

## FOREWORD

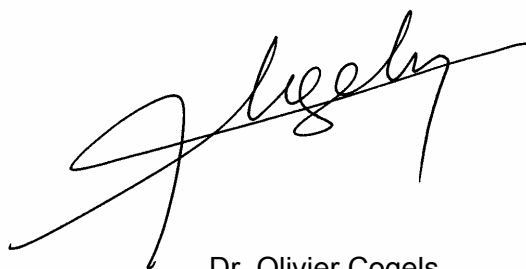
On behalf of the Mekong River Commission (MRC), it is my pleasure to present the MRC Work Programme for the year 2006 to our Member Countries, donors, partner agencies, and friends of the Mekong River Commission.

The programme activities of 2006 will be driven by the principles of Integrated Water Resource Management (IWRM) and administered through a fully integrated programmatic structure of the MRC. With this Work Programme 2006, the MRC will start its new five-year cycle in its strategic planning. According to the MRC Strategic Plan 2006 – 2010, a previous distinction of programmes into core, sector and support programmes will be abolished. The totality of programmes will support the Mekong Programme- a Regional Cooperation Programme for Sustainable Development of Water and Related Resources in the Mekong River Basin, owned by the Mekong countries.

New programmes are planned to be formulated in 2006: the Information and Knowledge Management Programme; the Hydropower Programme and the Drought Management Programme. The Navigation Programme and the Flood Management and Mitigation Programme have gone through preparatory phases and will gradually start up full implementation in 2006. Other Programmes have been revised or refocused to better serve the needs of the countries taking into account experience gained in implementation and will start a new phase in 2006 such as the Fisheries Programme (FP Phase 2) and the Agriculture, Irrigation and Forestry Programme (AIFP Phase 2).

The Work Programme 2006 provides a general introduction to the MRC and its new Strategic Plan 2006-2010. The second part of the Work Programme presents the MRC Integrated Programme, with an overview of the programmes and their active agreements and funding sources. The third part provides the reader with succinct information on what a given programme is aiming to achieve and what structure supports it; and set out planned outputs and activities per programme for the year 2006. The last part of the Work Programme presents progress of programme implementation in 2005 with a chart on budget status and graphs on output achievements. In the annexes, the reader will find the MRC strategic outputs as defined in the MRC Strategic Plan 2006-2010; and the short-list of projects identified by the Basin Development Plan programme and agreed by the MRC Council and Joint Committee.

Building the basis for an increasing participation of the international donor community in the MRC programmes, the MRC Member States continue to increase their contributions to the MRC, which is therefore well placed for a successful implementation of the Work Programme 2006. I should like to take this opportunity of the publication of the MRC Work Programme 2006 to express on behalf of the MRC our sincere gratitude to our donors, partners and friends for the continued active participation in MRC's work aiming at poverty reduction and sustainable development of the Mekong River Basin.



Dr. Olivier Cogels  
Chief Executive Officer

## PREFACE

The Work Programme 2006 contains brief descriptions of the programmes and explains how they are contributing to the MRC Strategic Plan 2006-2010. It also includes an activity plan for 2006 including a list of the active projects and their budget, as well as status of activities carried out in 2005 including graphic presentation of an output achievement indicator. As defined in the new Strategic Plan 2006-2010, the integrated programme structure of the MRC is composed of the following programmes:

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

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

Compared to the Work Programme 2005, new programme developments have been included. A summary overview of the programmes is given below:

### **Basin Development Plan**

Phase 1 of the present project under this Programme is scheduled for completion by mid 2006, both in terms of outputs and funding. Preparation of Phase 2 (2006-2010) is planned to proceed in direct continuation of Phase 1, focusing on long-term modelling and scenario analysis.

### **Environment Programme**

Milestones were developed for the period 2004-2008 to allow for a better monitoring of the programme by the Joint Committee. The 2005-2006 milestones consist of the approval by the Joint Committee of the Indicative Mekong River Basin Report Card on Environmental Conditions; the content of the Basin Report Card on Social and Land-use Issues; as well as the Guidelines for a Transboundary Environmental Assessment System..

### **Information and Knowledge Management Programme (Decision Support and Information Management Programme)**

This programme has been introduced in the Work Programme 2005 following the request of the Joint Committee at its Eighteenth Meeting in 2003 to take action regarding the sustainability of the MRC-Information System (MRC-IS), and prepare a proposal on allocation of funds for the

development, implementation and maintenance of the MRC-IS for submission to donors. The Joint Committee at its Twentieth Meeting has also highlighted the needs for hydrological data collection. A Preparation Phase is planned for six months and expected to start in the first Quarter of 2006.

### **Integrated Capacity Building Programme**

Significant developments include notably the Gender Mainstreaming component which has started in 2005. In 2006, the Integrated Training component and the Junior Riparian Professional component will need to embark in a new phase for 2006-2010.

### **Water Utilisation Programme**

Significant progress has been made in 2005 with regard to each component of the WUP, (i) Basin Modelling and Knowledge Base; (ii) Environmental and Transboundary Impact Analysis; (iii) Procedures for Water Utilisation; and (iv) Management and Institutional Strengthening. 2006 would be the last year of the programme in its present framework, and therefore the preparation of a possible new support from the Global Environment Fund (GEF) would also take place in 2006.

### **Flood Management and Mitigation Programme**

During the preparatory phase of FMMP implementation in the first half of 2005 key management staff was recruited. During the second half of 2005 additional expert and support staff was recruited. From 2006 onwards the FMMP will gradually reach its planned implementation capacity.

### **Drought Management Programme**

After a task force was established at the MRC Secretariat to prepare for a drought management programme, a proposal will be prepared in 2006 within the WUP and in cooperation with other divisions.

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

The first phase of the Watershed Management project will be completed by the end of 2005. The programme is now preparing for the second phase of this project. This programme would also include the MRC participation in the Challenge Programme of Water and Food.

### **Navigation Programme**

The NAP has gone through a preparatory phase in 2005, and has undertaken a number of preliminary activities. The programme will start its full implementation in 2006.

### **Hydropower Programme**

The MRC Council at its 11<sup>th</sup> Meeting in 2004 has approved the Secretariat's proposal to change the name of Water Resources Management Programme to Hydropower Programme, and to include the Hydrology component into the Information and Knowledge Management Programme. The Hydropower Programme is under formulation at the MRCS, and will support MRC role in the regional hydropower development.

## **Fisheries Programme**

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

## **Tourism Programme**

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

The basic structure of the document has been changed to facilitate the access to information on MRC programmes and projects. Therefore, after a general introduction to the MRC, the Work Programme provides a description of the programmes, including a list of the active projects/agreements. This section is followed by the workplan for 2006. Then the Work Programme provides a reporting section on activities carried out in 2005, including three graphs on funding status and achievement indicators for each programme. The BDP short list of projects is provided in annex 2 for ease of reference as each MRC programme would attempt to support and promote them.

## **Contact Details**

The Work Programme 2006 is made available to interested agencies upon request. It is also possible to provide copies of detailed comprehensive programme proposals upon request. For this purpose, kindly contact the MRC Secretariat's International Cooperation and Communication Section, at the following address:

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

# Acronyms and Abbreviations

<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 Planning – Basin Development Plan
<b>CNMC</b>	Cambodia National Mekong Committee
<b>CPWF</b>	Challenge Programme on Water and Food
<b>DSIMP</b>	Decision Support and Information Management Programme
<b>DSF</b>	Decision Support Framework
<b>EIA</b>	Environmental Impact Assessment
<b>EMP</b>	Environment Management Programme (EP- Environnement Programme)
<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>HP</b>	Hydropower Programme
<b>IBFM</b>	Integrated Basin Flow Management
<b>IWQM</b>	Integrated water Quality Management
<b>ICBP</b>	Integrated Capacity Building Programme
<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>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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**Annex 1:** MRC Strategic Plan 2006-2010 logframe

**Annex 2:** Short-List of Projects and Programmes (1<sup>st</sup> Batch) of the Basin Development Plan (BDP) as agreed at the 22<sup>nd</sup> Meeting of the Joint Committee.

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# 1 Introduction to the Mekong River Commission

## 1.1 Background

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

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

## 1.2 Areas of Cooperation

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

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

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

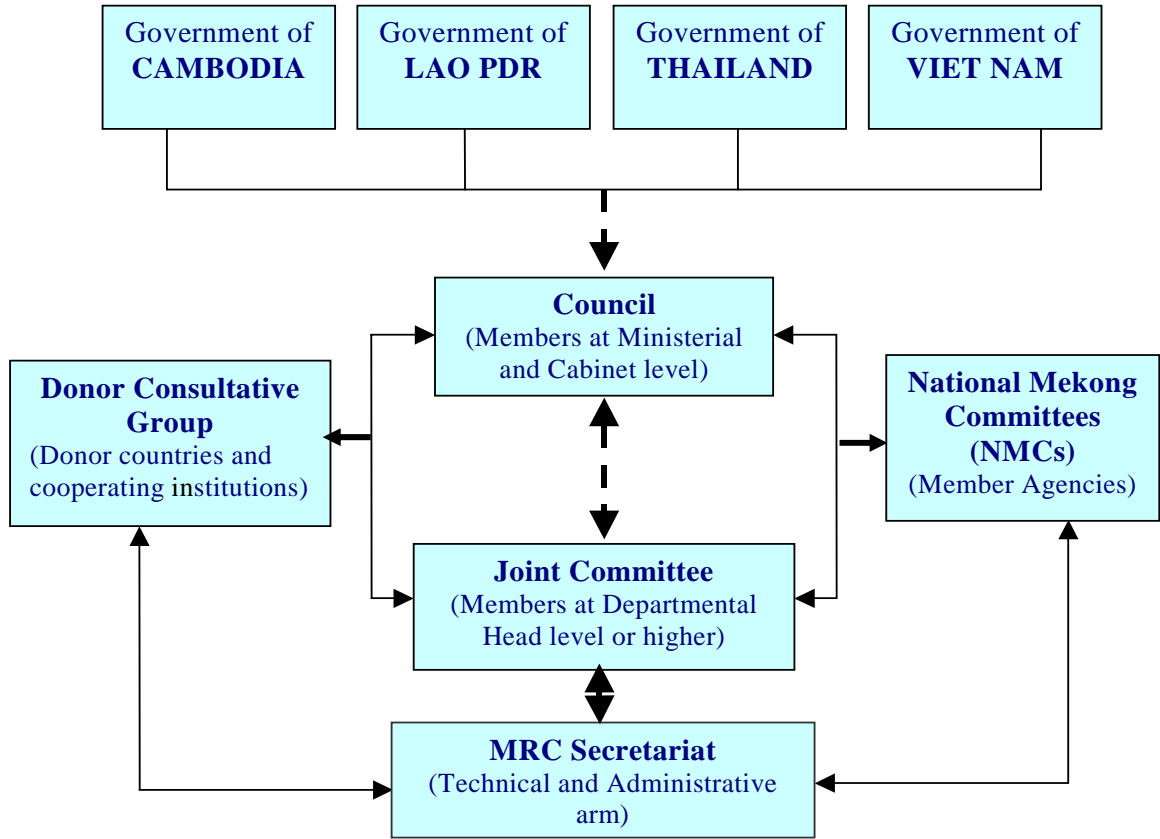
These three articles set the scope for the work of the Commission.

