse effects downstream of such investments. The aim would be to demonstrate the benefits of multi-sector planning, design and operation of significant water related projects. Another aim would be to pilot mechanisms for the joint funding, implementation and management of transboundary projects identified through the BDP process by two or more Member Countries, with facilitation of the MRC.

## **Strategy**

The activities under the regional component will be implemented by the MRC in consultation with its four Member Countries. Some of the resulting procedures, tools and processes for water resources planning and management will be implemented under the national and transboundary components. The activities under the latter components, which are broadly identified through the BDP process, will be prepared and implemented by the Member Countries with MRC providing coordination, facilitation and technical assistance. This will provide an opportunity to the MRC to engage itself more with the more detailed work at the sub-basin and project levels.

The proposed project and the BDP2 will reinforce each other. The BDP2, with support from other MRC Programmes, will provide the elements of the IWRM-based Basin Development Plan, which will facilitate the development of practical, enabling procedures, tools and processes and their subsequent implementation within a coherent consistent planning

framework in each of the LMB countries. The proposed project will assist the countries to initiate the joint implementation of the Plan components, with support from the MRC, development banks, the private sector and others. Lessons learned and the use of reinforced procedures and guidelines will facilitate the rolling BDP process, led by the MRC.

## **Structure**

The project activities are structured under three components that reinforce each other to achieve the project objectives

### *Component 1: Regional component*

This component will create an enabling framework for the implementation of IWRM at the interface between the basin and national levels: this component will support (i) regional tools; (ii) procedures and guidelines; (iii) processes and capacity to implement procedures and guidelines; (iv) upper riparian engagement and (v) overall project coordination and oversight.

### *Component 2: National component*

The national component will ensure implementation of IWRM at national and sub-basin levels: it may support (i) Cambodia: delta planning study and design of an integrated rural development project; (ii) Lao PDR: strengthening of policy, institution and capacity of WREA for coordination and oversight of water resource management and priority IWRM actions in selected sub-basins; (iii) Thailand: capacity building for RBCs and the implementation of pilot projects in the Northeast; and (iv) Vietnam: development of a model for river basin management in the Central Highlands and implementation of priority IWRM projects.

### *Component 3: Transboundary Component*

This component serves the implementation of IWRM at the transboundary project level: candidate projects include support for (i) Lao PDR-Cambodia joint planning and investment to improve fishery management in the Khone Falls area; and (ii) Cambodia-Vietnam joint planning and investment in flood mitigation, irrigation and drainage in the Cai-Co canal area.

The scope and details of these activities will be further clarified during project preparation and may be amended as required.

## **Implementation Arrangements**

The project will be implemented by the LMB countries with implementation support and coordination from the MRC and the World Bank. As a focal point of the project, the MRCS will facilitate interactions between the Bank and NMCs, and assist the LMB countries in the implementation of a harmonized and coordinated regional approach throughout project preparation and implementation. The MRCS will be

responsible for the preparation and implementation of the regional component, which includes overall project coordination and promotion of sharing expertise and joint learning among the member countries. National agencies, with coordination of NMCs, will be responsible for the preparation and implementation of the national and transboundary components in coordination with MRCS and the World Bank.

### Main Outputs

The main outputs of the project will be defined in details during the project preparation (2008 – 2009).

### Project Phases, Funding and Management

Phase	Timing	Funding (US\$ million)	Management
Project formulation	Dec 2007- May 2008	World Bank (0.02), FAO (0.02)	MRCS/BDP2
Project identification and preparation	July 2008–November 2009	AusAID (0.5), PHRD (1.0), MRC TF (0.09), Thailand (0.05)	MRCS, LMB countries
AusAID appraisal of Regional component and Bank pre-appraisal	May 2009		Australia
World Bank project appraisal	November 2009	World Bank	World Bank
Project implementation	2009-2014	AusAID (6.0), IDA (41.8) other donors (15.5), Thailand (20.0), LMB countries in kind (2.2),	MRCS, LMB countries

### List of agreements/projects

(US\$ 1,000)

Project title	Start date	End date	Budget	Balance 2008	Donor(s)
<b>Active projects</b>					
Australian contribution to the preparation of the M-IWRM Project (2008-2009)	06/2008	6/2009	567	N/A	Australia

### 3.6.2. Progress of M-IWRM Project in 2008

#### Planned and Achieved Outputs for 2008

The main planned outputs for 2008 are:

- Finalization of the project concept and obtaining endorsement from Member Countries.
- Mobilization of funds (AusAID and Japan PHRD) for the project preparation
- Initiate the Project identification and preparation at MRCS and in each of the Member Countries.
- Complete the project identification and achieve set targets for the preparation of different components and sub-components.

As of December 2008, funding has been obtained from AusAID for the preparation of the regional component and overall coordination of the project preparation phase. Hiring of short-term experts at MRCS has been initiated. Japan has approved PHRD grants to support the preparation of activities in the National and Transboundary components in August 2008. Planning for project preparation has been undertaken by

MRCS and discussed in the First Regional workshop for project preparation on 11 December 2008 which agreed to the project concept, structure and indicative preparation plan.

### **Significant problems encountered and corrective actions taken**

There have been some delays in the preparation of the project concept and funds mobilization given the downsizing of the WUP staff and need for a consensus among countries, World Bank, AusAID and the MRC. With BDP Programme taking the lead during the project pre-formulation and intensive discussion and coordination amongst WB, MRCS and Australia, the project concept has been finalized through three regional meetings with Member Countries. This has been critical for funds mobilization to support the project preparation.

### **3.6.3. Workplan for 2009**

The 1<sup>st</sup> Regional workshop on project preparation has agreed to the overall timeframe for the project preparation, which defines the project workplan for 2009. Currently, the following main outputs are expected in 2009:

#### *Component 1: Regional Component*

- The detailed proposal of Regional component agreed by Member countries and submitted to AusAID. Funding decision by AusAID by July 2009 to start the implementation of the Regional component.
- Project preparation is well coordinated and managed at regional and national levels;
- A Regional Oversight Committee (ROC) will be established to monitor project implementation, facilitate project coordination and supervision, and provide guidance to the National Implementing Agencies (NIA) and the MRC;
- A draft Project document, reconciling all three components and including a framework for project performance monitoring and evaluation prepared by end 2009;
- World Bank's appraisal of the project is facilitated and the LMB countries are supported in their negotiations for IDA financing of the project.

#### *Component 2: National component*

- Detailed descriptions for each subcomponent under the National component (for Cambodia, Lao PDR, Thailand and Viet Nam) with its costs, benefits, and compliance with World Bank social and environmental safeguards;
- Four individual PIP of national activities in each of the Member Countries;

- NIAs are identified and National Oversight Committees are established to guide the project preparation in each Member Country.

### *Component 3: Transboundary Component*

- Detailed descriptions for each subcomponent under the Transboundary component with costs, benefits and compliance with World Bank social and environmental safeguards. This may include Feasibility studies of infrastructure sub-components;
- PIP for each of the transboundary project (sub-components) with agreed upon implementation arrangements and mechanisms for cooperation between the concerned countries (i.e. Cambodia – Lao PDR, Cambodia – Viet Nam and Lao PDR– Thailand).

### **Donor Reviews and Appraisals planned in 2009**

World Bank appraisal of the new M-IWRM-P is currently scheduled for November 2009. The project preparation process with Member States will be monitored by regular meetings of the supervision committee comprising of MRCS, the World Bank and AusAID.

## **3.7. Flood Management and Mitigation Programme (FMMP)**

### **3.7.1. 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. In August 2008 widespread flooding occurred in Northern Lao PDR and Northern Thailand. 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 has significantly increased the damage risk.

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

#### **Approach**

Flood management is cross-sectoral in essence. Floodwaters can disrupt road transportation, affect farmer's crops etc. Development of levees to protect crops and infrastructure as well as construction of elevated roads has the potential to unintentionally exacerbate flooding elsewhere in the floodplain, and can also block fish migration routes. Therefore flood management needs to be coordinated in an IWRM approach at a basin-wide scale. Improved flood management and mitigation remain indispensable and will in the future be more in demand than ever. The complex flood problems of the Lower Mekong Basin not only require an integrated floodplain management 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 forecasting and warning and 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; (3) To strengthen the cooperation and capacities of the MRC in addressing and resolving differences in trans-boundary flood issues (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 trans-boundary 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 Center*

This component will maintain and further improve the (national and regional) availability of important flood-related tools, data, and knowledge; produce accurate regional flood forecasts and warnings 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 the most attractive structural and non-structural flood protection and mitigation interventions will be developed, ranked in terms of most effective or most feasible.

### *Component 3: Enhancing Cooperation in Addressing Trans-boundary Flood Issues*

This component aims at enhancing cooperation and capacities of the MRC in addressing and resolving differences in trans-boundary flood issues.

### *Component 4: Flood Emergency Management*

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 has been established. The management structure of the FMMP includes Programme Management Unit (PMU) at FMMP level, a FMMP Unit in each NMC to

coordinate the activities at the national level, a Programme Coordination Committee (at the levels of NMCs and MRC Secretariat) and a Steering Committee (at regional level).

In 2006, the USAID/OFDA has approved the proposals of MRCS and riparian countries for RANET communication and Satellite rainfall estimation. In 2007, the European Commission's Humanitarian Aid Office (ECHO) funded for 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. In 2008, the German Government agreed to considering the second phase of the projects "Flood Emergency Management Strengthening" (Component 4) and Land Management (Component 5), while USAID and ECHO have recently approved the project "Asia Flood Network - Flash-Flood Guidance System" and the fourth phase of project "Strengthen Implementation of Flood Preparedness Program at Provincial, District and Commune Levels in the Lower Mekong Basin", respectively.

### **Main Outputs**

1. Regional FMM Center: (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.
2. Structural Measures and Flood Proofing: (i) Identified impacts of reservoirs and other hydraulic structures in the Mekong basin, including those in China, with regard to implications for flooding in the LMB; (ii) An enhanced mechanism of coordination on hydraulic structures development and operation with all the riparian countries in the Mekong Basin; and (iii) Established guidance documents and guidelines on all aspects of structural measures of flood mitigation in the LMB.
3. Enhancing Cooperation in Addressing Trans-boundary Flood Issues: (i) Information Generation; (ii) Awareness Raising and Knowledge and Skills Building; and (iii) Toolbox Development
4. Flood Emergency Management: (i) Increased flood awareness; (ii) Regional knowledge sharing; (iii) Flood emergency manuals; (iv) Recommendations on trans-boundary emergency assistance; and (v) Related competence.
5. Land Management: (i) Harmonized land use management; (ii) Land use concepts and land management systems; (iii) Case studies; and (iv) Related competence.

## List of agreements

(US\$ 1,000)

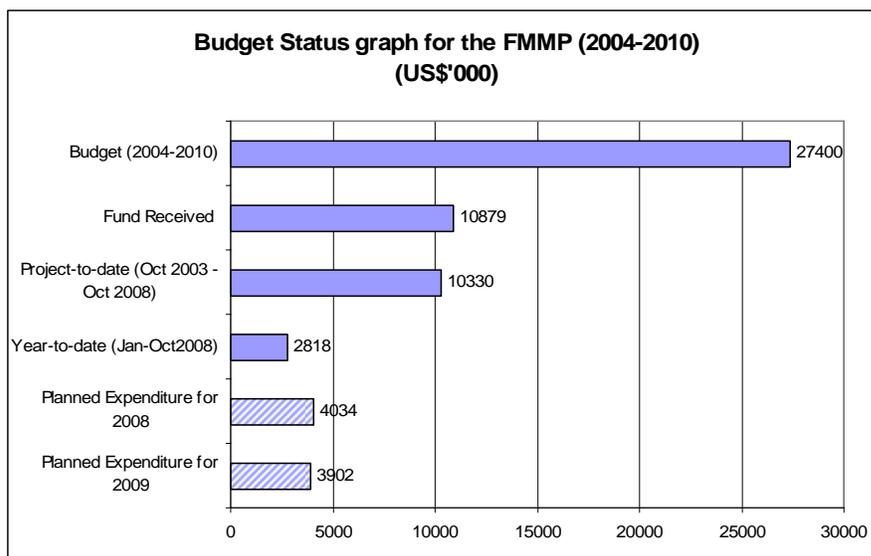
	Start date	End date	Budget	Balance 2008 (*)	Donors
<b>Agreements</b>					
Dutch contribution to the RFMMC	01/06/05	31/12/10	8,054	3,202	Netherlands
Dutch contribution to FMMP-NFUs	01/01/07	31/12/10	264	141	Netherlands
Danish contribution to FMMP-NFUs	01/01/07	31/12/10	211	163	Denmark
<i>German contribution to FMMP-NFUs</i>	<i>01/01/07</i>	<i>31/12/07</i>	<i>40</i>	<i>0</i>	
Danish contribution to FMMP coordination	01/09/04	31/08/07	605	206	Denmark
OFDA funding for provision of Flood Early Warning	01/01/03	31/12/08	1,250	10	USA
<i>German contribution to the 3<sup>rd</sup> Annual Flood Forum</i>	<i>01/01/05</i>	<i>31/12/05</i>	<i>18</i>	<i>0</i>	<i>Germany</i>
<i>Asia Flood Network contribution to the FMMP (Phase i)</i>	<i>01/01/05</i>	<i>31/12/05</i>	<i>74</i>	<i>0</i>	<i>AFN</i>
Asia Flood Network contribution to the FMMP (Phase li)	01/01/08	31/09/09	265	265	AFN
Dutch contribution to design of Flood Proofing Measures	01/06/05	31/12/10	2,539	1,859	Netherlands
<i>IHE-UNESCO contribution to the design of roads in flood plains</i>	<i>01/06/05</i>	<i>31/12/08</i>	<i>589</i>	<i>NA</i>	<i>IHE-UNESCO</i>
ADB contribution to Flood Proofing Measures	01/04/05	31/12/06	1,000	554	ADB
Dutch support to enhancing cooperation of flood issues	01/06/05	31/12/10	1,565	1,072	Netherlands
<i>EC-ECHO contribution for capacity building in flood preparedness</i>	<i>01/02/05</i>	<i>31/03/06</i>	<i>208</i>	<i>0</i>	<i>EU</i>
<i>EC-ECHO contribution for capacity building in flood preparedness</i>	<i>01/02/05</i>	<i>31/03/06</i>	<i>291</i>	<i>0</i>	<i>EU</i>
EC-ECHO contribution for support for implementation of the flood preparedness programmes	01/02/07	05/2008	375	49	EU
EC-ECHO contribution for strengthening implementation of flood preparedness programmes	15/08/08	15/11/09	546	546	EU
<i>Japan contribution to the RFMMC</i>	<i>27/10/05</i>	<i>31/12/10</i>	<i>970</i>	<i>NA</i>	<i>Japan</i>
<i>GTZ project for land use and flood emergency management (1<sup>st</sup> phase)</i>	<i>18/08/04</i>	<i>30/04/08</i>	<i>3,530</i>	<i>NA</i>	<i>Germany</i>
GTZ project for land use and flood emergency management (2 <sup>nd</sup> phase)	01/08/08	31/12/2010	4,650	NA	Germany
Dutch Contribution to Roads & Flood in the Lower Mekong Basin –Delf Cluster-WWF	01/06/06	31/03/09	161	86	Netherlands
<i>Dutch Contribution to 5<sup>th</sup> Annual Flood Forum for 2007</i>	<i>01/10/06</i>	<i>30/09/07</i>	<i>86</i>	<i>0</i>	<i>Netherlands</i>
Dutch Contribution to 6 <sup>th</sup> Annual Flood Forum for 2008	01/10/07	30/09/08	70	21	Netherlands

(\*) Balance as per end October 2008

Note: Completed Agreements indicated in red Italics.

### 3.7.1 Progress of Programme for 2008

The following graph provides an overview of the budget status of the programme. It is noted that for the figure on the total budget of US\$ 27.36 millions, includes the support from all donors. The remaining data, however, include the funds directly managed by FMMP only, i.e., excluding the technical assistance from GTZ, Japan and IHE-UNESCO as these are monitored separately.



*Note: The 'fund received' does not include the technical assistance from GTZ.*

## **Planned and Achieved Outputs for 2008**

### *Component 1: Regional FMM Center*

FMMP 1.1.2 Database for river flood forecasting and monitoring: An operational database mainly for water level and rainfall data will be set up at the RFMMC for the flood forecasting purposes.

FMMP 1.1.9 Annual Food Report for 2007 (published in 2008): Having contributed significantly to the understanding of Mekong mainstream floods and flooding in the 2006 annual flood report, the report for the year 2007 year presented the regional flood hydrology of the major tributaries in the Lower Mekong Basin.

FMMP 1.7.1 Flood risk maps for a part of Chiang Rai province: A set of maps, animations and time series to present flood extent and behavior will be produced.

FMMP 1.7.2 A set of guidelines and recommendations for flood mapping and forecasting in the LMB.

### *Component 2: Structural Measures and Flood Proofing*

FMMP 2.1.1 Nature and character of flooding of the Mekong River Basin: The report contained a description of flooding for the Mekong River and its tributaries.

FMMP 2.2.1 Guideline on Best Practices for the Design of the Roads in Floodplain Areas in Cambodia and Vietnam.

### *Component 3: Enhancing Cooperation in Addressing Trans-boundary Flood Issues*

FMMP 3.1.3 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.

FMMP 3.3.2 Improved hydraulic model for the Mekong Delta: An improved ISIS model will be available as a technical tool for the impact assessment of structural measures on flood conditions.

#### *Component 4: Flood Emergency Management*

FMMP 4.4.1 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**

The ADB conducted a progress review of FMMP component 2 implementation in early September 2008. The German government (BMZ) approved Phase II of the projects “Flood emergency management strengthening” and “Land management” under FMMP component 4 & 5, respectively. The USAID also approved the Asia Flood Network project on Flash Flood Guidance System. The European Commission’s Humanitarian Aid Office (ECHO) conducted the final evaluation of 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, and recently approved the fourth phase of the project on Strengthening Implementation of Flood Preparedness Programme at Provincial, District and Commune Levels in the Lower Mekong Basin.

#### **Significant problems encountered and corrected action taken**

Problems encountered in FMMP implementation have mainly related to human resource gaps due to resignation of staff and change of the team leader for a major sub-contract in Component 2. These have been addressed through recruitment and contract management measures.

The August 2008 floods in Northern Lao PDR and Northern Thailand provided an opportunity to test the implementation process of the FMMP flood forecasting and warning services. While overall forecasting results and timeliness have proven to stand up to the test, some technical matters and information dissemination issues are being addressed through an action plan to be implemented prior to the 2009 flood season.

### 3.7.2 *Workplan for 2009*

#### *Component 1: Regional FMM Center*

- FMMP 1.1.3 Routine short-term river flood forecasting and monitoring: A flood forecasting bulletin will be prepared and published quarterly, containing information on hydrological condition of the mainstream and the meteorological conditions through out the Lower Mekong Basin.
- FMMP 1.1.6 Advanced medium term river flood forecasting and monitoring: provides the flood forecasting along the mainstream Mekong River and disseminates this information on a routine basis, to the National Mekong Committees and line agencies concerned in the Member Countries, who transmit the forecasts to the respective flood forecasting centers or relevant agencies. This system will be ready at the beginning of 2009, using Uniform River Basin Simulator model, CatchmentSim, Hydrological and Meteorological Operating System database, HYDMET and Flood Early Warning System. The system will rely on the near real time (rainfall and water level) data transfer from the Member States and on the rainfall estimation/forecasts supplied by United States Geological Survey/ National Oceanic and Atmospheric Administration (USGS/NOAA).
- FMMP 1.1.10 Annual Flood Report 2008: The theme will be the socio-economic benefits and costs of Mekong flood, meteorological aspects and the potential consequences of climate change, including links with El Niño/Southern Oscillation (ENSO) Diagnostic Discussion.
- FMMP 1.4.4 Annual Mekong Flood Forum 2009: The theme has been recommended tentatively by forum as integrated flood risk management in the Mekong River Basin. The sub-themes will be determined in close consultation with MRCS Headquarter and Member States.
- FMMP 1.6.1 Regional Flash Flood Guidance System: is the MRC-RFMMC based regional system, which lies at the center of end-to-end system of data-collection, analysis, and information dissemination. The system provides a broad, cost-effective framework for monitoring and warning of the likely incidence of flash floods in four MRC Member Countries. As community based flash-flood warning systems are developed in the countries, the MRC-RFMMC based system will play a complementary role to such community operated systems.

#### *Component 2: Structural Measures and Flood Proofing*

- FMMP 2.1.2 Best practice guidelines for flood proofing building and infrastructure in urban and rural areas.

- FMMP 2.1.3 Best practice guidelines for the use, design, construction, O&M of major infrastructure.
- FMMP 2.1.4 Best practice guidelines to assess the significance of environmental and ecological impacts of infrastructure.
- FMMP 2.1.5 Best practice guideline to select and integrate 'hard' and 'soft' management measures to achieve maximum effective flood risk reduction.
- FMMP 2.1.6 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.  
  
Achievements 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.

*Component 3: Enhancing Cooperation in Addressing Trans-boundary Flood Issues*

- FMMP 3.2.2 Report of implementation of pilot study: For each pilot study a report will be prepared, which contains (i) A summary of the study, outlining the factual circumstances of the trans-boundary impact studied and the resulting inter-State difference, and the mechanisms, principles or procedures applied to the resolution of that difference; (ii) Lessons learned in the course of each pilot study; (iii) Recommendations for the elaboration of the framework; (iv) Recommendations for the elaboration of any associated guidelines and / or required technical tools; and (v) Timing of pilot implementation.
- FMMP 3.3.1 Administrative tools for addressing differences: these will be developed to provide a general guidance to MRC for addressing differences and disputes that might arise between members of the MRC as a result of operation of the 1995 Mekong Agreement. A set of administrative tools is suggested to support the modalities of the Agreement. The administrative tools offer the Member Countries, on a voluntary basis, a guidance process in addressing differences and disputes.

*Component 4: Flood Emergency Management*

- FMMP 4.4.1 Flood Preparedness Programmes implemented by local authorities: The programmes will be implemented by provincial and district authorities with support of MRC in selected districts of Cambodia, Lao PDR and Vietnam.
- FMMP 4.5.2 Linkages of provincial flood preparedness programmes with local development planning process: The linkage will be established in some selected provinces of Cambodia and Lao PDR.

### **Donor Reviews or Appraisals Planned in 2009**

Options for future operation of RFMMC after 2010 will be considered by the MRC Joint Committee in the course of 2008 and 2009 and potential donors will be invited to appraise potential further support on that basis.





## **3.8. Drought Management Programme (DMP)**

### **3.8.1 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 MRC's unique capability – 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 and adaptation 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 involving international and riparian consultants, MRCS staff, and representatives of the MRC Member Countries, during the period May 2006 to 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 objectives are to establish effective drought awareness, preparedness, planning and management mechanisms in the Lower Mekong Basin supported by the best available tools and know-how, and to facilitate implementation of high priority national and regional programmes, and multipurpose projects.

The proposed DMP is to be implemented through five programme components:

- C1. Drought forecasting;
- C2. Drought impact assessment;
- C3. Drought management policy;
- C4. Drought preparedness and mitigation measures; and
- C5. Programme management and communication.

The start-up activities, developed and implemented in cooperation with other MRC programmes would include:

- C1. Drought forecasting: Development of a regional drought forecasting and early warning system (with IKMP and FMMP); impacts of climate variability and change (with EP and external partners).

C2. Drought impact assessment: Drought and flood vulnerability indicators, impacts, and thresholds (with FMMP and external partners);

C3. Drought management policy: Regional, comparative analysis of drought management related national policies and related capacity development (with AIFP-WSMP);

C4. Drought preparedness and mitigation measures: Survey of regional best practice and opportunities for water harvesting and soil and water conservation practices (with AIFP-WSMP); technical guidelines on improvements in irrigation efficiency (with AIFP-IIEFP); economic assessment of drought impacts (with BDP); and

C5. Programme management and communication: project management further conceptualization of programme; networking with concerned governmental agencies and resource organisations; scientific communication and publications.

### **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**

1. Drought forecasting: (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.
2. Drought impact assessment: (i) Drought risk and vulnerability indicators: appropriate drought indicators and 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.

3. Drought management policy: (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 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.
4. Drought preparedness and mitigation measures: (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 a participatory manners, 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.
5. Programme management and communication: (i) Programme Implementation Plan: the PIP is the first document that is produced once programme funding is secured. It is based on the up-to-date information 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: ongoing 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 bodies.

### **3.8.2 Progress of DMP for 2008**

#### **Planned and Achieved Outputs for 2008**

A revised and down-scaled DMP Start-up Project was prepared. The fundraising activity for the programme start up continued.