## 1.3 Structure

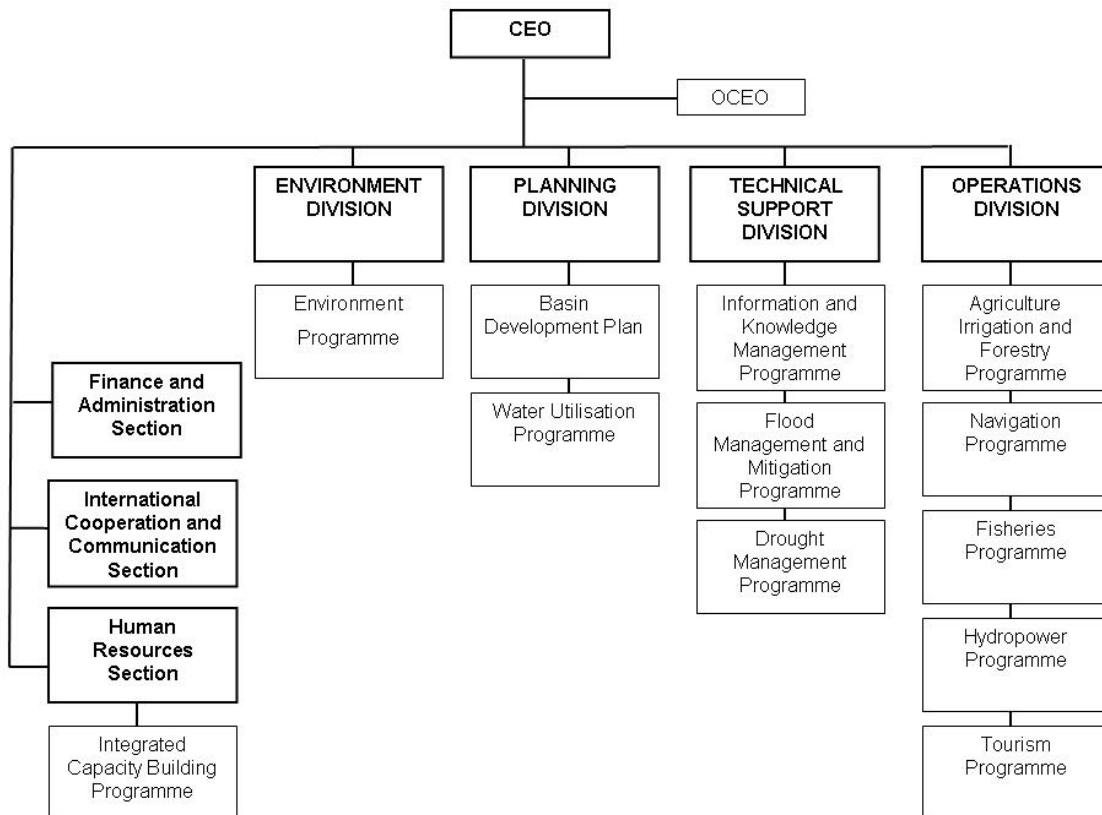
The MRC enjoys the status of an international body. It has signed several agreements and holds obligations with the donors and the international community. The MRC consists of three permanent bodies: Council, Joint Committee and Secretariat (see Figure 1). Acting as focal points for the Commission in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

The MRC Secretariat as the technical and administrative arm of the MRC works closely with the NMCs of the MRC member countries. The structure of the Secretariat is presented in the diagram below (see Figure 2). The structure was introduced in December 2005 to align it with the MRC Strategic Plan for 2006 - 2010. The budget of the Commission consists of contributions from its members and the donor community. Formal consultation with the donor community is undertaken through the annual Donor Consultative Group meeting. The Commission has formal agreements for cooperation with a range of regional and international organisations.

**Figure 1: MRC Organisational Structure**



**Figure 2: MRC Secretariat Organisational Structure**



## 1.4 Development Opportunities and Challenges

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

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

**Poverty:** Most of the Lower Mekong River Basin's population of nearly 60 million live in rural areas. They are subsistence farmers who supplement what they grow with the fish they catch and the food and other materials they gather from forests and wetlands. Nearly 40 percent of the people in Cambodia and Lao PDR, the two countries that lie mainly in the basin, have incomes below the poverty line. In addition, poverty rates are also high in the parts of Thailand and Viet Nam that lie within the Basin.

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

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

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

**Navigation:** River transportation provides an efficient means for the people of the basin to access different areas of the basin, to move goods from production, and to link with regional and global markets. The last ten years have seen a tremendous rise in trade in the region. However

infrastructure, capacities and standardized procedures and legislation for navigational use of the Mekong are lacking.

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

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

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

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

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

**Tonle Sap:** The Tonle Sap Lake in Cambodia is the largest freshwater water body in SE Asia. Its flow reversal system makes it a unique at the global scale. Its submerged area changes seasonally from 2 500 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 remained unproven.

**Biodiversity:** The biodiversity of the Mekong River Basin is of global significance, surpassed only by the Amazon and Congo systems. The diverse ecosystems of the Mekong Basin are exceptional in their productivity, and the benefits its people derives from this. The maintenance of high

biodiversity represents not only the biological integrity of the ecosystems but also the range of natural resources and products available to both urban and rural populations; and is therefore of high priority.

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

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

## **1.5 The MRC Strategic Planning Process**

In order to better fulfil its role, MRC developed a first Strategic Plan for the period 1999-2003. Although considerable progress had already been made, many areas of MRC's work still needed improvement. Consequently, the first Strategic Plan was reviewed in a participatory process in late 2000 and a new strategic plan for 2001-2005 was formulated. The programme approach launched with the Work Programme for 2001 meant that the objectives of the four core programmes<sup>1</sup>, 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 2006, the MRC has started the new five-year cycle in its strategic planning. Within the Strategic Plan 2006 – 2010, the fundamental strategic direction of MRC, its vision statement remained. The Strategic Plan, however, provides for an updated programme structure in a sector and cross-cutting programmes matrix, underpinned by a basin development planning process. This will allow the MRC to address the development opportunities of the Mekong Basin in a more balanced and sustainable manner.

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<sup>1</sup> *The core programme group has been enhanced to four with the inclusion of the Flood Management and Mitigation Programme after the approval of the MRC Council in November 2003.*

Figure 3: MRC Vision



**VISION for the Mekong River Basin:**  
*An economically prosperous, socially just and environmentally sound Mekong River Basin*

**VISION for the Mekong River Commission:**  
*A world class, financially secure, international river basin organisation serving the Mekong countries to achieve the Basin Vision*

**MISSION**  
in accordance with the 1995 Agreement:  
*To promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well-being*

## 1.6 Goals and Objectives

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

Four Goals have been identified that MRC should strive to achieve progressively from 2006 to 2010. The four goals and objectives 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>2</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;
  - 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

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

## **Goal 2**

### **To enhance effective regional cooperation**

#### Objectives

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

## **Goal 3**

### **To strengthen basin-wide environmental monitoring and impact assessment**

#### Objectives

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

## **Goal 4**

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

#### Objectives

- 4.1 To improve management systems to allow MRC to operate as a highly effective, transparent and innovative International River Basin Organisation;
- 4.2 To establish a technical coordination capacity for preparing and coordinating the implementation of MRC's Work Programme applying IWRM principles;
- 4.3 To enhance and maintain a common GIS-based information and knowledge management and dissemination system to support all MRC activities;
- 4.4 To maintain partnerships with leading organizations, universities and civil society stakeholders for programme-focussed collaboration of common interest;



- 4.5 To strengthen the human resources capacities of the MRC, NMCs and the Line Agencies;
- 4.6 To develop and update as new knowledge becomes available regional assessment tools (EIA, SEA, DSF, TB-EIA, RAM, SIA etc.) for all development projects to be implemented in the lower Mekong River Basin.

## 1.7 Criteria for Prioritising MRC Activities

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

The MRC Work Programme is built around the concept of Integrated Water Resources Management. Moving toward an integrated approach for developing and managing water and related resources will require changes impacting institutions, policies, technology, infrastructure, and financial mechanisms. Moreover, the very nature of an integrated approach will call for the active and coordinated participation of almost all of the countries' resource management agencies.

In 2005, MRC has defined IWRM Strategic Directions as the conceptual basis for supporting the joint development and management of water and related resources in the Lower Mekong Basin. 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 IWRM in the Lower Mekong Basin. A holistic IWRM approach also includes China and Myanmar, with developed Strategic Direction being applied as appropriate and relevant. The Strategic Directions are summarized below.