Depending availability of funds in 2008, 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 research collaboration with IWMI.
- Start-up activities, including setting up of programme management structure, identification and start up of priority (quick impact) activities.

#### **Relevant JC and Council Decisions**

The DMP was approved in principle by the MRC Council at its Thirteenth Meeting in December 2006 to be shared with donors for fundraising purposes. At the Twenty-sixth Meeting of the MRC Joint Committee in August 2007, the Secretariat was asked to review and revise the proposed budget of the DMP in order to make the proposal more attractive to development partners. In response to this request, the Technical Support Division with financial support from the Information and Knowledge Management Programme prepared the DMP Start-up Project Outline document (draft June 2008).

#### **Significant Problems Encountered, Corrective Action Taken**

The start-up activities have not started due to lack of funding. Consequently, the Drought Management Programme has not been set up. TSD assigned one senior staff as a Project Officer to be involved in the preparation of DMP Start-up Project Outline document which will be used for fund raising purposes.

### **Donor Reviews or Appraisals**

MRCS is now seeking for funding support from development partners for the DMP Start-up Project. The funds have not yet been secured.

#### **3.8.3 *DMP Workplan for 2009***

Since the DMP Start-up Project has not yet started (at the time of preparation of this report, June 2008) due to the lack of funding, the project activities in 2009 will depend on the funding status. The priority activities in 2009, if funded, will be (1) Drought forecasting and early warning system based on detailed data; (2) Drought risk maps; (3) Economic assessment of drought impacts; and (4) Vulnerability methodology and assessment.

Further action on promoting the Drought Management Programme will be influenced by the outcome of the Mid-term Review of the Strategic Plan 2006-2010.

#### **Donor Reviews or Appraisals Planned in 2009**

The Programme Document can be submitted to donors in 2008 and donor reviews or appraisals can take place thereafter.

## **3.9. Agriculture, Irrigation and Forestry Programme (AIFP)**

### **3.9.1 Programme Overview**

A concept paper for an AIFP Phase 2 has been developed, which takes into account continuing activities from Phase 1. A programme formulation process for phase 2 is envisaged for 2008, taking into account the accelerating water resources development environment, also with regard to AIFP sectors.

Meanwhile there are three on-going projects within the programme: the Watershed Management Project (WSMP) funded by the Government of Germany; 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). Challenge Programme is reconsidering its approach for the next phase and so some delay in start-up is expected. The Japanese Government has pledged a continuous support to AIFP with similar theme as IIEPF. A three year follow up project was thus launched in 2008. The Evaluation report of the WSMP was finalised in early 2008. The Project Document and the agreement for the next phase are being prepared.

#### **Purpose**

Agricultural land use (irrigated and rain fed) 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 2.5 % 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. These 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 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 overarching objective 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. DMPF has completed all the planned activities and will be closed in 2008. However another three year project to follow up IIEPF was launched in 2008.

The CGIAR Challenge Programme on Water and Food (CPWF) is also placed under this component. The CPWF is a global 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 region. 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**

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:

1. First draft of a Watershed Management Action Plan based on policy and institutional development made available in all Pilot Watersheds. Watershed Management decrees have been under development in two of the four Countries.
2. Information, data and knowledge management at 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 the four Member Countries. Learning and information centers were established and functioning properly in pilot watersheds in all four countries.
4. Demonstration of multi-functionality of paddy fields, paddy fields' non-production functions demonstrated through the quantified analysis of selected functions.
5. Improvement of irrigation efficiency on paddy fields, a practical guidance to improve irrigation efficiency produced.

6. MRC support to Challenge Program on Water and Food, network among related projects/institutions established.

**List of agreements**

(US\$ 1,000)

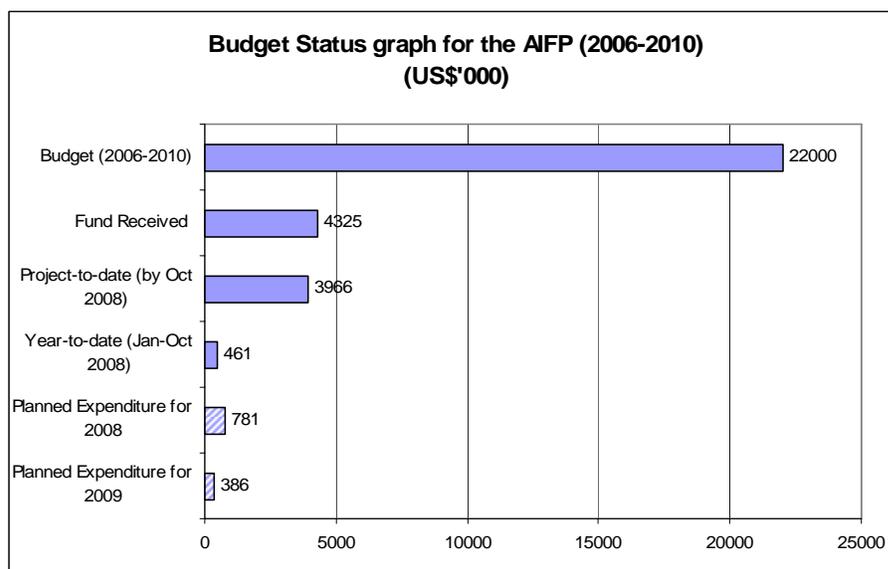
	Start date	End date	Budget	Balance 2008 (*)	Donors
<b>Agreements</b>					
MRC-GTZ project on watershed management (TA)	Dec/05	May/11	9,840	30	Germany
<i>Japan contribution to Demonstrate the Multi-Functionality of Paddy Fields</i>	<i>Feb/03</i>	<i>Nov/07</i>	<i>1,227</i>	<i>18</i>	<i>Japan</i>
<i>Japan contribution to Improvement of Irrigation Efficiency on Paddy Field</i>	<i>15/06/05</i>	<i>14/6/08</i>	<i>1,010</i>	<i>26</i>	<i>Japan</i>
Japan Contribution to Improvement of irrigation Efficiency	Jul/08	Jun/11	903	839	Japan
Challenge Program on Water and Food	Jan/03	Dec/08	1,007	155	CGIAR-IWMI
<b>Projects in preparation</b>					
Formulation of a new AIFP	N/A	N/A	100	N/A	
KfW contribution to Sustainable Watershed Management project	N/A	N/A	7,950	N/A	Germany (KfW)

(\*) Balance as per end October 2008

Note: Completed Agreements indicated in red Italics.

**3.9.2 Progress of AIFP for 2008**

The following graph provides an overview of the budget status of the 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. Technical assistance from GTZ is not indicated in the budget as it is monitored separately.



Note: The 'fund received' does not include the technical assistance from GTZ and KfW.

## **Planned and Achieved Outputs for 2008**

### *Component 1: Watershed Management (WSM)*

- AIFP 1.1.1. Final Policy Analysis Report. Policy drafting process initiated; Watershed Committees initiated in Cambodia, Laos and Viet Nam. First Draft Plan of Action for Watershed Management available in four pilot areas.
- AIFP 1.1.2. MekongInfo successfully integrated into IKMP.
- AIFP 1.1.2. The Watershed Management Resource Kit version 2.0 is being finalised and is expected to be completed in early 2009 for approval for publication. The Resource Kit will be translated into riparian languages and used for Capacity Building;
- AIFP 1.1.3 Capacity Building continued. Learning Centers established, equipped, and the move from establishment to operation supported.
- AIFP 1.3.1 Under this component the evaluation of second phase of WSMP and proposal for third phase was conducted. A result-based monitoring system for WSMP will also be established.

### *Component 2: Irrigation and Agriculture*

#### Improvement of Irrigation Efficiency on Paddy Fields (IIEPF):

- AIFP 2.2.4 Guidance for efficient irrigation water use is drafted and presented to Member Countries for their review.
- AIFP 2.4 Detailed work plan of a follow-up project is discussed.

#### Challenge Program on Water and Food (CPWF):

- AIFP 2.3.1.1 Eight projects have already finished or are due to the end in 2008. The best way to use their outputs is identified and the outputs are matched with specific individuals and their institutions to obtain impact. For other several projects continuous monitoring and evaluation is provided.  
Three projects in the Mekong basin have newly started.
- AIFP 2.3.1.2 Final Basin Focal Project workshop was held in Vientiane in conjunction with the initial Basin Advisory Committee meeting.
- AIFP 2.3.1.7 Basin Coordinator keeps assisting CPWF secretariat as communications advisor.
- AIFP 2.3.1.8 Second International Forum on Water and Food is held in Addis Ababa, Ethiopia.

## **Significant Problems Encountered, Corrective Action Taken**

A full-time Basin Coordinator of CPWF was not, as anticipated, hired in the first quarter. The interim Basin Coordinator's services were extended to

end of 2008. Challenge Programme is reconsidering its approach for the next phase and so some delay in start-up is expected.

### **Donor reviews or appraisals planned in 2008**

IIEPF conducted an annual donor consultation meeting to review the project progress in January 2008. A project progress review of the WSMP was undertaken in March 2008.

### **3.9.3 AIFP Workplan for 2009**

#### *Component 1: Watershed Management (WSM)*

AIFP 1.3 In March 2008, an independent evaluation mission to review the WSMP was undertaken. The mission team assessed the achievements of WSMP during phase two and its remaining challenges for the months to come. It was acknowledged that most of the objectives will be achieved until the end of the year and that WSMP's activities contribute to MRC Strategic Goals 1 and 4.

The team also formulated recommendations for a third phase, to begin in December 2008 and provided potential work packages, objectives and indicators. The key issues for the third phase will be consolidation of previous achievements and the integration into existing planning systems on a sustainable basis. The proposed objective for the third phase therefore reads:

“Self-sustaining capacities for the planning, implementation and monitoring of integrated watershed management in the LMB are established at national and regional levels, and dispose of replicable experiences in selected pilot areas.”

The following indicators are suggested:

1. At least 60% of the watershed committees of existing pilot area confirm that the introduction of the WSM concept has significantly contributed to the sustainable use of natural resources and the improvement of the socio-economic situation of the community members.
2. The experiences made in the pilot watersheds areas are documented, processed and communicated at national and regional level in such a way that at least in two countries serious initiatives for replication are being undertaken.
3. The information and training products of WSMP (CB packages, MekongInfo, WSM Resource Kits, Decision Support System) are actively managed by the corresponding organisational units of MRCS and continuously used by its stakeholders in the member countries.
4. At least 50% of the existing National Working Groups and Pilot Watershed Committees confirm that they are willing and able to continue their work also without further support by the project.

Generally, the work packages and modes of delivery remain the same, with some exceptions: MekongInfo will already be fully handed over to

IKMP by the beginning of the next phase. Furthermore, the evaluation team recommended to include the issues of climate change adaptation and financial mechanisms for watershed management into the next phase to explore opportunities for ensuring financial sustainability. Finally, a new work package on an Integration and handing over of WSMP processes and results into other MRC(S) programmes and structures is set up.

Detailed work plans will be compiled during planning workshops in late 2008 and early 2009.

#### *Component 2: Irrigation and Agriculture*

AIFP 2.4.1 Two active Japanese funded projects (DMPF and IIEPF)  
AIFP 2.4.2 are also ending in 2008. A three year new project following up IIEPF starts in 2008.

AIFP 2.5.1 The CPWF is nearing the end of its first, five-year phase  
AIFP 2.5.2 (2004-2008). In preparation for its second phase, the program is aiming to increase the focus of its research work and to better articulate the ways in which its research results can have developmental impact. Basin impact challenges have been proposed for each of its river basins that the CPWF research work will address. To ensure that the benefits of these can be seen, and to facilitate partnership development, the CPWF seeks to tighten the focus of the basin impact challenges by describing their plausible impact pathways with key stakeholder representatives in the basins; and to obtain endorsement for the impact challenges from these representatives.

Specific details will be forthcoming after the Phase 2 Plan and Mid-term Plan are submitted and approved by the Science Council.

#### **Donor Reviews or Appraisals Planned in 2009**

A regular donor review through an annual consultation meeting with the Ministry of Agriculture Forestry and Fisheries (MAFF) of Japan is planned as usual.