### Strategic directions for IWRM at the basin scale<sup>3</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 the ecological balance of the MRB from harmful effects of development (1995 Mekong Agreement)
- Social development and equity: To ensure equity in the 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 minimise 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

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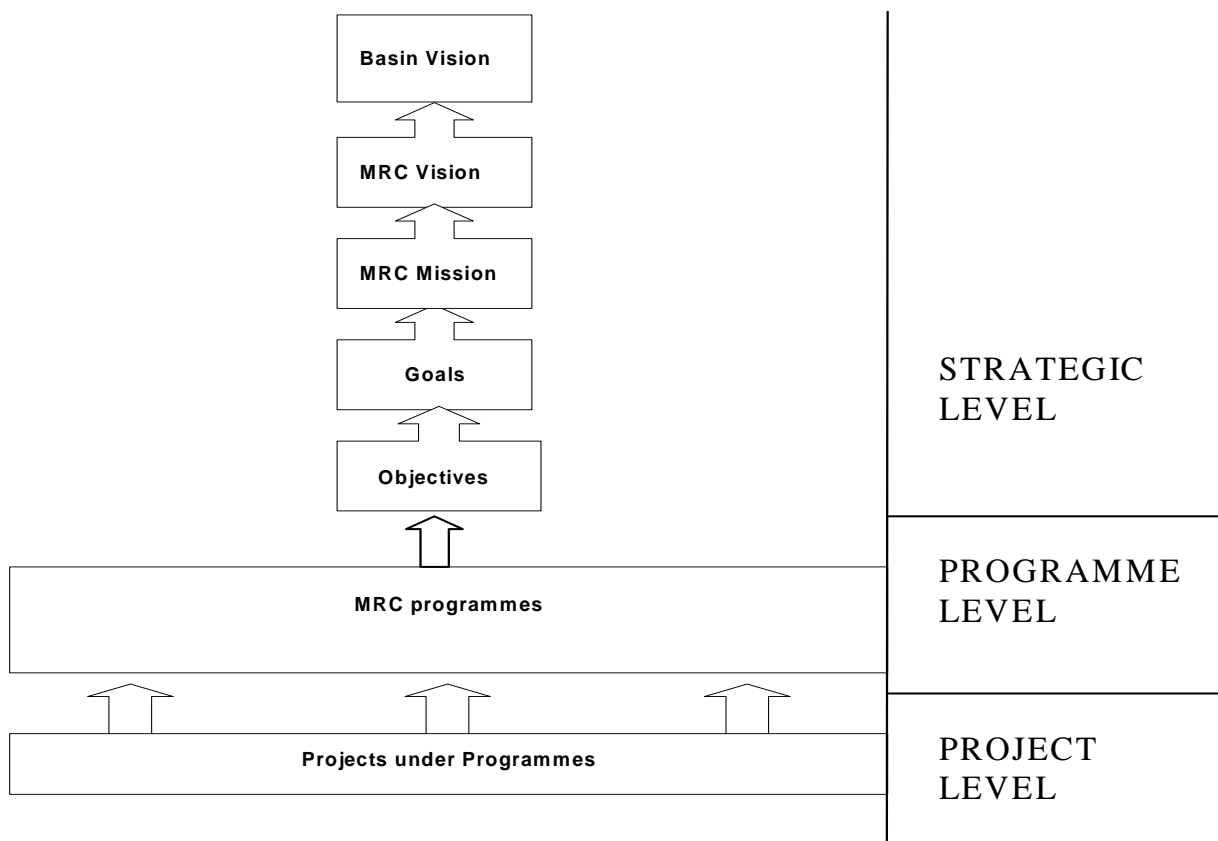
<sup>3</sup> From "Strategic Directions for Integrated Water Resources Management in the Lower Mekong Basin".

- 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 when the MRC Strategic Plan 2006-2010 is being implemented are illustrated below.

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



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

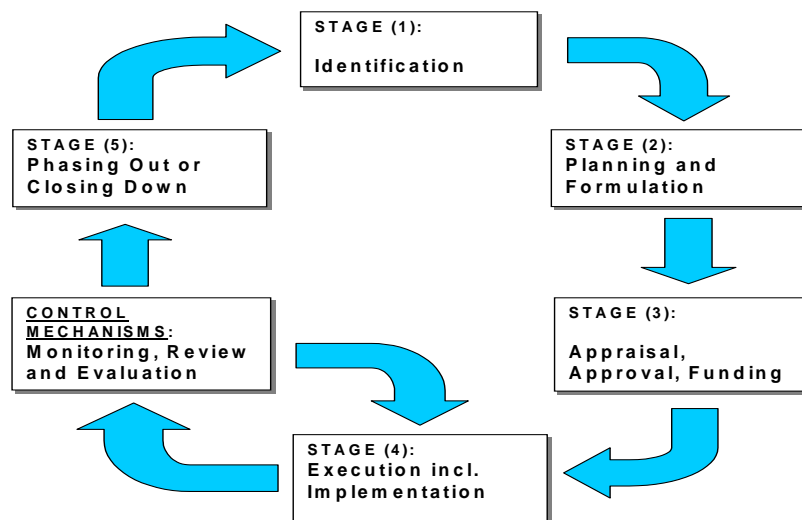
Each MRC programme is composed of a portfolio of complementary and well-coordinated projects or programme components which normally correspond to an agreement with a donor. All projects contribute to the main goal of the programme. These sets of linkages will ensure that activities undertaken under the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

In addition, priority basin-wide and transboundary water resources related projects identified under the MRC Basin Development Plan 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 consultation and support of funding agencies, NMCs/line agencies, and the MRC Secretariat.

Projects under MRC programmes are developed and implemented by the MRC Secretariat throughout the programme cycle (figure 6) in close cooperation with NMCs and other national or international partners. For projects of the BDP Projects Database, the role of the MRC is more limited. However, MRC can provide a valuable support to NMCs/Line Agencies in cooperation with donors, investment banks and other stakeholders. During the identification stage, MRC can conduct impact screening and assessments of trade-off and screen and formulate suites of projects. During the preparation phase, MRC can support line agencies through the NMCs, on special request, for pre-feasibility studies focusing on environmental, social and hydrological impact assessments. During the appraisal stage, the role of MRC is very limited; appraisals would be carried out only on a special request. During the implementation stage, for infrastructure projects, MRC has no role, while for development projects, MRC may act as the implementer or co-implementer. During the evaluation stage, MRC can conduct post-project impact monitoring.

**Figure 5: MRC Programme Management Cycle**



In 2005, the MRCS aimed to provide more 'output-orientation' to the MRC programmes. The purpose of this approach is to be able to measure and present the impact of MRC's programmes on the basin resources and on the basin's population. Based on the logical framework approach of MRC's programmes, a first and practical means to confirm that MRC is on the right way to achieve the overall objective is to measure the achievement of the outputs expected from each MRC programme. Within a logical framework approach, in order to measure the achievement outputs, the degree of completion of the activities related to each output can be measured.

An application of this 'output-oriented' approach is provided in this document within the reporting section for 2005, which includes for each programme two graphs on achieved outputs for the year 2005 and for the whole programme duration, respectively. For some programmes, the outputs selected in these graphs as 'main outputs' are different for the overall programme duration and for the reporting year 2005. This is due to the fact that these programmes focused on specific achievements in 2005. The graphs are useful to provide an overview of programme achievements; however, all the outputs set out in the programmes' documents are important and necessary to achieve the objectives of the Programmes. This list of main outputs of each programme is also provided in the section for planned outputs and activities for 2006.

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

## 2 The MRC Integrated Programme

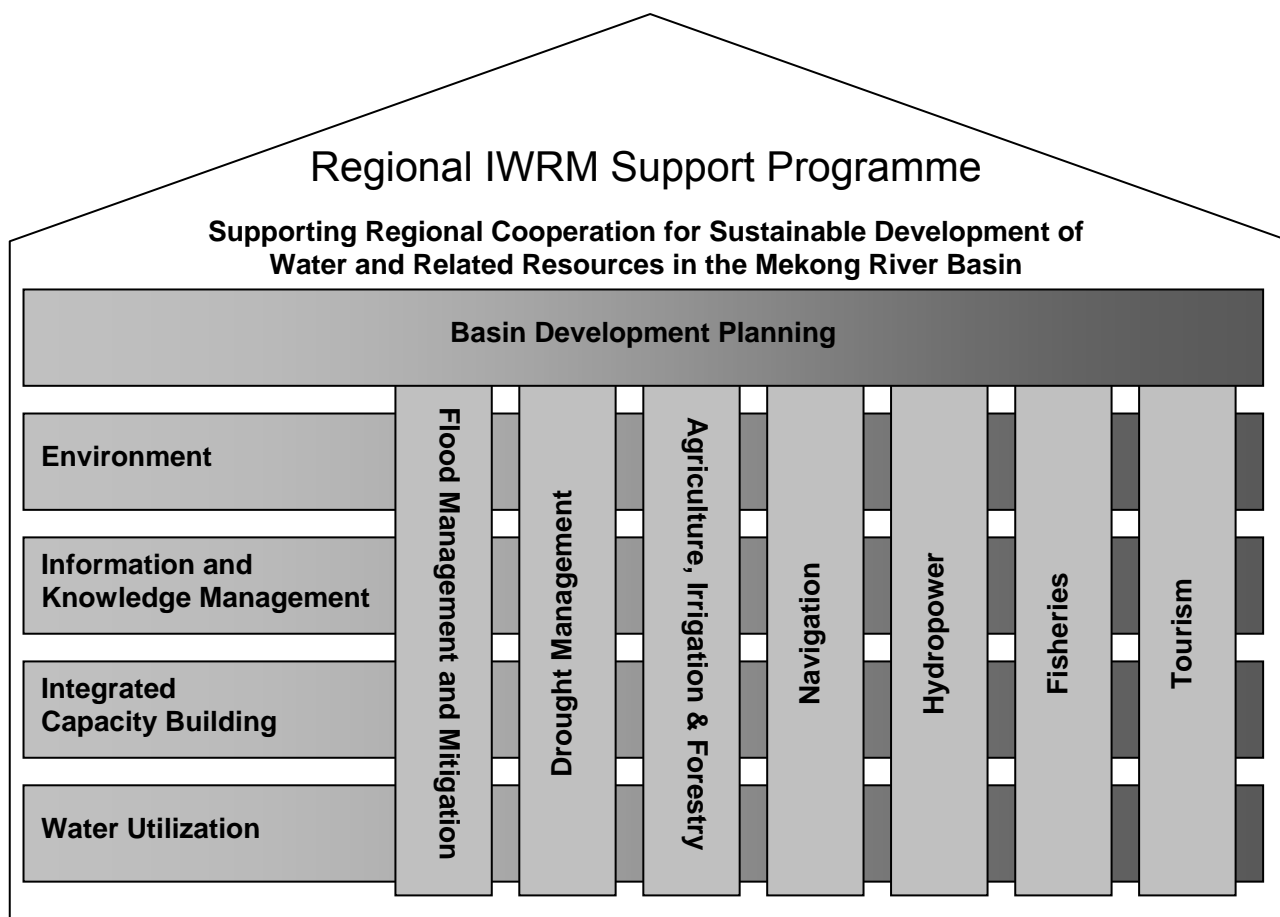
### 2.1 Introduction

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

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

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

**Figure 6: MRC Programme structure<sup>4</sup>**



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

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

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

## **2.2 Overview of agreements/projects and budget balances**

The Work Programme for 2006 provides a table on MRC programmes budgets and balances. Compared with previous Work Programmes, the presentation has been simplified to present only **the active agreements/projects under each programme**. Therefore, programmes which are currently being developed, such as the Drought Management Programme, the Hydropower Programme, the Tourism Programme do not yet feature project budgets and balances.

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

The total, multi-year agreed budget for MRC programmes and (active) projects comes to **US\$ 66,156 million**. The total balance amounts at **US\$ 31,201 million**.

### MRC Programmes, Active Agreements/Projects and Budget Balances

Programme	Projects	Total Budget (US\$ 1,000 )	Balance (12/05) (US\$ 1,000 )
<b>Basin Development Plan</b>	<b>Total</b>	<b>6,465</b>	<b>597</b>
	Multidonor contribution to Basin Development Plan - BDP 1	6,465	597
<b>Environment Management Programme</b>	<b>Total</b>	<b>7,398</b>	<b>3,196</b>
	Danish contribution to the Environment Management Prog.	2,375	-28
	Swedish contribution to the Environment Management Prog.	3,264	1,598
	Participation in UNDP Mekong Wetland Biodiv Prog	156	156
	Dutch contribution to Mekong Wetland Biodiv Prog	1,603	1,470
<b>Info &amp; Knowledge Mg Programme</b>	<b>Total</b>	<b>694</b>	<b>216</b>
	Australian contribution to the Appropriate Hydrological Network Improvement Project- AHNIP	694	216
<b>Integrated Capacity Building Programme</b>	<b>Total</b>	<b>1,316</b>	<b>439</b>
	Danish contribution to positions of Junior Prof. Officers	540	113
	MDBC-MRC Strategic Liasion Programme Phase 2	178	21
	UNDP contribution to capacity building on Water Utilization	100	4
	Swedish contribution to the Junior Riparian Prof. Scheme	218	73
	New Zealand contribution to Gender Mainstreaming	280	228
<b>Water Utilisation Programme</b>	<b>Total</b>	<b>15,854</b>	<b>2,382</b>
	GEF and FIN contribution to the WUP	15,257	1,925
	FIN contribution to position of modelling advisor	597	457
<b>Flood Management and Mitigation Programme</b>	<b>Total</b>	<b>19,866</b>	<b>16,542</b>
	Dutch contribution to FMMP	8,343	7,319
	Danish contribution to FMMP coordination	816	778
	OFDA funding for provision of Flood Early Warning	1,250	438
	German contribution to 3rd AFF	18	18
	Asia Flood Network contribution to FMMP	74	16
	Dutch contribution to design of Flood Proofing Measures	2,700	2,642
	ADB contribution to Flood Proofing Measures	1,000	1,000
	Dutch support to mediation of flood issues	1,697	1,697
	EC-ECHO funding for capacity building in flood preparedness	290	42
	GTZ project for land use and flood emergency mgt	3,678	2,592
<b>Drought Management P.</b>	<b>Total</b>	<b>0</b>	<b>0</b>
<b>Agriculture, Irrigation and Forestry Programme</b>	<b>Total</b>	<b>2,650</b>	<b>836</b>
	Japan contribution to Demonstrate the Multi-Functionality of Paddy Fields	866	367
	Japan contribution for Improvement of Irrigation Efficiency	343	247
	GTZ project on Watershed Management	541	66
	MRC participation in the Challenge Programme for Water and Food (IWMI)	900	156
<b>Navigation Programme</b>	<b>Total</b>	<b>6,000</b>	<b>5,977</b>
	Belgium contribution to the Navigation Programme	6,000	5,977
<b>Hydropower Programme</b>	<b>Total</b>	<b>0</b>	<b>0</b>
<b>Fisheries Programme</b>	<b>Total</b>	<b>9,275</b>	<b>6,418</b>
	Stock structure of Mekong Carp species (ACIAR- Australian Centre for International Agricultural Research)	76	66
	Swedish contribution to the Technical Advisory Body	159	98
	Twinning arrangement with Inland Fisheries Research and Development Institute (IFREDI)	388	123
	Danish contribution to the Fisheries Programme	8,652	6,131
<b>Tourism Programme</b>	<b>Total</b>	<b>0</b>	<b>0</b>
<b>Institutional support to the Regular Budget</b>	<b>Total</b>	<b>2,638</b>	<b>575</b>
	Swiss institutional support to the Secretariat	1,093	24
	Swedish institutional support to the Secretariat	1,200	395
	Australian institutional support to the Secretariat	104	60
	Australian contribution to MRC Strategic Planning Process	241	96
<b>TOTAL</b>		<b>66,156</b>	<b>31,201</b>

### **3 Planned outputs and activities for 2006**

This section provides a brief account of the work plan activities for each programme in 2006. The planned activities reported under this section can be found within the individual programme work plan for 2006 available for each programme. This section provides for each programme the following information:

- Purpose: information on the development opportunities and challenges addressed by the programme; and reflected through its Development Objective.
- Approach: information on how the programme contributes to the implementation of an IWRM approach in the Mekong Basin, within its Immediate Objective.
- Strategy: information on the overall strategy of the programme.
- Structure: description of the components of the programme.
- Implementation arrangements: brief description of international partners, and main national partner network.
- Main outputs: main outputs expected from the programme.
- List of agreements/projects: active projects and projects in preparation under the programme.
- Planned outputs and activities for 2006: including the prerequisites and risks for output achievement; and the projects in preparation.
- Planned donor reviews or appraisals in 2006

#### **3.1 Basin Development Plan (BDP)**

##### **Purpose**

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

The overall programme objective has been derived from the 1995 Mekong Agreement and supports the MRC vision of 'an economically prosperous, socially just and environmentally sound Mekong River Basin', in line with the MRC mission 'to promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well being'. Presently the BDP Phase 2 programme objective is stated as "The water resources of the Mekong River Basin managed and developed in an integrated and sustainable manner for the equitable benefit of the riparians". However, this objective will require further consolidation and approval by the MRC Member Countries.

##### **Approach**

Optimal and equitable development of the Mekong's water resources require collaborative planning and joint identification of investment priorities, referring to basin-wide strategies in each



water-related sector. This may also be usefully supported by multi-sectoral analysis and the simulation of various development scenarios and their effect on the river flow regime.

Presently, three Immediate Objectives have been defined to reflect the manner in which MRC conceptualizes basin planning. The Immediate Objectives are;

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

### **Strategy**

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

### **Structure (BDP Phase 2)**

A detailed BDP 2 project document was approved by the Council in December 2005. The document describes 3 components:

1. A rolling basin development plan
2. Knowledge base and assessment tools
3. Capacity Building

The content of the project document will be further discussed with potential BDP phase 2 donors.

### **Implementation arrangements**

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

### **Main Outputs (BDP Phase 1)**

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

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

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

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

### List of agreements/projects

Project title	Start date	End date	Budget (US\$ 1,000)	Balance (US\$ 1,000)	Donor(s)
<b>Active projects</b>					
Multi-donor contribution to the Basin Development Plan –BDP 1 -	01/2001	31/07/06 (no-cost extension)	6,465	597	Denmark; Switzerland; Sweden; Australia
Japan contribution to the Basin Planning			In kind JICA contribution and seconded experts		Japan
<b>Projects in preparation</b>					
Multi-donor contribution to the Basin Development Plan –BDP 2 -	N/A	N/A	N/A	N/A	Interest indicated by: Denmark; Sweden; Australia

### Planned outputs and activities for 2006

At the end of the extension of BDP Phase 1 by July 2006 the project will have established a planning network in the LMB built on a range of BDP planning tools and features. This includes the Strategic Directions for IWRM in the LMB, together with a portfolio of projects and programmes to support it (the MRC-BDP Projects Database). Also, a substantial volume of knowledge, personal skills, and institutional capacity will have been generated in the field of integrated river basin development. The BDP project phase 2 is in preparation.

The prerequisites for successful achievement of the planned outputs are the full concentration of all BDP resources on outputs as defined in the project document; the reduction of cost on all project levels; the prioritization of tasks; and the identification of additional financial resources, if possible. Based on the limited funds available several financial scenarios for scaling down BDP Phase 1 have been discussed in order to optimize staff presence and the achievement of outputs.

### Donor reviews or appraisals planned in 2006

A Donor appraisal mission for BDP Phase 2 is planned for January 2006.

## 3.2 Environment Programme (EP)

### Purpose

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

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

### **Approach**

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

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

### **Strategy**

The Environment Programme has a two-pronged approach in that it is aiming to fulfil the articles in the 1995 Agreement related to the protection of the environment and maintaining the ecological balance of the basin. It is also supporting the other programmes through provision of environmental data and development of tools for environmental planning and management. Assessment and monitoring of water quality and ecosystem health form an important basis for data provision. The programme also aims to improve environmental policy and management through advice to and promotion of cooperation among environmental agencies, directly supporting the BDP process. Through compilation of existing knowledge and facilitation of research activities it also promotes a better understanding of the environmental and ecological aspects of the Basin. The MRC Environment Programme is comprehensive, flexible, and builds on improved mechanisms for co-ordination provided by the new organisational structure of MRC Secretariat. In contrast to previous and more technically oriented environmental projects, the central focus of the programme is people.

### **Structure**

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

#### *Component 1: Environmental Monitoring & Assessment.*

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

#### *Component 2: Environmental Decision Support.*

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

#### *Component 3: People and Aquatic Ecosystems.*

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

*Component 4: Environmental Knowledge.*

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

*Component 5: Environmental Flow Management.*

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

### **Implementation arrangements**

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

### **Main Outputs**

The main outputs of the Environment Programme are the following:

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

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

## List of agreements/projects

Project title	Start date	End date	Budget (US\$ 1,000)	Balance (US\$ 1,000)	Donors
<b>Active projects</b>					
Danish contribution to EP 2002-2004	2002	2004 extended 31/07/06	2,375	-28	Denmark
Swedish contribution to EP	01/01/04	31/12/06	3,264	1,598	Sweden
Participation in UNDP-Mekong Wetland Biodiversity Programme	19/07/04	18/07/09	156	156	UNDP
Dutch support to Mekong Wetland Biodiversity Programme	01/10/04	30/09/09	1,603	1,470	Netherlands
<b>Projects in preparation</b>					
UNDP contribution to Environmental Governance	N/A	N/A	1,000 (indicative)	N/A	UNDP
<b>Projects of the BDP project database</b>					
To be identified	N/A	N/A	N/A	N/A	N/A

## Planned outputs and activities for 2006

Implementation in 2006 will follow the revised programme including work initiated in 2005 as well as a number of new activities.