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SP Code	WBS	Task Name	2008												2009											
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	<b>AIFP.1</b>	<b>Watershed management</b>																								
<b>Goal-1.4.1</b>	<b>AIFP.1.1</b>	<b>MRC-GTZ watershed management project, phase 2 (WSMP2)</b>																								
	<b>AIFP.1.1.1</b>	<b>Policy analysis and advice</b>																								
	AIFP.1.1.1.1	Policy analysis and report in four countries	try reports, workshops																							
	AIFP.1.1.1.2	Instruments and processes for improved stakeholder coordination in WSM	Joint report, conference documentation																							
	AIFP.1.1.1.3	Concept for policy drafting in four countries	Joint strategy report																							
	<b>AIFP.1.1.2</b>	<b>Information management</b>																								
	AIFP.1.1.2.1	MekongInfo maintenance	www.mekonginfo.org																							
	AIFP.1.1.2.2	Watershed management resource kit	WSM resource kit (folder) in English and all riparian languages																							
	AIFP.1.1.2.3	Information needs assessment	Consultancy reports in 4 countries																							
	AIFP.1.1.2.4	Existing experiences on WSM in Thailand documented	Case studies on 2T, 3T, 5T watersheds in Thailand																							
	AIFP.1.1.2.5	WSMP information and knowledge management fully integrated into the MRC system																								
	AIFP.1.1.2.6	Climate change adaptation mainstreamed into information management	Concept for climate change adaptation at watershed level																							
	<b>AIFP.1.1.3</b>	<b>Capacity Building</b>																								
	AIFP.1.1.3.1	Documentation training needs assessment																								
	AIFP.1.1.3.2	6 capacity building packages	30 capacity building workshops conducted																							
	AIFP.1.1.3.3	Impact monitoring assesses significance of conducted trainings	Results based monitoring report																							
<b>Goal-1.4.1</b>	<b>AIFP.1.2</b>	<b>KfW Nam Ton watershed management project</b>																								
	AIFP.1.2.1	MRC support to project formulation	study																							
<b>Goal-1.4.1</b>	<b>AIFP.1.3</b>	<b>MRC-GTZ watershed management project, phase 3 (WSMP3)</b>																								
	AIFP.1.3.1	Policy development																								
	AIFP.1.3.2	Institutional development																								
	AIFP.1.3.3	Financial mechanisms																								
	AIFP.1.3.4	Watershed management resource kit																								
	AIFP.1.3.5	Decision support system																								
	AIFP.1.3.6	Consolidation of watershed management plan of action in pilot areas																								
	AIFP.1.3.7	Climate change adaptation																								
	AIFP.1.3.8	Capacity building																								
	AIFP.1.3.9	Learning centers																								
	AIFP.1.3.10	Results-based project monitoring																								
	AIFP.1.3.11	Cooperation with KfW watershed management project in Nam Ton, Laos																								
	<b>AIFP.2</b>	<b>Irrigation and agriculture</b>																								
<b>Goal-1.4.1</b>	<b>AIFP.2.1</b>	<b>Demonstration of multi-functionality of paddy fields (DMPF)</b>																								
	<b>AIFP.2.1.1</b>	<b>Project preparation</b>																								
	<b>AIFP.2.1.2</b>	<b>Updating of irrigation database</b>																								
	AIFP.2.1.2.1	Irrigation scheme database																								
	AIFP.2.1.2.2	Rice cultivation spatial information																								
	AIFP.2.1.2.3	Irrigation water use assessment																								
	<b>AIFP.2.1.3</b>	<b>Analysis of paddy fields' multiple functions</b>																								
<b>Goal-1.4.1</b>	<b>AIFP.2.2</b>	<b>Improvement of Irrigation Efficiency on Paddy Fields (IIFPF)</b>																								
	AIFP.2.2.1	Project formulation	rt																							
	<b>AIFP.2.2.2</b>	<b>Appraisal of irrigation system and its performance</b>																								
	AIFP.2.2.2.1	Establishment of data set	Field observation and analysis report																							
	AIFP.2.2.2.2	Assessment of water balance, etc.	Field observation and analysis report																							
	AIFP.2.2.2.3	Appraisal of scheme management	Field observation and analysis report																							
	AIFP.2.2.2.4	Rapid appraisal process (RAP)	Methodology paper and workshop																							
	<b>AIFP.2.2.3</b>	<b>Enhancement of stakeholders' capacity</b>																								
	AIFP.2.2.3.1	Backstopping note																								
	AIFP.2.2.3.2	RAP training workshop and initial assessment																								
	AIFP.2.2.3.3	Assessment of capacity building needs	Needs assessment report																							
	<b>AIFP.2.2.4</b>	<b>Guidance for efficient water use</b>	Guidelines																							



## 3.10 Navigation Programme (NAP)

### 3.10.1 Programme Overview

#### Purpose

The Mekong River is an important gateway to trade centres in the Southeast Asia region and beyond. However, in many stretches, the Mekong River of today has not exploited its inherent potential to boost trade relations and income for the countries situated in its Basin. A regional development approach is needed to contribute to poverty reduction, 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.

#### *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. The component has clear relations to the rules and procedures for water use developed within the Water Utilization Programme (WUP) and the experiences made by the WUP team are 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 and Programme Management*

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 beneficiaries of the programme.

## Main Outputs

The main outputs of the NAP are the following:

1. Waterway and safety improvement designs (Component 1).
2. An updated and harmonized legal regime 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

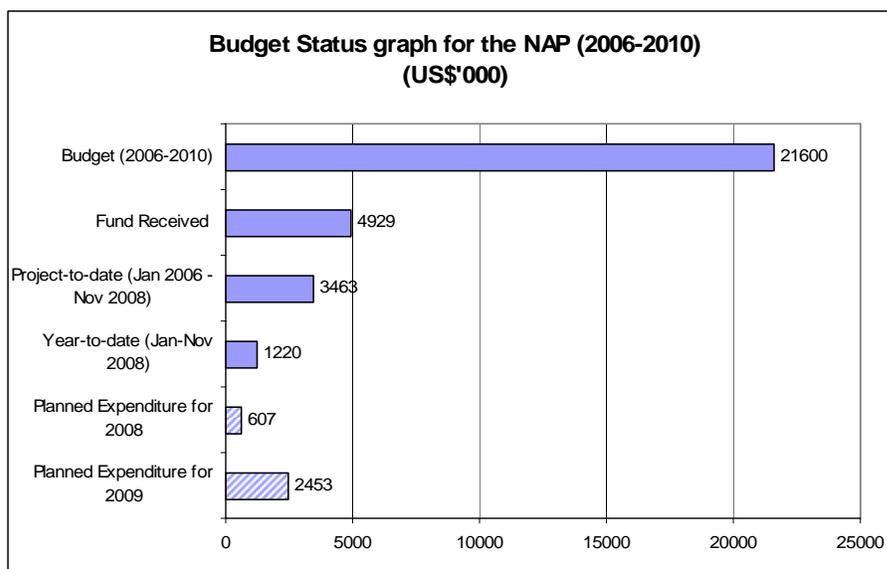
(US\$ 1,000)

	Start date	End date	Budget	Balance*	Donors
<b>Agreements</b>					
NAP-Belgium	04/10/05	04/10/10	6,700	3,352	Belgium
NAP-Australia	05/05/08	30/04/09	1,011	896	Australia

\* Balance as per end of November 2008

### 3.10.2 Progress of NAP for 2008

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



#### Planned and Achieved Outputs for 2008

The main outputs of the NAP in 2008 were the following:

##### *Component 1: Socio-economic Analysis and Transport Planning*

NAP 1.1.1 Condition Surveys of Dangerous Areas for Navigation Improvement between Luang Prabang and Pakse in the Lao PDR and Thailand, Dangerous Areas 1 to 11 completed while selected Dangerous Areas of 12 to 22 are covered under the amendment of the contract to be executed in the dry flow season of December 2008 to March 2009. The outcome of the condition survey includes a preparation of full set of bidding documents for manufacturing and installation of aids to navigation in priority areas (Component 3).

NAP 1.1.2 Condition Surveys from the Cambodia-Viet Nam border to Can Tho Port on the Mekong/Vam Nao/Bassac Rivers and from Vam Nao to My Tho Port on the Mekong River in Viet Nam: field survey started in mid-June 2008. The whole work is now about 80% completed. The outcome of the condition survey includes a detailed engineering design and preparation of full set of bidding documents for manufacturing and installation of aids to navigation (Component 3).

NAP 1.1.4 Condition Surveys of Dangerous Areas for Navigation Improvement between Phnom Penh Port and Kampong Cham in the Cambodia has been completed. Other works

including the waterway channel design, aids to navigation design and preparation of full set of bidding documents for manufacturing and installation of aids to navigation (Component 3) is now being finalized.

- NAP 1.1.5 Condition Survey of dangerous areas for navigation (hot spots) between Houei Sai and Luang Prabang in the Lao PDR and Thailand: field survey started mid September 2008..The outcome of the condition survey includes detailed surveys and preparation of full set of bidding documents for manufacturing and installation of aids to navigation.

*Component 2: Legal Framework for Cross-border Navigation*

- NAP 2.1.1 The negotiations between Cambodia and Viet Nam on establishing a legal framework for cross-border navigation, with MRC's facilitation, have reached the final stage. Both parties are now making necessary consultations with their respective governments for finalizing and eventually signing the Agreement.

- NAP 2.1.2 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. TOR for this study have been prepared.

*Component 3: Traffic Safety and Environmental Sustainability*

- NAP 3.1.2 The condition survey of dangerous areas for navigation between Luang Prabang and Pakse and condition survey for navigation improvement from Phnom Penh to Kampong Cham which were carried out as part of Component 1 have provided detailed designs and full sets of bidding documents for the manufacturing and installation of aids to navigation. The bidding for this phase will start from 01 December 2008.

*Component 4: Information, Promotion and Coordination*

- NAP 4.1.4 Installation of two tidal stations, and civil works for upgrading the stations completed. The ship masters and pilots at the estuaries now have information on the almost real time water levels at the estuaries. This is of particular importance for the larger ships that 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 have assisted 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. The MRC HYCOS project under IKMP will cover the first three years of the operations of the hydrological stations.

NAP 4.2.2 MRC and P.R. China have reached a new level of cooperation in the field of Navigation in which both parties organized the first joint seminar on Waterway Safety and Navigation Improvement in Jinghong from 14-16 October 2008.

In parallel with the seminar the following studies were completed:

Socio-economic assessment (comparative advantage of waterway transportation);

Recommendations for standard navigation lock design;

International best practices of regulating works and mitigation measures.

The findings of these studies were presented at the meeting in Jinghong. Subsequent joint seminar on the navigation related topics is now being proposed.

#### *Component 5: Institutional Development and Programme Management*

NAP 5.1.2 The NAP Office and NAB are fully functioning to implement the Belgian and AusAID 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.

#### **Significant Problems Encountered, Corrective Actions Taken**

Even though additional funding of US\$ 1 million was provided by Australia to the NAP in 2008, the most significant problem of the NAP is still the lack of funds. The programme continues to be under funded and development objectives will only be attained provided the programme is fully financed.

The NAP is still not able to launch an important study on analysis of risk for oil spills and other related navigation hazards in major ports and on waterways, the output of which will provide the scope for prevention and contingency planning. The same problem is valid for the regional socio-economic transport study.

Additionally, the NAP has been forced to delay the action of 4.1.2 on the Development of Management Information System Phase II which was originally planned to be implemented by using the funding from the NAP and Phnom Penh Autonomous Port. Due to fluctuation of exchange rates the NAP has been compelled to revise its budget accordingly.

In general, on an operational level, no significant problems have been encountered since the start of implementation of the Programme in August 2006. The progress is on track according to the plan of the PIP within the Belgium and AusAID contribution to MRC NAP 2006-2010.

## **Donor reviews or appraisals planned in 2008**

No donor review or appraisal has been planned.

### **3.10.3 NAP Workplan for 2009**

#### *Component 1: Socioeconomic Analysis and Transport Planning*

NAP 1.1.1 Remaining dangerous areas for the Mekong section under Condition Survey of dangerous areas for navigation between Luang Prabang and Pakse have to be carried out. (please correct the location names)

NAP 1.1.5 Condition Survey of dangerous areas for navigation between Houei Sai and Luang Prabang, including detailed design and preparation of full set of bidding documents for manufacturing and installation of aids to navigation in priority areas carried out.

#### *Component 2: Legal Framework for Cross-border Navigation*

NAP 2.1.1 Legal study to provide recommendation for establishing a legal framework for cross border navigation down stream of Luangbang between Thailand and Lao PDR, carried out (subject to availability of fund).

NAP 2.1.4 Start-up the implementation of the Legal framework for cross-border and to guarantee freedom of navigation and operation of navigation agreements between Cambodia and Viet Nam.