### *Component 1: Environmental Monitoring & Assessment*

The social impact monitoring will be completed and data compiled and analysed. The basin report card on social and land-use issues will be prepared and submitted to the JC/Council approval in the second half of 2006. A MRC technical report on the Water Quality in the Lower Mekong River Basin will be prepared.

### *Component 2: Environmental Decision Support*

The guidelines for Transboundary Environmental Impact Assessment will be completed (framework, guidance and support). The work on Environmental Risk Assessment in a transboundary context will be continued. Development of mechanisms for addressing environmental conflicts will be initiated. Promotion of and capacity building in environmental governance will be developed in the NMCs and MRCS.

### *Component 3: People and Aquatic Ecosystems*

Working on wetland assessment and valuation as well as guidelines for management of wetland biodiversity will also continue, in cooperation with IUCN. Field work on vulnerability and dependence on aquatic ecosystems will be undertaken to complement the data already collected.

### *Component 4: Environmental Knowledge*

A study of development impacts on the Sesan, Srepok and Sekong will be undertaken.

### *Component 5: Environmental Flow Management*

The work on environmental flows, Phase 3 of the Integrated Basin Flow Management (IBFM), will continue with the first year of detailed field investigations to provide information for flow management.

An important activity, in cooperation with the WUP, is the two-phased approach to development of an Integrated Water Quality Management (IWQM) Strategy which commenced in 2005 and will continue in 2006 with its 2<sup>nd</sup> phase. The IWQM is proposed in technical support for the drafting of the Rules for Water Quality (RWQ) for approval by MRC Council.

A UNDP funded project on Environmental Governance is currently in preparation. It would be part of the Component 2 of the programme. Other potential projects for 2006 in the field of environment management could emerge from the BDP database or list of projects, promoted by the MRC.

The prerequisites for output achievement will be the active and continuous cooperation with the NMCs. The most immediate risk for the programme is to not be able to attract additional funding. The current funds are sufficient for 2006, but starting in 2007 the available funds will not allow the programme to operate at the current level and drastic reduction in staffing and activities will be needed.

#### **Donor reviews or appraisals planned in 2006**

The annual consultation with SIDA is expected in February 2006, and discussions about continued support after 2006 are expected during this year. The Dutch government is also expected to undertake an annual review.

### **3.3 Information and Knowledge Management (IKM) Programme**

Activities related to information and knowledge management were carried out in 2005 under the Technical Support Division (TSD) of the MRCS. Given the importance of these issues, MRC is planning to establish an Information and Knowledge Management Programme (IKMP), by 2006. The programme document is planned to be finalized by end 2006; therefore information provided in the profile below may still be modified as an outcome of this formulation process.

#### **Purpose**

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

The development objective of the Information and Knowledge Management Programme is “to facilitate access and use by member governments, policy and decision makers, institutional developers, the donor and investment community and other stakeholders to comprehensive, up-to-date and objective data, information and decision support tools necessary to promote and co-ordinate the sustainable development of water and related resources in the Mekong Basin”.

#### **Approach**

Integrated Water Resources Management and Development needs to be supported by databases and Geographical Information Systems (GIS) in order to store, analyse, and distribute hydro-

meteorological data, land use data, socio-economic data, administrative data, infrastructure data, etc. Planning and decision-making require mathematical simulation models and Decision Support Systems (DSS). During the past five years, the MRC Secretariat has developed rich databases and powerful mathematical tools which need further maintenance and updating, based on an effective international data management and exchange policy.

The immediate objective of the programme is being defined under the programme document formulation process. It will reflect the need to develop and maintain the databases and tools available at the MRC to support planning and decision-making.

### **Strategy**

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

### **Structure**

Four components are envisaged in the draft concept paper:

#### *Component 1: Data Exchange and Sharing.*

This component will promote and facilitate exchange and sharing of data and information necessary to support the strategies and decisions required to operate the Mekong Agreement.

#### *Component 2: Information Management.*

This component will ensure that primary data and information is up-to-date, quality assured, processed, stored and made accessible in a way that makes it readily available and used by member governments, policy and decision makers, institutional developers, the donor and investment community and other stakeholders; it will produce a set of high quality and integrated MRC Information System (MRC-IS) databases, including but not limited to GIS, socio-economic, hydrological, meteorological and water quality data.

#### *Component 3: Decision Support Systems.*

This component will maintain the technical capacity and systems needed to analyse and interpret the primary data and results of models or scenario simulation, in order to provide value-added information and decision support for the users.

#### *Component 4: Capacity Building and Institutional Strengthening.*

This component will strengthen regional institutional capacity for efficient data and information collection, management and distribution, including implementation of technical support systems, procedures, guidelines, standards and best practices.

### **Implementation arrangements**

For the past years, information and knowledge activities were carried out within the framework of the TSD (A. Database/GIS Team; B. Documentation Centre; C. Hydrology Team; D. Modeling Team). A data sharing agreement was signed between WWF and MRCS, giving MRC access to as well as limited distribution rights to WWF data.

### **Main outputs**

As set out in the draft concept paper, the programme is planned for two phases: the Preparation Phase (expected to run for six months starting in the first quarter of 2006) and the Implementation Phase (planned to start in mid-2006).

The expected outputs from the preparation phase are:

1. MRC Data and Information Management Policy;
2. MRC Strategic Plan for Data and Information Management;
3. Programme Proposal, including component and overall programme design.

The expected outputs during programme implementation are:

1. Programme and component establishment;
2. Design, development and maintenance of products and services;
3. Procedures, guidelines, standards and technical support systems;
4. Strengthening of regional institutional capacity for efficient data and information exchange, sharing and management.

### List of agreements/projects

Project title	Start date	End date	Budget (US\$ 1,000)	Balance (US\$ 1,000)	Donor(s)
<b>Active Projects</b>					
Australian contribution to AHNIP	02/04/01	31/03/06	694	216	Australia
<b>Projects in preparation</b>					
Australian contribution to AHNIP- Phase 2	N/A	N/A	N/A	N/A	Australia
Finish contribution to the IKMP	N/A	N/A	N/A	N/A	Finland
AFD support to Mekong Hycos	N/A	N/A	N/A	N/A	France
<b>Projects of the BDP project database</b>					
To be identified					

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

### Planned outputs and activities for 2006

Programme preparation will be done in a highly participatory manner with national and regional consultations throughout the process. The preparation phase is expected to run for eight months starting in the first quarter of 2006, at an indicative cost of US\$ 190,000. Expected outputs from the preparation are: (1) An MRC Decision Support and Information Management (DSIM) Policy; (2) An MRC Strategic Plan for Decision Support and Information Management; (3) A DSIM programme proposal, including component and overall programme design. The final draft documents are scheduled to be presented to the Council at its 13<sup>th</sup> Meeting in 2006 at the latest.



In parallel with the programme preparation, information and knowledge management activities currently carried out under the Technical Support Division will continue in 2006. These are reported here, under the four expected components of the programme.

#### *Component 1: Data Exchange and Sharing*

Emphasis will be put on facilitating the implementation of the comprehensive framework of procedures, guidelines etc developed in the last three years, including agreed national data custodianship, management and operating agreements, through technical support and assistance to the countries and other stakeholders.

#### *Component 2: Information Management*

Collection and supply of improved quality, quantity and timely hydro-meteorological information to all programmes, forecasting, monitoring, strengthening and consolidation of the network and capacity involved will continue in 2006. The implementation of the MOU for Management of the AHNIP Network to be terminated on 19 March 2006 will be an important activity not only in the rest of project but also for the long-term sustainability of MRC hydro-meteorological data collection. Improvements of the MRC-IS Portal web service, a gateway to data and information on the Mekong Basin including powerful tools to search, view and download data and information, will continue. Specific components of the Portal, e.g. the Document Management System and the Metadata Catalogue, are planned to be opened for external access. Assistance and provision of technical services to the MRC programmes will continue. Important outputs will be 2.1. setting up of operational databases at the Regional FMM Centre in Phnom Penh; 2.2. integration of real-time or near real-time hydrometeorological data to the MRC Information System; 2.3. finalization of a basin-wide hydropower dams dataset; and 2.4. improved spatial datasets for land use and wetlands.

#### *Component 3: Decision Support Systems*

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

#### *Component 4: Capacity Building and Institutional Strengthening*

Implementation of the Procedures for Data and Information Exchange and Sharing and Procedures for Water Use Monitoring will continue in the countries as per national work plans, with support from the MRC Secretariat.

One of the main projects in preparation is Mekong-HYCOS. It is envisaged that the project implementation be started in 2006 with funding support from AFD and the French GEF. Subject to funding availability, the Mekong-HYCOS Project activities in 2006 will focus on the Inception Phase of the project. The objectives of the Inception Phase are firstly to make the project team operational, secondly to review and update all Terms of Reference for the station equipment as set out in the project document and thirdly to schedule in details the project tasks. It aims at formulating a plan of operations that responds to the specific project requirements and constraints.

Other potential projects for 2006 in the field of information management could emerge from the BDP database or list of projects, promoted by the MRC.

The prerequisites for output achievement are the follow-up of the AHNIP Network MOUs which needs to be considered before the completion date of the current MOU in order to maintain the

benefit coming from the AHNIP project. Best efforts will be made by the MRC Secretariat and line agency staff to carry out the tasks using the training received from the project. In addition, there are several factors which may cause delay in progress or unsatisfactory outputs. Those factors are financial constraints (lack of funds to fully implement all planned activities); personnel constraints (insufficient number of qualified staff to perform all tasks); and insufficient efforts and commitment provided from concerned parties. Due to the nature of services provided through the MRC-IS Portal, opening of components for external access is dependant on availability of high bandwidth Internet connection. The cost of this may however be prohibitively expensive, in which case alternative approaches will need to be investigated. The risks with highest impact on the programme, or related activities to be carried out by the TSD, are the absence or lack of funds. A basic level of services can be provided through MRC Programme support, as was the case in 2005, but donor funds are required for IKMP preparation and implementation.

#### **Donor reviews or appraisals planned**

An appraisal of the HYCOS project took place in late 2005. The IKMP itself is in its early stage and donor support for programme preparation and implementation still sought; therefore no donor appraisal mission is planned.

### **3.4 Integrated Capacity Building Programme (ICBP)**

#### **Purpose**

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

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

#### **Approach**

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

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

#### **Strategy**

The ICBP is guided by the principle that the level of competence in river basin management among the MRC staff and staff in the riparian governments is to be raised through a systematic, modular training programme. The future pool of expertise available within the region is to be

broadened through on-the-job training of young professionals to work at the MRC Secretariat. The ability of MRC to carry out communication, public participation and partnership activities is to be ensured through expert services. Capacity and resources of MRC to respond to priority needs and changing conditions is to be strengthened through a facility to draw on external support on an ad hoc basis.

## **Structure**

### *Component 1: Integrated Training Component.*

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

### *Component 2: Junior Riparian Professional Project.*

The objective of this component is to improve skills in international integrated river basin planning and management among young Riparian Professionals within the lower Mekong countries.

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

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

## **Implementation arrangements**

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

## **Main Outputs**

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

## **List of agreements/projects**

<b>Project title</b>	<b>Start date</b>	<b>End date</b>	<b>Budget</b> (US\$ 1,000)	<b>Balance</b> (US\$ 1,000)	<b>Donor(s)</b>
<b>Projects signed</b>					
Danish contribution to Provision of Junior Professional Officers	01/01/01	31/12/05	540	113	Denmark
MDBC-MRC Strategic Liaison Programme- Phase II	02/04/01	31/12/04 To be extended	178	21	Australia-MDBC
UNDP contribution to Capacity Building on Water Utilization	20/04/01	31/12/05	100	4	UNDP
Sweden contribution to Junior Riparian Professional Programme	01/01/04	31/12/06	217	73	Sweden
New Zealand contribution to Gender project	01/12/04	30/11/07	280	228	New Zealand
<b>Projects in preparation</b>					
New Junior Riparian Professional Scheme	N/A	N/A	N/A		N/A
<b>Projects of the BDP project database</b>					
To be identified					

### **Planned outputs and activities for 2006**

#### *Component 1: Integrated Training Component*

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

#### *Component 2: Junior Riparian Professional Project*

The JRP phase 2 project document will be finalized in early 2006. While funding is secured for completion of phase 1 by June 2006, new funding needs to be sought for continuation of activities under phase 2.

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

The Gender Mainstreaming Project (Phase 2) in Water and Related Resources Development in the Lower Mekong Basin will: 4.1. Conduct gender sensitive training and provide data and information to personnel of NMCs, line agencies and MRC Secretariat; 4.2. Improve MRC capacity in planning, executing, monitoring and evaluating gender responsive water and related resources development programmes; 4.3. Provide necessary tools for implementing gender responsive development practices; and 4.4. Conduct gender training activities in each riparian country as well as the regional gender training activities at the MRC Secretariat.

Other potential projects for 2006 in the field of capacity building could emerge from the BDP database or list of projects, promoted by the MRC.

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

### **Donor reviews or appraisals planned in 2006**

At this stage, no donor appraisal mission is planned

### **3.5 Water Utilisation Programme (WUP)**

Description of the programme is based on the current WUP, which is scheduled to end in late 2006. Development of a possible new phase of GEF support as a follow-up to WUP will be undertaken through national and regional consultations following advice of Joint Committee Members.

#### **Purpose**

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

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

#### **Approach**

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

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

#### **Strategy**

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

#### **Structure**

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

### *Component 1: Basin Modelling and Knowledge Base.*

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

### *Component 2: Environmental and Trans-boundary Analysis*

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

### *Component 3: Procedures for Water Utilization.*

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

### *Component 4: Management and Institutional Strengthening.*

This component will enhance project and basin management capacity.

## **Implementation arrangements**

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

## **Main Outputs**

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

1. A set of agreed procedures / rules for water utilization (component 3)
  - Procedures for Data & Information Exchange & Sharing
  - Procedures for Notification, Prior Consultation and Agreement
  - Procedures for Water Use Monitoring
  - Procedures for the Maintenance of Flows on the Mainstream
  - Rules for Water Quality
2. Transboundary studies ( Component 2)
  - Integrated Basin Flow Management (IBFM): technical inputs for the Procedures for the maintenance of flows on the mainstream
  - Integrated Water Quality management (IWQM): technical inputs for the Rules for Water Quality
3. A Basin Modelling and Knowledge Base developed (Component 1)
4. DSF maintenance, enhancement and capacity building (Component 4)

Programme reports provide more information on each specific output.

## **List of agreements/projects**

<b>Project title</b>	<b>Start date</b>	<b>End date</b>	<b>Budget</b> (US\$ 1,000)	<b>Balance</b> (US\$ 1,000)	<b>Donors</b>
<b>Active projects</b>					
GEF World Bank contribution to the Water Utilisation Programme –	Jan2000	Dec 2006	15,257	1,925	GEF
Finland contribution to the Water Utilisation Programme –	Jun 2001	Oct 2006			Finland
Support to position of senior modelling advisor	14/03/05	13/03/08	597	457	Finland
<b>Projects in preparation</b>					
GEF-World Bank contribution to the Water Utilisation Programme – phase 2	N/A	N/A	N/A	N/A	GEF

## **Planned outputs and activities for 2006**

### *Component 1: Basin Modelling and Knowledge Base*

Work to improve the DSF and ensure its relevant application will continue in 2006. It will include continued calibration and improvement, and application of DSF to actual case studies (8 have been identified by NMCs). In doing so WUP will ensure full integration and sustainable application in support of the various MRC and NMC programmes, most notably the BDP and the Integrated Basin Flow Management (IBFM), as well as other programmes and activities that may arise. It is proposed to expand the capacity of the modelling team to develop a Decision Support Toolbox, to encompass not only the DSF but to incorporate other modelling tools and approaches. Capacity building activities will be adjusted in light of the conclusions of the DSF Assessment recommending a partial centralization of the services of the DSF. The coordination work in the implementation of the Phase 2 WUP-FIN modelling activities will also be in progress during 2006.

### *Component 2: Environmental and Trans-boundary Analysis*

With support of the Environment Management Programme, Phase 2 of IBFM activities in technical support of flow assessments for the Procedures for Maintenance of Flows on the Mainstream (PMFM) will continue in 2006. The basic approach for Phase 2 is to assess the beneficial uses, including the environmental, economic and social, of Mekong flow regimes for a wide range of basin development scenarios provided by the BDP. Also with the support of the Environment Management Programme, the two-phased approach to development of an Integrated Water Quality Management (IWQM) Strategy which commenced in 2005 will continue in 2006 through the IWQM Phase 2 in technical support for the drafting of the Rules for Water Quality (RWQ) planned for approval by MRC Council in 2006. The IWQM approach starts with defining water quality objectives related to beneficial uses identified by the member-States through the water quality Technical Review Group. Water quality criteria may then be determined and agreed for the Mekong mainstream, requiring management actions plans in each Member State.

### *Component 3: Procedures for Water Utilization*

In 2006, the drafting process for the Rules for Water Quality would continue. Other important activities of this component will be in supporting the implementation, dissemination and capacity building related to the approved procedures.

#### *Component 4: Management and Institutional Strengthening*

Activities will continue in 2006, notably to support technical collaboration with upstream countries.

#### **Donor reviews or appraisals planned in 2006**

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

### **3.6 Flood Management and Mitigation Programme (FMMP)**

#### **Purpose**

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

The development objective is “to prevent, minimize or mitigate people’s suffering and economic losses due to floods, while preserving the environmental benefits of flood”.

#### **Approach**

As the population and infrastructure on the floodplain grow, the potential for loss of life and economic damage due to floods is increasing. Development of levees to protect crops and infrastructure as well as construction of elevated roads less subject to flood impact have the potential to unintentionally exacerbate flooding elsewhere in the floodplain, and can also block fish migration routes on the flood plain. The large floods of the Mekong are regional in essence, and MRC is in a unique position to contribute effectively to improved flood management at the regional level.

Immediate objectives are defined for each of the programme components. The immediate objectives of the programme include: (1) To establish a regional FMM Centre; (2) To reduce vulnerability of society to floods, and risk of flood disasters caused by failure or inappropriateness of structural intervention; (3) To enhance mediation and coordination capacity of the MRC in issues of non-compliance in flood management (4) To strengthen competence in flood preparedness and flood mitigation at each management level; (5) To improve land use planning integrated into floodplain management and mitigation in the LMB.

#### **Strategy**

The overall Flood Management and Mitigation Strategy was formulated in 2001. This dialogue pointed out a list of possible MRC roles: flood forecasting services; Centre of flood data and information; flood analytical services and setting of standards; neutral mediator of transboundary



issues; capacity building and technology transfer; coordination of floodplain management of national and MRC programmes; forum on floodplain management and flood preparedness.

## **Structure**

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

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

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

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

### *Component 3: Mediation of Trans-boundary Flood Issues.*

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

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

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

### *Component 5: Land Management.*

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

## **Implementation arrangements**

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

## **Main Outputs**

The main outputs for the Flood Management and Mitigation Programme are the following:

1. A fully operational Regional Flood Management and Mitigation Center is established under MRCS, interacting with national collaborating centers/focal points and a significant number of village communities (Component 1).

2. Guidelines for integrated flood risk management, and for structural measures and flood proofing are established, while a ranked list will be provided for potential basin-wide flood protection/mitigation measures is produced (Component 2).
3. A well-functioning operational Mediation and Coordination Sub-component (MCS) is established (Component 3).
4. Flood preparedness programs are produced and implemented (Component 4).
5. Capacity of line agencies in the area of land management is strengthened (Component 5).

#### List of agreements/projects

Project title	Start date	End date	Budget (US\$ 1,000)	Balance (US\$ 1,000)	Donors
<b>Active projects</b>					
Dutch contribution to the FMMP	01/06/05	31/12/10	8,343	7,319	Netherlands
Danish contribution to FMMP coordination	01/09/04	31/08/07	816	778	Denmark
OFDA funding for provision of Flood Early Warning	01/01/03	31/12/08	1,250	438	USA
German contribution to the 3 <sup>rd</sup> Annual Flood Forum	01/01/05	31/12/05	18	18	German
Asia Flood Network contribution to the FMMP	01/01/05	31/12/05	74	16	AFN
Dutch contribution to design of Flood Proofing Measures	01/06/05	31/12/10	2,700	2,642	Netherlands
ADB contribution to Flood Proofing Measures	01/04/05	31/12/06	1,000	1,000	ADB
Dutch support to mediation of flood issues	01/06/05	31/12/10	1,697	1,697	Netherlands
EC-ECHO contribution for capacity building in flood preparedness	01/02/05	31/03/06	290	42	EU
GTZ project for land use and flood emergency management	18/08/04	31/12/10	3,500	2,590	Germany
<b>Projects in preparation</b>					
To be identified					
<b>Projects of the BDP project database</b>					
To be identified					

#### Planned outputs and activities for 2006

In 2006, the Flood Management and Mitigation Programme will be fully operational.