#### *Component 3: Traffic Safety and Environmental Sustainability*

NAP 3.1.2 Operational Aids to Navigation system on prioritized stretches and hot spots between Luang Prabang and Vientiane, including commissioning and trained maintenance staff, fully functional.

NAP 3.1.3 Operational Aids to Navigation (day and night) system from Cambodia/Viet Nam border-Can Tho Port on Bassac and the Vam Nao River, and on Mekong River from East Vam Nao River to My Tho Port in Viet Nam fully functional. This also includes an Automatic Identification System (AIS) of the river stretches from Cambodia/Viet Nam border to the sea (subjected to availability of fund)..

NAP 3.1.4 Operational Aids to Navigation (day and night) system from Kampong Cham to Phnom Penh in Cambodia fully functional. This also includes an AIS from Phnom Penh to Cambodia Viet Nam Border.

NAP 3.2.2 Risk Assessment of improved navigation and impacts of carriage of dangerous goods, including contingency planning started (subject to available funds)

#### *Component 4: Information, Promotion and Coordination*

- NAP 4.1.6 Operational services and fairway information provided Development of Automatic Identification System (AIS) for the Mekong river (Phnom Penh to the Cambodian-Viet Nam border) in Cambodia and in Viet Nam from Cambodian-Viet Nam border to the sea on the Mekong River, and for the Vam Nao River and Bassac rivers. (subject to available funds)
- NAP 4.2.2 Under the cooperation between the Upper and Lower Mekong River navigation between MRC and China, with focus on waterway safety and environmental protection: a second joint seminars on Waterway Safety and Environmental Sustainability may be organized in Lao PDR in June 2009. This is subjected to confirmation by China.

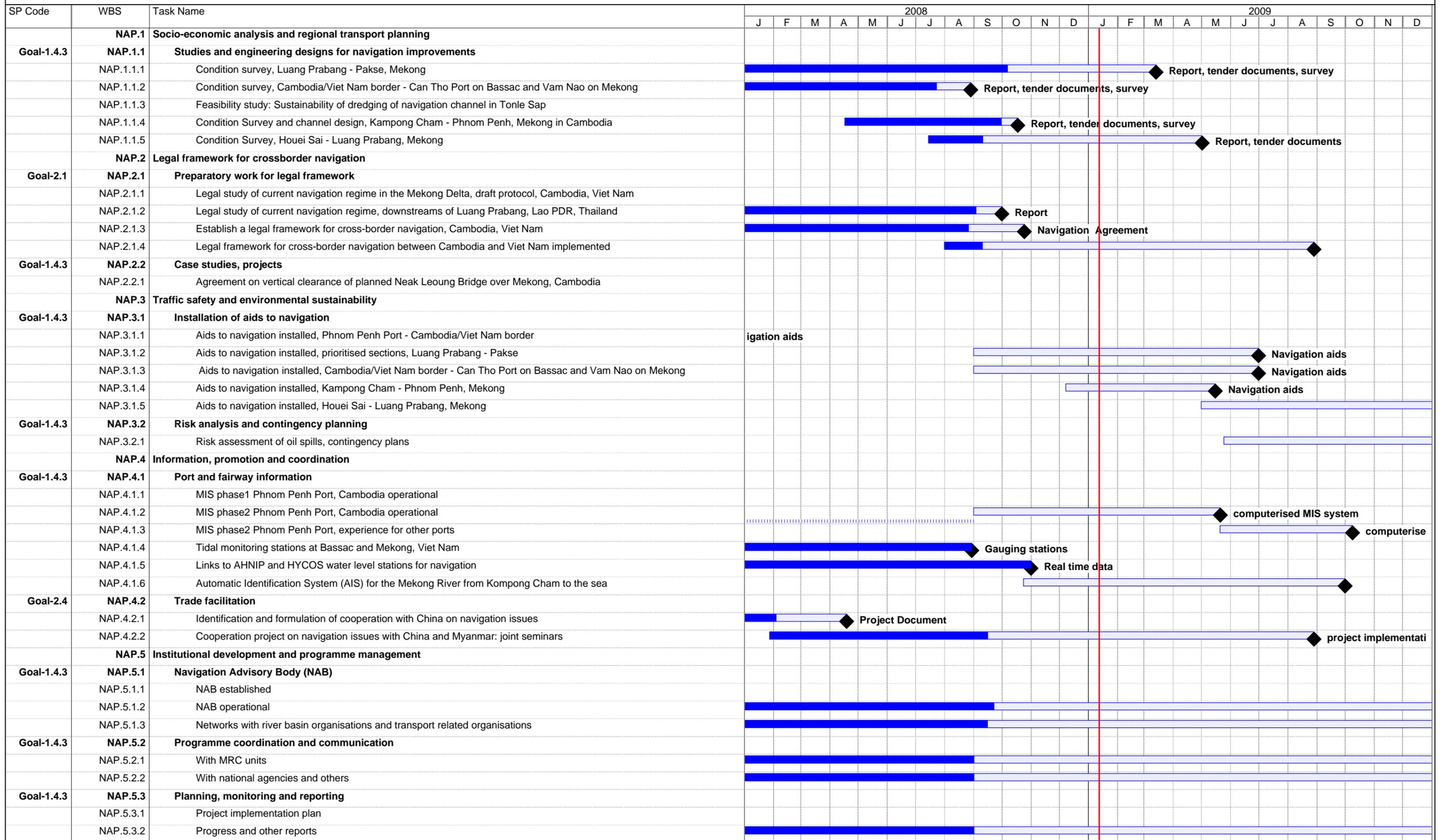
#### *Component 5: Institutional Development and Programme Management*

- NAP 5.1.2 The NAP Office and NAB are fully functioning to implement the Belgian and Australian 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 2009**

Presently, no donor review or appraisal has been planned.

# Navigation Programme - Progress and Work Programme 2008-2009



## 3.11 Sustainable Hydropower Programme (HP)\*

### 3.11.1 Programme Overview

#### Purpose

The Mekong Region is enjoying consistent economic growth. As a result, the region's demand for energy is rapidly growing. This and the increasing importance of regional trade and investment flows, have stimulated a new era of hydropower development in the basin, now mainly driven by regional private sector actors. In response to market demands, a broad range of developers are now investigating a large number of potential projects, among them projects for the Mekong mainstream. The planning cycle for private sector projects is generally much shorter than the conventional public sector approach, and many concessions agreements are already at advanced stages of negotiation.

Hydropower generation potential and energy demand are geographically imbalanced, thus highlighting the importance and opportunities of an emerging regional power market. This regional dimension is the driver behind most of the current projects with bilateral agreements for the export of electricity. The foreign exchange revenues from such power exports in turn provide opportunities for targeted actions to achieve poverty alleviation and social development goals in the lesser-developed parts of the basin.

Considerable efforts have been made to develop an appropriate policy framework for environmental and social issues and related decision-making, through project planning, implementation and operation. Innovative mitigation measures are being piloted. There remain however numerous concerns over policy implementation and the consequences for individual projects. This attention has broadened the understanding of the benefits of a triple bottom line approach to hydropower development among a wide range of stakeholder groups. At a project-level, the challenge remains now to adapt to and replicate these experiences. Beyond that, at a basin scale, there are issues that require a more integrated approach, assessing the integrity of the system as a whole and the opportunities and risks that hydropower development brings.

#### Approach

MRC approved its Hydropower Strategy in 2001 and drafted a Concept Note for its Hydropower Programme (HP) in 2005. These documents were a comprehensive attempt to interpret emerging international good practice and lay out what it meant for the Mekong region, and identify strategic work areas and possible components of the programme.

Although due to funding constraints, the HP only formally started in 2008, a number of the strategic directions and activities identified under the Strategy have been incorporated into other related MRC programmes. Some of the elements of the HP Concept Note are actively being implemented, including:

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\* The consideration and consultation are on-going regarding the implementation modality. The Hydropower Programme may therefore take a form as cross-cutting initiative to ensure integration of on-going Programmes' works.

- Assessment of cumulative impacts of basin-wide water resources development options, including hydropower development on the mainstream and tributaries - under BDP;
- Providing assessment tools for environmental and social aspects, with particular focus on trans-boundary impacts; and synthesizing regionally appropriate environmental considerations for sustainable hydropower development - under EP; and
- Broadening the understanding of the possible impacts of dams on fish migration, spawning and fisheries production – under FP.

In recognizing the complexities but also the pace of hydropower development in the basin, and building on what has already been agreed, key aspects to consider in framing the detailed activities for the HP include:

- Articulation of the benefits of a basin-wide approach focusing on long-term sustainability;
- Added-value of MRC as a regional river basin organization;
- Need to be participatory and inclusive;
- Relevance to the agencies responsible for setting the policy framework and regulating project developments;
- Consistency with the MRC Strategic Plan 2006-2010; and
- Coordination with other MRC programmes.

### **Strategy**

Two tracks are proposed for the implementation of HP, but others may emerge through the programme formulation process:

- Track 1: Short term activities focused on understanding the regional implications of, and opportunities for, hydropower projects including related activities already being implemented by other MRC programmes.
- Track 2: Medium to long term activities on capacity building and facilitating dialogue on regional hydropower development.

### **Structure**

Components of the HP would include:

#### *Component 1: Programme Management and Communications*

1. Activities under this component will include setting up and managing the Sustainable Hydropower Programme but will focus on facilitating dialogue and communication between Member States, Dialogue Partners and other stakeholders, and provide technical expertise in the PNPCA process.

### *Component 2: Capacity Building and Knowledge Base Support*

2. This component will concentrate on expanding MRC's technical, environmental, social and economic database and improving socio-environmental baseline data relating to hydropower development in the Basin, as well as building capacity in MRCS, NMCs and line agencies for implementing hydropower development policies, assessing economic, social and environmental impacts of hydropower development on a regional and sector basis, and monitoring hydropower project development.

### *Component 3: Regional Planning Support*

3. Activities under this component will involve provision of support to government agencies and project developers on hydropower-related planning issues on which MRC has acquired and developed region-wide knowledge, expertise and experience through its various work programmes.

### *Component 4: Sustainability Assessment and Financing*

4. This component focuses on assisting line agencies and project developers in devising financing mechanisms and implementing good practices designed to enhance the sustainability of hydropower projects developed in the Mekong Basin.

## **Implementation Arrangements**

Management and coordination of the Sustainable Hydropower Programme will be assumed by a working group of specialists at MRCS within the Operations Division and led initially by the Hydropower Project Manager during initiation of Track 1 activities for which available resources have already been allocated. The initial composition of the group will be determined once the activities to be undertaken in Track 2 have been finalised and may subsequently vary as some activities are completed and/or new activities are initiated. Recruitment of a Programme Coordinator and CTA will follow once the Programme scope and approach have been finalised and significant additional funding has been secured.

An important function of the working group will be coordination with other ongoing programmes within the MRC and MRCS management. In particular coordination is needed with the BDP, EP, FP, NAP, FMMP, IKMP and ICCS. An internal coordination task force will be established for this purpose reporting jointly to the Director OPD and CEO. Coordination with the work of external institutions and organisations such as the GMS, World Bank, Lao Thai Hydro Forum, other financiers and developers, and civil society will also be essential.

While permanent MRCS staff members will undertake most of the proposed activities of the Sustainable Hydropower Programme, it is envisaged that specialist consultants will also be commissioned where necessary. Collaboration with relevant national institutions in MRC's Member Countries will be critical to the overall success of the HP.

It is proposed that a high-level Hydropower Steering Committee (HSC) reporting to the MRC CEO will be established to advise the MRC on Mekong hydropower issues, to provide guidance on the work of the Sustainable Hydropower Programme working group and to evaluate the

results of the various activities of the Sustainable Hydropower Programme. It is envisaged that the HSC will be made up of i) senior officials from relevant line agencies in all four Member Countries, ii) representatives of the NMCs, iii) the MRCS OPD Director and Sustainable Hydropower Programme Coordinator, iv) one participant each from China and Myanmar on an ad hoc basis as observers, v) a representative of Development Partners funding the Sustainable Hydropower Programme, and vi) external experts and members of private sector and civil society on an ad hoc basis as resource people. The HSC will meet formally twice a year to review progress of the Sustainable Hydropower Programme, possibly with less formal special meetings to deal with specific matters of importance that may arise.