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

The required staffs will be recruited and all components will be managed from the Regional Flood Management and Mitigation Centre (RFMMC). The RFMMC will acquire flood forecasting and risk assessment tools aiming at providing accurate forecasts to the forecasting and warning centers of the member states as well as timely dissemination of warning to local communities at risks. The 4<sup>th</sup> Annual Flood Forum will be conducted and documented. A database will be setup to improve the modeling systems and capabilities. A communication link between the RFMMC and MRCS will be established. The coordination within FMMP and between FMMP and other MRCS programs will be enhanced. The documentation of the flood events of 2005 will be presented through the Flood report 2005. A Roadmap for the development of the RFMMC will be produced, while the existing data collection for the forecasting and warning system will be verified for later calibration purposes. A start will be made at pilot level to implement a basin-wide flash flood forecasting and warning system.

#### *Component 2: Structural Measures and Flood Proofing – Implementation Plan*

Guidelines for integrated flood risk management will be completed. Basin wide guidelines on structural measures and flood proofing will be developed and relevant institutions strengthened. In support of the BDP process, a list of potential structural and non-structural flood protection/mitigation measures will be under development.

#### *Component 3: Mediation of Trans-boundary Flood Issues*

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

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

The flood emergency management capacity building of MRC riparian staff will be continued. The ECHO project phase 2, will be completed in the first half of 2006.

#### *Component 5: Land Management*

Activities planned for 2006 include: the establishment of the contact with governmental and non-governmental organizations as well as other stakeholders involved in riparian land management; the support and facilitation of the establishment of a network on riparian land management in the lower Mekong area; the close liaison with reconnaissance level risk assessments activities under Component 1; and the production of the guidelines and training modules on the topic of using flood probability information in land-use planning in cooperation with partner line agencies. The other activities that will be started in 2006 are the production of a comparative documentation with examples of and recommendations for improved riparian land management; the establishment of an open access database with flood probability data for land use planning and physical mitigation planning; and the conduction of training for line agency staffs in selected provinces and districts on using flood probability information in land use planning and in producing integrated flood hazard plans.

Other potential projects for 2006 in the field of flood management could emerge from the BDP database or list of projects, promoted by the MRC.

The prerequisites for the achievement of the planned outputs of the FMMP are to ensure that sufficient capacity (staff and consultants) is available.

#### **Donor reviews or appraisals planned in 2006**

The FMMP will convene regular progress monitoring meetings with its stakeholders.

### 3.7 Drought Management Programme (DMP)

#### 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 will be determined during the programme formulation process. It should address the problem of droughts in the LMB its impacts upon agriculture and water resources and what management plans and mitigation policies might be put in place.

**Approach, Strategy, Structure, Implementation arrangements, and Main outputs** will be determined during the programme formulation process. The Drought Management Programme will have strong linkages with the Flood Management and Mitigation Programme; with sector programmes such as irrigation and water use efficiency activities under the AIFP programme. It would also benefit from strong linkages with the Water Utilisation Programme. Development of the programme proposal will be based on a study on Drought Forecasting and Management carried out in 2005 by the MRCS whose main objective was to enable identification of deficient hydrological conditions resulting from the natural variability of the regional climate and to be able to distinguish these from impacts of resource developments and interventions.

#### List of agreements/projects

Project title	Start date	End date	Budget	Balance	Donors
<b>Active projects</b>					
No project signed					
<b>Projects of the BDP project database</b>					
To be identified					

#### Planned outputs and activities for 2006

At the 12<sup>th</sup> Meeting of the Council in December 2005, the Secretariat was asked to expedite the development of a Drought Management Programme. The planned activities under the Drought Management Programme in 2006 will be the formulation of a programme concept and the development of a comprehensive programme proposal, together with fund raising activities. The Drought Management concept will build on ongoing conceptual work of the WUP and will be closely coordinated with irrigation sector and water use efficiency work of the MRC.

### 3.8 Agriculture, Irrigation and Forestry Programme (AIFP)

The programme as per the current programme document was finished at the end of 2005. The programme document therefore needs revision for its 2<sup>nd</sup> Phase from 2006-2010. Although the 2<sup>nd</sup> Phase of AIFP has not yet been fully developed, there will be continuing activities from the previous phase.

## **Purpose**

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

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

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

The development objective of the AIFP Phase 2 as proposed in the concept paper is: "Land resources in the Mekong River Basin are managed and developed in a way that allows the river system to provide sustainable beneficial uses".

## **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 and in the Delta, which is currently responsible for about 50% of Viet Nam's total food production. There is still potential for expansion of irrigation in the basin, but more investment is also needed in the improvement of existing irrigation systems and management capacities aiming at increased irrigation efficiency and water productivity ("More Crop per Drop"). Intrusion of seawater into the Delta is becoming more and more an issue of concern, reducing the potential for irrigated rice production. It also affects shallow wells for domestic use. Deforestation is a significant environmental concern of all Mekong country governments. There is an urgent need to preserve the integrity of the watersheds through monitoring land use changes, identifying problems and management training. Concerns focus on the loss of biodiversity and livelihoods as the forests are cleared, as well as the potential impact of the land-use change on the rivers. Forest clearing can lead to leaching of nutrients and erosion of sediments into rivers. The forests of the lower Mekong provide habitats for animals such as tigers, leopards and elephants, which apart from their intrinsic and cultural values are the sorts of species

that can provide the basis of developing eco-tourism.

The immediate objectives of the programme are to improve water use efficiency in agriculture and to improve “healthy” management of the whole basin for agriculture and forestry.

### **Strategy**

The Programme Strategy consists of a collaborative learning approach to meet the evolving needs of basin communities, as these become progressively apparent. While objectives and intended outputs are fixed, actions undertaken to achieve these will remain flexible. The programme provides MRC with a micro-level community-based mechanism for the basin development process. The strategy also facilitates macro-level policy development and capacity building such as in the forestry sector, building on the detailed forest cover and watershed classification work already undertaken under MRC by making it a basis for catchment planning and resource use monitoring for all land and water use for agriculture, forestry, and also fisheries.

### **Structure**

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

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

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

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

The Challenge Programme of Water and Food (CPWF) is also placed under this component. The MRC is participating in the Challenge Programme of Water and Food of the International Water Management Institute through a Research Coordination facility whose key objective is the gathering, assimilation and packaging of information for the benefit of the MRC programmes.

### **Implementation arrangements: international partners, main national partner network**

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

### **Main Outputs**

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

#### *Watershed Management Component (WSMC):*

1. Watershed management approaches for selected watersheds are further developed, documented and disseminated.

2. Structures and instruments for analysis and further development of national policies and guidelines are developed and functioning.
3. Structures and instruments for continuous and effective regional collaboration are developed and functioning.
4. Regional data, information and knowledge management is improved.

*Irrigation and Agriculture:*

1. Agriculture and water use database are improved.
2. Paddy field's functions are analysed.
3. Practical methods to increase water use efficiency are developed.

*MRC participation in the Challenge Programme of Water and Food*

Coordination and liaison between the MRC and external sources of data and research is strengthened.

**List of agreements/projects**

<b>Project title</b>	<b>Start date</b>	<b>End date</b>	<b>Budget</b> (US\$ 1,000)	<b>Balance</b> (US\$ 1,000)	<b>Donors</b>
<b>Active projects</b>					
GTZ project on watershed management	01/10/03	30/11/05	541	-19	Germany
Japan contribution to Demonstrate the Multi-Functionality of Paddy Fields	01/01/03	31/12/05	866	367	Japan
Japan contribution to Improvement of irrigation Efficiency	01/01/05	31/12/07	342	248	Japan
Challenge Programme on Water and Food-2005	01/01/05	31/12/05	122 Indicative budget 2003-2008: USD 900 000	9	CGIAR-IWMI
<b>Projects in preparation</b>					
GTZ project on WSM Phase II	01/11/05	30/11/08	4,800	N/A	Germany
KfW contribution to Watershed Management	N/A	N/A	6,180	N/A	Germany (KfW)
<b>Other projects identified in the BDP project database</b>					
Improvement and Rehabilitation of Nam Souang Irrigation Project	N/A	N/A	6,000 (indicative)	N/A	N/A

The programme will be revised for its second Phase from 2006-2010.

**Planned outputs and activities for 2006**

*Component 1: Watershed Management (WSM)*

Activities of the WSM GTZ Project will continue building on the outputs produced in Phase 1 and recommendations made by the Project Progress Review Team. An overall workplan will be prepared in April 2006, as well as country workplans and a Programme Implementation Plan. As regards policy analysis and advice, a study on Institutional framework for watershed management will be completed by February 2006. Other outputs will be determined during formulation of the workplans. Regarding information management, the final study on The socio-economic driving forces behind decisions regarding land use and land use change- An overview will be completed by February 2006, as well as the study on Payments for environmental services: A review of global experiences and recommendations for their application in the Lower Mekong Basin. A water management toolkit will be produced by mid 2006. As a continuous activity, MekongInfo will be actualized. By mid 2006, base line studies on pilot watersheds in Viet Nam and Thailand will be completed. In addition, capacity building activities would take place in all four pilot watersheds.

### *Component 2: Irrigation and Agriculture*

AIFP will continue with the Project to Demonstrate the Multi-Functionality of Paddy Fields (DMPF) to achieve output 2 of the project: Analysis of Paddy Fields' functions. It would include completion of activities on data collection with NMCs, analysis of multi-functionality of paddy fields and participation in the fourth World Water Forum. The Improvement of Irrigation Efficiency project, with new funding started in 2005 will continue with the following activities in 2006: 1. Finalization of project document; 2. Contract for field observation with NMCs; 3. Commencement of field observation. The programme will also have to develop a concrete cooperation with FAO.

Under the MRC Participation in the Challenge Programme for Water and Food, planned activities in 2006 will include: 1. continue to manage and implement the Challenge programme on Water and Food (CPWF) in the Mekong River Basin; 2. continue to contribute to the coordination of the CPWF Basin Focal Projects (BFPs); 3. Collaborate and provide inputs to other AIFP projects and activities; 4. continue the organization and implementation of the MRC's ad hoc research lecture series.