## **Main Outputs**

The main outputs envisaged under the four Components of the Sustainable Hydropower Programme are:

### *Component 1: Programme Management and Communication*

- 1.1. Programme Formulated (Based on Regional Multi-Stakeholder Consultation) – Track 1
- 1.2. Dialogue facilitated: ministerial briefings, dialogue with developers and financiers, multi-stakeholder forum, dialogue partners – Tracks 1 and 2
- 1.3. Technical inputs provided to PNPCA process – Track 2
- 1.4. Raised awareness of risks and opportunities of hydropower development – Track 2
- 1.5. Improved communication and dissemination of MRC outputs – Track 2
- 1.6. Programme managed effectively – Track 2

### *Component 2: Capacity Building and Knowledge Base Support*

- 2.1. Expanded MRC hydropower knowledge base – Track 1
- 2.2. Improved environmental baseline information for hydropower planning – Track 2
- 2.3. Improved access to hydrometeorological and operational data of developers – Track 2
- 2.4. Capacity building provided to line agencies for implementation of strategic environmental assessment, environmental and social policy implementation and monitoring of hydropower project development – Track 2
- 2.5. Technical assistance provided to developers on safeguards and monitoring – Track 2

### *Component 3: Regional Planning Support*

- 3.1. Standard specifications for navigation locks in mainstream dams – Track 1
- 3.2. Barrier effects of mainstream dams to fish migration identified – Track 1
- 3.3. Configuration of mainstream hydropower projects optimised – Track 1
- 3.4. Strategic environmental assessment and regional macroeconomic evaluation of proposed mainstream dams in LMB– Tracks 1 and 2
- 3.5. Guidance developed for mitigation measures for fish migration – Track 2

- 3.6. Sub-basin hydropower SEAs and CIAs undertaken – Track 2
- 3.7. Multipurpose functionality of hydropower projects identified – Track 2
- 3.8. Scoping for Small-Scale Hydropower Undertaken – Track 2

*Component 4: Sustainability Assessment and Financing*

- 4.1. “Environmental Considerations for Sustainable Hydropower Development” field-tested – Track 1
- 4.2. (a) Financing mechanisms for sustainability measures for mainstream dams identified (b) Sustainability incentives within market and regulatory frameworks introduced – Track 2
- 4.3. Benefit-sharing mechanisms elaborated at regional, national and community levels – Track 2
- 4.4. Guidance provided on sustainable management of reservoir watersheds – Track 2

**List of agreements**

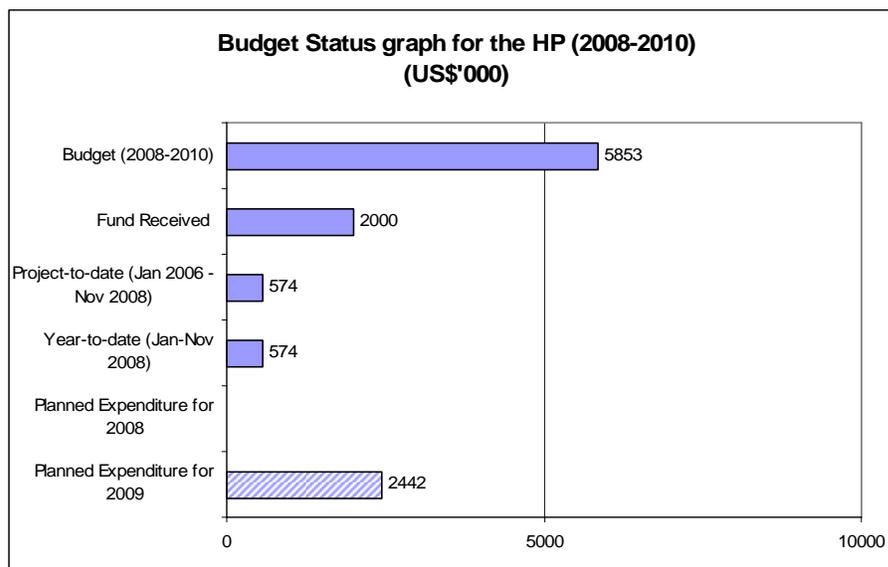
(US\$ 1,000)

	Start date	End date	Budget	Balance*	Donors
<b>Agreements</b>					
Initial Analysis of Hydropower Potential in the Lower Mekong Basin in Relation to Cumulative Transboundary Impacts	06/2007	12/2010	500	325	Japan (JAIF)
The MRC Sustainable Hydropower Programme	07/2007	12/2011	1,499	1,100	Finland

\* Balance as per end of November 2008

**3.11.2 Progress of HP for 2008**

The following graph provides an overview of the budget status of the 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 outputs and achieved outputs for 2008**

Activities of the Sustainable Hydropower Programme in 2008 focussed on Track 1 Outputs, namely:

### **1.1 Programme Formulated (Based on Regional Multi-Stakeholder Consultation)**

In consultation with other MRC programmes a “Discussion Brief on MRC Sustainable Hydropower Programme” was prepared and endorsed by the MRC Joint Committee at its meeting on 19 June 2008. National Consultation Meetings on the MRC Hydropower Programme as outlined in the Discussion Brief were held with all four riparian countries during July/August 2008. Taking into account the comments received at these meetings, a Preliminary Draft Sustainable Hydropower Programme Document was prepared and presented at the “Regional Multi-Stakeholder Consultation on the MRC Sustainable Hydropower Programme Formulation” held in Vientiane on 25-27 September 2008.

On the basis of views and opinions expressed during the meeting, detailed descriptions of the envisaged Outputs of the programme were elaborated and incorporated into the Draft Sustainable Hydropower Programme Document. A second round of National Consultation meetings for detailed discussions on the proposed Outputs was held during November/December 2008.

This detailed document is now being used to prepare a more formal project document. In doing so, it reflects the added value of MRC as a regional organization, the importance of demonstrating relevance to agencies responsible for hydropower development as well as developers and other stakeholders, coordination with other MRC programmes, the urgency associated with current rapid pace of development initiatives and importance of broad participation in its activities.

#### **Output 2.1 Expanded MRC hydropower knowledge base**

Work on assembly of a detailed database of existing, under-construction and planned/proposed hydropower projects in the Basin was initiated under BDP in the first half of 2008, with data obtained from relevant line agencies and NMCs.

#### **Output 3.1 Standard specifications for navigation locks in mainstream dams**

In view of the resurgent private-sector interest in mainstream hydropower dams and the recently announced plans of the Ministry of Energy and Mines of the Lao PDR to commission a power optimisation study of the five most northerly run-of-river schemes, a study was carried out in the second half of 2008 to produce standard specifications of navigation locks which should be incorporated in any such scheme. Experience on other major waterways in the world as well as current and forecast waterborne transport volumes in the Mekong region were taken into account during the study.

#### **Output 3.2 Barrier effects of mainstream dams to fish migration identified**

Also in the light of the renewed proposals for mainstream hydropower dams, an Expert Group was mobilised, comprising recognised international and riparian professionals and applied scientists with experience in fish migration, impact assessment, and engineering and social mitigation measures. Background papers and case study summaries were commissioned and presented at an Expert Group Meeting held in

Vientiane, Lao PDR, on 22-23 September 2008. An output statement, available on the MRC website, summarised the principal findings of the meeting.

#### Output 3.3 Configuration of mainstream hydropower projects optimised

In July 2008 the Ministry of Energy and Mines, Lao PDR, approached MRC with a request for i) provision of hydrological data for the sites of the proposed mainstream dams in the upper Lao and Lao-Thai reaches of the mainstream Mekong, and ii) support to the Ministry and its selected consultant with respect to ensuring that the provisions of the 1995 Mekong Agreement are met, iii) assistance with designing the incorporation of navigation facilities in the projects, and iv) support in dealing with fisheries aspects of the projects.

As part of this support, MRC organised a Developers' Workshop on 8 December 2008, in which a range of topics, including the Procedures for Notification, Prior Consultation and Agreement (PNPCA) and MRC's work on standard specifications for navigation locks and mitigation measures for fish migration, were discussed.

#### Output 3.4 Strategic environmental assessment (SEA) and regional macro-economic evaluation of proposed mainstream dams in LMB

One of the principal outcomes of the above-mentioned Regional Multi-Stakeholder Consultation was the general support for a comprehensive strategic environmental assessment (SEA) of the proposed mainstream hydropower dams. Accordingly, detailed Terms of Reference for the SEA, including a regional macro-economic assessment, were prepared, whereby the initial step, scoping of the key issues to be addressed, was formulated as an initial stage which could be embarked on immediately.

#### Output 4.1 "Environmental Considerations for Sustainable Hydropower Development" field-tested

A concept note on formulation of the detailed project for contextualisation and field-testing of the sustainability guidelines and protocol of the International Hydropower Association was prepared in 2007. During 2008 the detailed "Project Document" was elaborated and, after a round of National Consultations, presented at the above-mentioned Regional Multi-Stakeholder Consultation in September 2008. The Document was subsequently refined and a detailed budget and work plan established.

### **Significant Problems Encountered, Corrective Action Taken**

None.

### **Donor reviews or appraisals**

Not yet planned.

### **Relevant JC and Council Decisions**

Recommendations regarding the Discussion Brief on the Sustainable Hydropower Programme, informal JC meeting, June 2008.

### **3.11.3 HP Workplan for 2009**

In general it will be a continuation of the works started in 2008 and many of them will have their scope refined during detailed programme formulation.

#### **Planned Outputs and Activities for 2009**

Work on the following Outputs of the Sustainable Hydropower Programme is foreseen for the year 2009:

Output 1.2 Dialogue facilitated: ministerial briefings, dialogue with developers and financiers, multi-stakeholder forum, dialogue partners

It is envisaged that work on this Output will be continuous throughout the year.

Output 1.3 Technical inputs provided to PNPCA process

As indicated above, there is resurgent interest in mainstream hydropower projects. In accordance with the 1995 Mekong Agreement such projects would come under the Procedures for Notification, Prior Consultation and Agreement (PNPCA). The amount of work carried out under this Output will depend on the number of such projects submitted for Prior Consultation and Agreement and on the scope of the project assessments requested by the Joint Committee.

Output 1.4 Raised awareness of risks and opportunities of hydropower development

Initial discussions will be held with relevant line agencies (environment, power and water) and the status of communication programmes with regard to hydropower and the Mekong will be reviewed. Media training will be provided as deemed appropriate to the NMCs and line agencies on the design and implementation of communication programmes

Output 1.5 Improved communication and dissemination of MRC

It is envisaged that there will be ad hoc inputs to this Output during the course of the year, preparing publicity materials and articles on the opportunities and risks associated with hydropower development in the Basin, disseminating the principle results of Sustainable Hydropower Programme and responding to key public relations events and media coverage regarding hydropower development in the Basin.

Output 1.6 Programme managed effectively

After recruitment of the Programme Coordinator and Chief Technical Adviser, efforts will concentrate on setting up an efficient programme management system, processes and procedures set in place to cover all programme activities and give particular attention to interaction with other MRC programmes.

Output 2.1 Expanded MRC hydropower knowledge base

Work will continue on verifying data already collected from the line agencies in the four riparian countries and on expanding the hydropower knowledge base to include all data required by BDP as well as relevant reports and other documentation

Output 2.2 Improved environmental baseline information for hydropower planning

A review will be made of data and information already held in the project databases established by other MRC programmes (EP, FP, BDP, IKMP, etc. as well as the hydropower project knowledge base under Output 2.1 above) in order to identify the additional baseline information to be obtained and the possible need for installation of new water quality monitoring stations and/or updating of land use information. In consultation with relevant line agencies in the riparian countries the locations of new monitoring stations and the parameters to be monitored at each station will be identified. Arrangements will be made for new data to be received as made available and incorporated in MRC environmental baseline database.

#### Output 2.3 Improved access to hydrometeorological and operational data of developers

Current arrangements with line agencies and MRC for sharing of operational data (in particular data relating to flood flows) from existing projects as well as in those sub-basins where multiple projects are under construction or planned will be reviewed. In consultation with the line agencies and projects developers/operators recommendations will be drawn up for standard procedures for sharing of hydrometeorological data from existing projects and those under development (e.g. through corresponding requirement in the Concession Agreement or Project Development Agreement).

#### Output 3.3 Configuration of mainstream hydropower projects optimised

It is expected that work will continue on the provision of support to the Ministry of Energy and Mines, Lao PDR, and their selected consultants over the planned 5-month period of the power optimisation study of the proposed mainstream dams in the northern part of the LMB.

#### Output 3.4 Strategic environmental assessment (SEA) and regional macro-economic evaluation of proposed mainstream dams in LMB

Execution of the strategic environmental assessment and regional macro-economic assessment of the proposed mainstream hydropower dams will continue and is expected to be completed by November 2009.

#### Output 3.5 Guidance developed for mitigation measures for fish migration

Ad hoc inputs will be provided throughout 2009 by the Expert Group formed to provide guidance on mitigation measures for the barriers to fish migration posed by mainstream hydropower dams. This information will be used in the strategic environmental assessment of the mainstream dams and by BDP in formulation and assessment of alternative basin development scenarios.

#### Output 3.7 Strategic environmental assessment (SEA) and regional macro-economic evaluation of proposed mainstream dams in LMB

Execution of the strategic environmental assessment and regional macro-economic assessment of the proposed mainstream hydropower dams will continue and is expected to be completed by November 2009.

#### Output 4.1 "Environmental Considerations for Sustainable Hydropower Development" field-tested

It is planned that Stage 1 (Testing Phase) of the project “Environmental Considerations for Sustainable Hydropower Development (ECSHD)”, involving: i) contextualisation of IHA Sustainability Assessment Protocol to conditions in Mekong Region and incorporation of the basin-wide perspective, ii) testing of the modified guidelines in current and/or planned SEA/EA MRC activities, iii) preparation of a report on the testing phase and recommendations to be considered under the wider review process of IHA, and iv) national and regional consultations with Member States and Dialogue partners (China, Myanmar), will be completed in the first half of 2009.

Work will then be initiated on Stage 2 (Consolidation and Capacity Building Phase), involving: i) contributing to updating of the hydropower database and to identification of financing mechanisms and incentives to promote adoption of effective environmental mitigation measures and improved sustainability performance of hydropower projects, ii) assessment of training needs in line agencies of Member States, iii) capacity building and training courses on awareness and application of the sustainability assessment tool, iv) obtaining agreement among Member States on ECSHD, and v) preparation of a report on agreed Mekong environmental hydropower sustainability guidelines and future action plan.

#### **Donor Reviews or Appraisals Planned in 2009**

None.



## **3.12 Fisheries Programme (FP)**

### **3.12.1 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, with an estimated yield of 2-3 million tonnes per year, with a total value of around US\$ 2,000 million. 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. Consequently, they are essential for food security, especially for the poorest people in the LMB.

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 outlined 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 and 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 producing information relevant for fisheries development, utilisation, management and conservation in the Mekong basin. Relevant information is that which is necessary for development and management of the fisheries within the context of the integrated development and management of all the resources of the river. With respect to fisheries, the primary focus is on developing an understanding of biology, ecology, economics and social aspects of fisheries, and the threats to the resource from other river-based developments. Activities are

mainly centred 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 focus on proposals for dams on the mainstream has required FP to fast-track several activities designed to produce information specifically related to the possible impacts of dams on fisheries in the Mekong. These are as follows:

1. Identification of important spawning sites on the mainstream: Sampling of fish larvae and juveniles will be conducted along the length of the Mekong mainstream over a 12-month period to identify the distribution of spawning habitat. Planning is currently underway for the quantitative survey work to be carried out in 2009, with preliminary results available at the end of 2009. The results will also help to improve the reliability of the predictions of the dam impact model described below.

2. Modelling barrier effect of proposed mainstream dams: The Fisheries Programme and the WorldFish Centre (Phnom Penh office) are collaborating to model the barrier effect of proposed mainstream dams. The modellers will look at how the barriers will impact on populations of highly migratory species of different sizes and with different life history strategies. A report on the work will be available by May 2009.

3. Expert meeting on dams as barriers to fish migration on the Mekong mainstream, and possibilities for mitigation: The Fisheries Programme and the Sustainable Hydropower Programme organised a meeting of experts from around the world on fisheries ecology and hydropower development. The aim was to bring their experiences and knowledge to assess the possible impacts of mainstream dams on the fisheries of the Mekong, and to see what mitigation activities could be relevant to this region. The full paper detailing the outcomes of the meeting will be published in the form of answers to frequently asked questions about dams, hydropower and fisheries.

4. Development of guidelines for fisheries impact assessment, forecasting and mitigation: The guidelines will draw upon the lessons and experiences from dam projects, environmental impact assessments and related studies undertaken both within and beyond the Lower Mekong Basin to generate best practice guidelines for dam impact forecasting assessment and mitigation. The report will be completed by mid 2009.

5. Mitigating the impacts of dams on fisheries: a primer FP will prepare a report on measures which can assist in mitigating the impacts of dams on fisheries, before, during and after construction of a dam. The report will be written as a general source document for a wide audience. It will be published in the MRC Development Series in early 2009.

6. Review of fisheries in reservoirs in the LMB: The Fisheries Programme will publish a technical report on the development of fish communities and reservoir fisheries in the Lower Mekong Basin. This will look at what sort of fisheries we can expect in new reservoirs and will attempt to compare yields in reservoirs with those lost from the river fisheries. The report should be available by mid-2009.

7. In addition, during 2008 the FP has published several articles on fisheries and dam development in its regular newsletter, Catch and Culture. More will be published in future editions, reflecting the importance of the issue for fisheries management and development in the basin.

### **Coordination with other Programmes of MRCS and external fisheries agencies**

The FP2 coordinates and interacts closely with other programmes of MRCS to identify areas of synergy. Examples during the early years of FP2 were involvement on staff in the bio-monitoring work of EP; the conflict identification and prevention activities of EP; and the development of WUP-follow up programme in cooperation with WUP and more recently BDP; and joint work with IKMP and EP on identifying and mapping deep pools in the Mekong River. More recently, the FP has engaged with the Sustainable Hydropower Programme in organising an expert panel workshop on dams as barriers to fish migration in the Mekong mainstream, and possibilities for mitigation. One new and important activity is an assessment of the socio-economic impact of the scenario of the loss of say 50% of the migratory fish resource in the basin, which might result if the mainstream dams are built. The FP will continue to look for areas of synergy between its work and that of other programmes, to ensure efficient implementation arrangements and expenditure funds, as well as maximising the outcomes of the work.

FP2 also collaborates in field activities and in meetings/workshops with a range of fisheries agencies active in the Mekong basin. The major ones are of course the fisheries line agencies of the MRC Member States, through which the FP2's field programme is implemented. Others include the South-east Asian Fisheries Development Centre (SEAFDEC); the Network of Aquaculture Centres in Asia-Pacific (NACA); the Food and Agriculture Organisation (FAO) offices of the UN in both Bangkok and Rome; The WorldFish Center based in Phnom Penh; and several universities active in fisheries.

### **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 in 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

(US\$ 1,000)

	Start date	End date	Budget	Balance 2008 (*)	Donors
<b>Agreements</b>					
<i>Swedish contribution to the Technical Advisory Body</i>	<i>01/01/04</i>	<i>31/12/06</i>	<i>159</i>	<i>0</i>	<i>Sweden</i>
<i>Swedish contribution to FP2 (MK 2004/06)</i>	<i>01/01/06</i>	<i>31/12/06</i>	<i>180</i>	<i>0</i>	<i>Sweden</i>
Denmark support to FP2	01/01/06	31/12/08	5,000	925	Denmark
Swedish contribution to FP2 (MK 2007/03)	01/01/07	31/12/09	1,610	1,023	Sweden
Danida pledged support to FP2	01/01/09	31/12/10	3,550	na	Denmark *

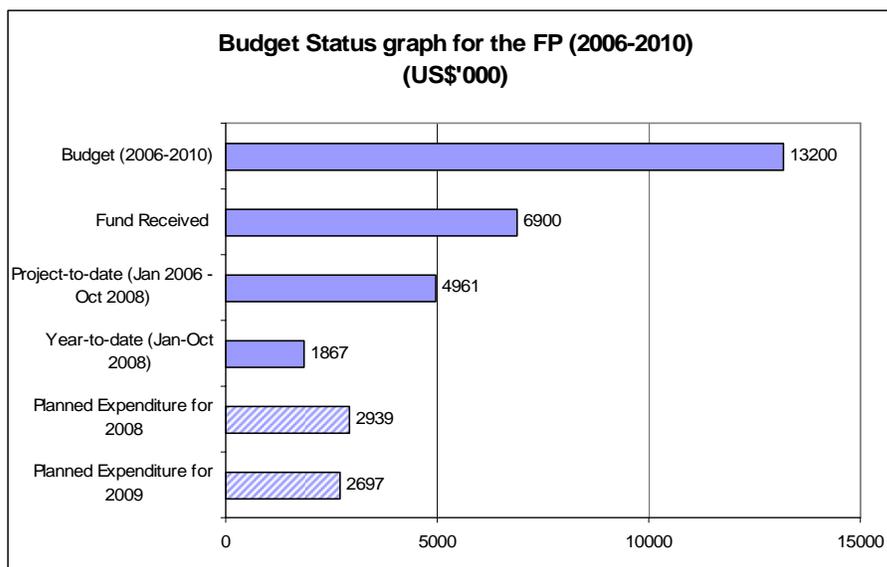
(\*) Balance as per end October 2008

Note: Completed Agreements indicated in red Italic.

### 3.12.2 Progress of FP for 2008

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.

\* Signature subject to resolution of the on-going discussion of permanent location of the MRCS



### Planned and Achieved Outputs 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.

FP 1.2 Expert Group Meeting on the barrier effect of dams on fish migration, and possibilities for mitigation was organised.

Communication products will include:

FP 1.2.5 A photographic book titled "The Living Mekong",

FP 1.2.4 "Catch and Culture" omnibus editions in riparian languages; three issues of "Catch and Culture" newsletter;

FP1.2.5. "Fisheries Information in the LMB, Version3".

#### *Component 2: Fisheries Ecology, Valuation and Mitigation*

FP 2.2.1 Establishment of data collection procedures for fisheries valuation studies;

FP 2.2.2 Produce a technical report on the rice field fisheries in Battambang, Cambodia;

FP 2.3.1 Analyses data in fisheries databases, publish results;

FP 2.3.4 Modelling of impacts of barriers to fish migration in the Mekong mainstream;

FP 2.4.1 Publish a catalogue of water management projects in the LMB;

FP 2.4.4 Initiating project to a document impacts, forecasting and mitigation of dams.

### *Component 3: Fisheries Management and Governance*

- FP 3.1.1 Further development and expansion of localized IWRM in the Mekong delta (Soc Trang Province, Viet Nam);
- FP 3.1.3 Documentation of lessons learned from participatory fisheries management on local, provincial and national levels from more than 80 sites in four riparian countries;
- FP 3.2.1 Preparation and implementation of about 25 capacity-building events on local and national levels (all four countries);
- FP 3.2.3 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*

- FP 4.2.2 Genetic inventory of two species of indigenous Mekong fish will be completed – this will provide the basis for selective breeding programmes.
- FP 4.5.1 Propagation techniques of at least two Mekong indigenous fish species will be defined and published. Biological synopses of nine indigenous Mekong fish species will be published, providing essential background for further development of aquaculture techniques for the species.

### **Significant Problems Encountered, Corrective Action Taken**

Accelerating water resource development in the Mekong, in particular, hydropower development on the Mekong mainstream has necessitated resource re-allocations with the Programme to accommodate fast-tracked activities.

### **Donor reviews or appraisals in 2008**

A mid-term review of the FP Phase 2 conducted jointly by Denmark and Sweden in February-March 2008. The review was very positive regarding the management and outputs of the FP2. Based on the review, Denmark is progressing an anticipated allocation of approximately US\$ 3.7 million for 2009-2010; Sweden is also giving further consideration to renewing its allocation to FP in 2010.

### 3.12.3 **FP Workplan for 2009**

#### *Component 1: Programme Management and Communication*

- FP 1.1.1 The FP will engage with donors (Sweden Australia and others) to secure funds required to implement the programme in 2009-10.
- FP 1.2.1 Publications will include Proceedings of the MRC Fisheries  
FP 1.2.5 Technical Symposium 2008; 3 editions of Catch and Culture newsletter, as well as omnibus editions in riparian languages; a book on the fishing gears of the Mekong delta in Vietnam; and several MRC Technical Series and Development Series reports.

#### *Component 2: Fisheries Ecology, Valuation and Mitigation*

- FP 2.1.1 Monitoring of several fisheries will continue. These associated databases will be analysed under an ACIAR grant to yield information on long-term trends in the fisheries, and the relationships with hydrological changes. Fish larvae sampling will be undertaken along the length of the Mekong to identify important spawning sites.
- FP 2.2.1 A series of surveys will be undertaken to refine the  
FP 2.2.2 estimates of the value of the fisheries in the Mekong. Several publications will come from the work.
- FP 2.3.1 Development of models relating fisheries production to hydrology will continue to be refined. A new, quantitative model on the barrier effect of dams on fisheries will be developed and published in 2009. All products will be disseminated to planning agencies in the region.
- FP 2.4.1 Reviews are being undertaken on the impacts of  
FP 2.4.2 developments on fisheries and possible mitigation measures. These will be published and made available for planning and development agencies.

#### *Component 3: Fisheries Management and Governance*

- FP 3.1.1 A regional symposium will be held in Hanoi on mechanisms for sustaining co-management initiatives in the Mekong basin. This will be complemented by further field activities in the MRC Member Countries aimed at strengthening and expanding co-management processes and mechanisms already developed. The component will also organise a regional forum on reservoir fisheries management, to complement the work of FP2 in addressing hydropower development information requirements in the Mekong basin.
- FP 3.2.1 Capacity building will cover the full spectrum of involvement  
FP 3.2.2 in fisheries management – from the TAB, to national line agency staff, to communities dependent on fisheries in the Mekong. The work continues the well-established institutional and personal capacity development activities of

the component. The TAB work plan for 2010-2012 will be developed.

*Component 4: Aquaculture of Indigenous Mekong Fish Species*

- FP 4.2.2 Breeding and husbandry techniques for the priority species will be further developed, in conjunction with both national fisheries agencies and cooperating fish farmers.
- FP 4.3.1 National staff involved in the component will be supported in presenting and reporting their work in international forums and journals. A workshop will be organised to develop guidelines for enhancement of open water fisheries through stocking of hatchery-reared fingerling fish.
- FP 4.5.1 A range of extension materials will be prepared in national  
FP 4.5.2 languages and disseminated to farmer groups. Extension staff will be trained in the use of the materials.

**Donor Reviews or Appraisals Planned in 2009**

No donor reviews are planned in 2009. Sweden reviews its support to FP as part of its annual consultation with MRC.

Planning for FP3 (2011-2015) will begin in early 2009. A team will collate inputs from NMCs, line agencies and MRCS to determine the basic content of the programme. The resultant programme description will be available for consideration by development partners from mid-2009 onwards.



# Fisheries Programme - Progress and Work Programme 2008-2009

SP Code	WBS	Task Name	2008												2009											
			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-4.3	FP.2.4.1	Develop a topology of water management projects, produce report	[Progress bar]																							
Goal-1.4.5	FP.2.4.2	Symposium on mitigation of developments on fisheries, in coop with FAO	[Progress bar]																							
Goal-1.4.5	FP.2.4.3	Expert group meeting on barrier effects of mainstream dams to fish migration	[Progress bar]																							
Goal-1.4.5	FP.2.4.4	Guidelines for forecasting, assessing and mitigating on the impacts of dams	[Progress bar]																							
Goal-1.4.5	FP.2.4.5	Develop of a population model to predict impacts of dam on fish migrations	[Progress bar]																							
Goal-1.4.5	FP.2.4.6	Mitigation of impacts of dams on fisheries	[Progress bar]																							
	<b>FP.2.5</b>	<b>Improved stakeholder and institutional capacity</b>																								
Goal-4.5	FP.2.5.1	Training course on project proposal writing and the logical framework	[Progress bar]																							
Goal-4.5	FP.2.5.2	ARC GIS software training	[Progress bar]																							
Goal-4.5	FP.2.5.3	Survey of stationary trawl (Dai) fisheries of the Tonle Sap	[Progress bar]																							
	<b>FP.3</b>	<b>Fisheries management and governance</b>																								
	<b>FP.3.1</b>	<b>Awareness raising on co-management initiatives</b>																								
	<b>FP.3.1.1</b>	<b>Applied research on fisheries management issues</b>																								
Goal-3.3	FP.3.1.1.1	Socio-economic assessment of co-managed fisheries	[Progress bar]																							
	FP.3.1.1.2	Improved marketing	[Progress bar]																							
	FP.3.1.1.3	Deep-pool/reservoir conservation zone management	[Progress bar]																							
	FP.3.1.1.4	Participatory water management	[Progress bar]																							
	FP.3.1.1.5	Community fish culture	[Progress bar]																							
	FP.3.1.1.6	Conflict management/improved regulations and enforcement	[Progress bar]																							
Goal-3.3	<b>FP.3.1.2</b>	<b>Stakeholder information visits and meetings</b>																								
	FP.3.1.2.1	Participatory water management	[Progress bar]																							
	FP.3.1.2.2	River and reservoir fisheries co-management	[Progress bar]																							
Goal-3.3	<b>FP.3.1.3</b>	<b>Dissemination and promotion of results among stakeholders</b>																								
	FP.3.1.3.1	Manuals on fisheries co-management	[Progress bar]																							
	FP.3.1.3.2	Technical manuals on fish production	[Progress bar]																							
	FP.3.1.3.3	Guidelines in management issues	[Progress bar]																							
	FP.3.1.3.4	Fisheries sector presentations	[Progress bar]																							
	<b>FP.3.2</b>	<b>Capacity building</b>																								
Goal-4.5	<b>FP.3.2.1</b>	<b>Human capacity development</b>																								
	<b>FP.3.2.1.1</b>	<b>Training/learning events</b>																								
	FP.3.2.1.1.1	Fisheries legislation	[Progress bar]																							
	FP.3.2.1.1.2	Business management skills	[Progress bar]																							
	FP.3.2.1.1.3	Environmental conservation	[Progress bar]																							
	FP.3.2.1.1.4	Fish production and processing	[Progress bar]																							
	FP.3.2.1.1.5	Financing	[Progress bar]																							
	FP.3.2.1.1.6	Data collection and analysis	[Progress bar]																							
	FP.3.2.1.1.7	Conflict management	[Progress bar]																							
Goal-3.3	<b>FP.3.2.2</b>	<b>Institutional capacity development</b>																								
	FP.3.2.2.1	Fisheries management planning	[Progress bar]																							
	FP.3.2.2.2	Support to institutional functioning	[Progress bar]																							
	FP.3.2.2.3	Upscaling of management organizations and institutions	[Progress bar]																							
Goal-3.3	<b>FP.3.2.3</b>	<b>Support to implementation of TAB work plans</b>																								
	FP.3.2.3.1	Preparation and implementation of TAB meetings	[Progress bar]																							
	FP.3.2.3.2	Preparation/dissemination of TAB publications	[Progress bar]																							
	<b>FP.3.2.3.3</b>	<b>Support to implementation of other TAB activities</b>																								
	FP.3.2.3.3.1	TAB presentations at international meetings and conferences	[Progress bar]																							
	FP.3.2.3.3.2	Capacity-building in regional fisheries management	[Progress bar]																							
	FP.3.2.3.3.3	Implementation of regional fisheries management	[Progress bar]																							
	FP.3.2.3.3.4	Institutional strengthening of TAB	[Progress bar]																							
	<b>FP.3.3</b>	<b>Fisheries development strategy</b>																								
Goal-3.5	FP.3.3.1	Formulation of plans and scenarios, best practice	[Progress bar]																							



### **3.13 Tourism Programme (TP)**

#### **3.13.1 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. Tourism development however will need to take into account both benefits and cost. While it might yield economic benefits, tourism might also have adverse environmental effects. There is therefore a need to ensure that tourism can be taken into account within the framework of the MRC for a sustainable development of the Mekong River Basin.

At present the immediate objective of the TP remains to be defined on the basis of on-going assessments.

##### **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**

TP activities 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 UNESCAP, especially the Mekong/Lancang River Tourism Planning Study.

Structure and main outputs would be determined through the formulation of the programme proposal.

#### **3.13.2 Progress of TP 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.

Three country reports on environment impacts of tourism were completed, a fourth is underway.

Drafting of a regional synthesis report is scheduled for the fourth quarter of 2008.

#### **Relevant JC and Council Decisions**

At the Twelfth Meeting of the MRC Council, the Secretariat was requested to accord more attention to Tourism; subsequently, the above reports have been prepared as a basis for this process.

#### **Donor Reviews or Appraisals**

N/A

### **3.13.3 TP Workplan for 2009**

In 2009 a regional report on environmental impacts of tourism in the LMB can be prepared on the basis of the national reports.

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 2009**

An assessment of the role of the MRC in the Tourism Sector will form part of the MRC portfolio assessment of the mid-term review of the MRC Strategic Plan 2006-2010. further actions will depend upon the outcome of that review.

## **3.14 MRC Water Management Trust Fund**

### **3.14.1 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, activities and initiatives 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 emerging challenges 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 supplementary mechanism was needed and hence, the MRC Water Management Trust Fund (WMTF) was established.

Moreover, the role of the MRC as a facilitator for 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 water resources 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 WMTF 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 below US\$ 100,000 the use of funds of the WMTF 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 WMTF 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 tranches 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 WMTF rests with the MRC Secretariat International Cooperation and Communication Section.

In implementing an activity under the WMTF, recruitment and procurement of services follow the MRC standard procedures as set out in Personnel Manual and Procurement Manual. A special emphasis is placed on the involvement of regional and local experts to give them an opportunity to participate.

### **Monitoring and Reporting**

The WMTF makes use of the established and transparent substantive and financial reporting system of the MRC which is geared towards multiple-donor funding formats and agreement-based reporting.

Donor contributions in towards the WMTF are re-traceable and drawn upon under the conditions agreed upon in the funding agreement with the WMTF Donor.

### **3.14.2 Progress for the Water Management Trust Fund for 2008**

The first contribution to the WMTF was made by the French Development Agency, the AFD in 2006 for an amount of US\$ 200,000.

The WMTF volume increased from US\$ 200,000 to more than US\$ 1 million thanks to several new funding agreements signed in 2007.

The Agreement between the Embassy of Denmark and the MRC was signed on 5 October 2007 and contributed to the WMTF with DKK 3 million equivalent to US\$ 537,220. This contribution is earmarked to support the implementation of a selection of recommendations from the Independent Organisational, Institutional and Financial Review of the MRCS and the NMCs.

The Agreement between the Ministry for Foreign Affairs of Finland and the MRC was signed on 7 November 2007 and contributed to the WMTF with € 250,000 equivalent to US\$ 340,599. This contribution is not earmarked.

The Ministry for Foreign Affairs of France informed the MRC on 27 November 2007 that the balance of US\$ 27,941 from a former contribution to the WUP should be transferred to the WMTF.

These contributions brought the WMTF to US\$ 1,105,760.

Funded from the first allocation from the AFD, the eight regional consultants have finalised their 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). The final report is under review and revision by the World Bank.

The AFD allocation has been utilised in 2008 for the Mid-term Review of the Strategic Plan. The AFD has also provided its non-objection for a partial contribution to the work of the Environment Programme on Technical Guidelines of the Procedures for Water Quality. A complementing budget for this work will be charge to the allocation from Finland.

As set out in the funding agreement, the contribution from Denmark has been used to support the follow-up on the Independent Organisational, Institutional and Financial Review of the MRCS and the NMCs with the organisation of relevant meetings, operational means and required consultancies. In 2008, the allocation from Denmark continued to be used in support of the implementation of priority recommendations of the Independent Organisational, Institutional and Financial Review of the MRCS and the NMCs.

The contribution from Finland is expected to be used in 2008 and 2009 for the formulation of the AIFP strategy, the support to the identification and preparation of the WUP follow-up, the Mekong Integrated Water Resources Management Programme (M-IWRMP) in Thailand and the complementing allocation to the work of the Environment Programme on Technical Guidelines of the Procedures for Water Quality.

### **3.14.3 *Planned outputs for the Water Management Trust Fund for 2009***

A new allocation of € 550,000 from the AFD might be expected in 2009. While the proposal was rejected in 2008, it might be re-submitted in 2009. If the proposal is approved, the new AFD contribution to the WMTF management will follow improved modalities, as it is expected that the AFD will not require any longer the non-objection procedure at each step of the consultancy. In addition, the contribution scope is expected to be widened from consultancy only to other activity tracks and modalities.

In 2009, the studies initiated in 2008 will be finalised, including the implementation of most of the recommendations of the Independent Organisational, Institutional and Financial Review of the MRCS and the NMCs on the contribution from Denmark, the formulation of the AIFP strategy on the contribution from Finland, the support to the identification and preparation of the M-IWRMP in Thailand on the contribution from Finland and the work using Technical Guidelines of the Procedures for Water Quality using the balance of the contributions from both AFD and Finland.