The projects in preparation are the second phase of the GTZ Watershed Management Project as well as a pilot project funded by the German KfW. A project identified in the BDP long-list in the field of irrigation (Improvement and Rehabilitation of Nam Souang Irrigation Project) in Lao PDR will be promoted and facilitated under the AIFP.

### **Donor reviews or appraisals planned**

Presently, no donor review or appraisal is planned for the year 2006.

## **3.9 Navigation Programme (NAP)**

### **Purpose**

The Mekong River is an important gateway to trade centres in the Southeast Asia region and beyond. In 2001, trade valued at US\$ 4,700 million was transported throughout the LMB on the Mekong River and its tributaries, including the passage of an estimated US\$ 88 million of goods between Thailand and Yunnan. However, in many stretches, the Mekong River of today has not exploited its inherent potentials to boost trade relations and income for the countries situated in its Basin. A regional development approach is needed to contribute to poverty reduction by reducing vulnerability, opening new economic opportunities, creating new employment, enhancing



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

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

## **Approach**

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

The MRC Navigation programme has the following immediate objectives:

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

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

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

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

## **Strategy**

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

## **Structure**

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

*Component 1: Socioeconomic Analysis and Regional Transport Planning.*

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

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

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

*Component 3: Traffic Safety and Environmental Sustainability.*

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

*Component 4: Information, Promotion and Coordination.*

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

*Component 5: Institutional Development.*

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

## **Implementation arrangements**

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

## **Main Outputs**

The main outputs of the NAP are the following:

1. A Master plan for regional waterborne transport and development of rural water transport (Component 1).
2. An updated and harmonized legal regime legal to guarantee freedom of navigation consisting of legal and operational navigation agreements (Component 2).
3. Installation of aids to navigation (Component 3).
4. River Information Services Implementation Plans (Component 4).

5. Strengthening of Management Capacities of National Counterparts directly related to the implementation of the Navigation Programme and its functioning (Component 5).

### List of agreements/projects

Project title	Start date	End date	Budget (US\$ 1,000)	Balance (US\$ 1,000)	Donors
<b>Active Projects</b>					
Belgium contribution to the Navigation Programme	04/10/05	04/10/10	6,000	5,997	Belgium
<b>Other projects</b>					
Belgium support for the Navigation Master Plan in Cambodia	01/04/05	30/09/06	880 (approximately)	N/A	Belgium
<b>Projects of the BDP project database</b>					
To be identified					

### Planned outputs and activities for 2006

With receipt of NAP project funds from Belgium in October 2005; 2006 will be the first year for actual implementation of the Navigation Programme. In addition to focusing on the establishment of the *Navigation Advisory Body* (Component 5) at the MRC Secretariat and in the countries, several other NAP Components will begin to be implemented.

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

The results of the Project "Design of the Master Plan for Navigation on the Mekong River System in Cambodia" which started in 2005, together with the other national navigation strategies and plans, will feed into the formulation of the Regional Master Plan (Comprehensive Investment Programme) for waterborne transportation. Another important activity under this component will be the study and implementation of pilot projects to better understand and mitigate morphological changes resulting in riverbank instability; including causes, impacts and solutions. One such activity will be study of the impacts of dredging in the Tonle Sap Lake. Other activities will include the development of pilot studies to reduce the potential for riverbank erosion in the Lao PDR, Thailand and Viet Nam.

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

Activities will focus on a comprehensive legal study of the current navigation regime and the basic principles for the development of freedom of navigation on the Mekong River. The legal work will help to facilitate the navigation process leading to new and better agreement on navigation between MRC member countries.

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

An important activity will be the implementation of a complete system of aids to navigation on the Mekong River from Phnom Penh in Cambodia to the Vam Nao Pass in Viet Nam. This reach of the Mekong River, with a distance of 154 km, is important for the improvement of international maritime shipping between Cambodia and Viet Nam.

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

Navigation experts from the MRC NAP will participate in the Fourth World Water Forum in Mexico City where they will trade experience with other river basin based navigation programmes. Similarly, a formulation Team consisting of riparian experts and Secretariat staff plans to visit China and Myanmar to jointly plan a cooperative programme which may involve training of waterway operators in China, harmonizing aids to navigation between riparian countries, and establishing cooperative research. MRC will cooperate with the Cambodia-Belgium Consultancy Fund to establish the Information Management System of the Port in Phnom Penh.

#### *Component 5: Institutional Development*

The *Navigation Advisory Body* will be implemented. In addition, logistics will be prepared and a fully functioning management structure will be established to implement the MRC Navigation Programme .

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

#### **Donor reviews or appraisals planned**

Presently, no donor review or appraisal has been planned.

### **3.10 Hydropower Programme (HP)**

In spite of its significance, the Hydropower Programme within the present MRC organization plays a modest role compared to that of other sectors. The programme has very limited resources at its disposal. Therefore, a wider Hydropower Programme is under formulation at the MRCS since December 2004. A programme document defining programme objectives, structure, outputs etc. is expected for the coming year. Funds are sought in this regard.

#### **Purpose**

The total hydropower potential of the Mekong river system is estimated at 17,000 MW for the tributaries and 13,000 MW for the mainstream. Only 4,450 MW has been developed to date (1,600 MW in the LMB; 2850 in the Upper Basin). Demand in the LMB is expected to grow by around 7% per year over the next 20 years, and there are substantial opportunities for trading of power between the countries in the region.

As defined in the Hydropower Strategy, the development objective of the Programme (2001-2006) is: "The increasing demand for affordable electric energy in the MRC Member Countries is met with minimal negative impacts on the environment and local people, thereby promoting economic growth for the countries' mutual benefit".

#### **Approach**

Hydropower options are included in the power development strategies of all the Mekong countries. There is thus still a large hydropower potential that could be developed in the Mekong region. Obstructions to meeting this potential include the lack of an effective regional transmission system, competition from other power sources, and resistance to hydropower development due to concerns about the impacts of dams on fish migration and the river flow regime. Storage dams typically decrease wet season flows and increase dry season flows. Successful development of the region's hydropower potential will require a well structured and integrated programme founded on a basin-wide strategy, with due regard to environmental and social aspects.

As defined in the Hydropower Strategy, the immediate objective is: "Hydropower resources of the Mekong mainstream and its tributaries are developed according to true least-cost planning, fully considering environmental and social impacts".

### **Strategy**

Best options in the Lower Mekong Basin for sustainable development in the hydropower sector will be identified, based on the MRC Hydropower Development Strategy. At the basin-wide level MRC will facilitate proper planning and development of hydropower as well as monitoring of impacts and mitigation measures. Information on water resources will also support the Water Utilisation and the Flood Management and Mitigation Programmes.

### **Structure**

Structure and components would be defined during the formulation of the programme proposal.

### **Implementation arrangements**

Participation of stakeholders and coordination with national authorities and international organizations in the formulation of development initiatives will be ensured and activities will be strongly linked to the BDP. Recommendations of the World Commission on Dams will be taken into account, as appropriate in the Mekong context.

### **Main Outputs**

The main outputs expected from the Hydropower Strategy are:

1. Cooperation structures with hydropower segments in the MRC member countries established and advice on the planning, development, operation and decommissioning of hydropower plants and dams based on the MRC Hydropower Development Strategy are provided.
2. Review of previous hydropower studies, reports and plans at national and regional levels and conduction of supplementary studies to identify options for best hydropower development in the LMB in close consultation with the riparian governments and the BDP process.
3. Costs and benefits of existing hydropower plants and dams analyzed to support identification of options for best hydropower development in the LMB.
4. Possible alternatives to hydropower development studied and riparian governments advised on alternatives to support identification of options for best hydropower development in the LMB.
5. Study carried out of the potential for improved efficiency, reduced power demand and savings in investments in the power sector in the MRC member countries through Demand Side Management (DSM) and other options.

6. Study conducted on practices and obstacles for private and public participation in hydropower development in the MRC member countries; efficient and fair principles for private and public participation developed and proposed.

7. Long and short lists of hydropower projects in the Lower Mekong Basin identified for the BDP programme (Hydropower database).

Outputs would be further defined during the formulation of the programme proposal.

### List of agreements/projects

Project title	Start date	End date	Budget	Balance	Donors
<b>Active projects</b>					
No project signed					
<b>Projects of the BDP project database</b>					
To be identified					

### Planned outputs and activities for 2006

2006 will be the year of development of the start up of the new Hydropower Programme (HDP), subject to the availability of funding. A programme document will be produced and provide full information on the expected outputs of the programme. MRCS is currently seeking funds for formulation of the programme document.

Activities under the MRC Hydropower Strategy and cooperation with the BDP will continue in 2006. Thus, cooperation structures with hydropower segments in the riparian countries will be established and advice on the planning, development and operation of hydropower plants in the LMB will be provided in close consultation with the riparian governments and the BDP. Costs and benefits of existing hydropower plants and dams will be analyzed to support identification of options for best hydropower development in LMB. Studies will be carried out on the potential for improved efficiency, reduced power demand and savings in investments in the power sector in the riparian countries through Demand Side Management (DSM) and other viable options. Hydropower projects in the LMB will be identified for the BDP planning process, and a Hydropower database is expected to be developed in the context of the BDP Projects Database.

Other potential projects for 2006 in the field of hydropower development could emerge from the BDP database or list of projects, promoted by the MRC.

### Donor reviews or appraisals planned

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

## 3.11 Fisheries Programme (FP)

In direct continuation with the first phase of the programme, the FP phase 2 will start up in 2006.

### Purpose

The Lower Mekong fishery is the world's largest freshwater fishery, estimated at over two million tonnes per year, with a total value of around \$US 1.4 billion. Up to 40 million people (two-thirds of

the population of the LMB) are actively involved at least part-time in the fisheries and in many places in the basin; the fishery is one of the few sources of employment for an increasingly young, often landless rural population. Fisheries products also supply essential micro-nutrients and the bulk of the animal protein for the population in the basin. It is necessary to manage the productive Mekong fisheries so as to sustain their high yield and economic output well into the future.

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

### **Approach**

In the Lower Mekong Basin, floodplains provide benefits for the livelihoods of tens of millions of people. Much of this floodplain is subject to a substantial annual wet season flood pulse, which is crucial to the survival and production of most of the fish and aquatic animals and many of the plant species in the basin. The flood recession provides major fishing opportunities as well as supplying water to the recession rice crop in much of Cambodia and southern Laos. Change in the annual flood pattern is a major threat to the fishery, as well as loss of habitat (e.g. conversion of wetlands into agricultural land), and barriers across rivers blocking fish migration routes. Increasing fishing effort is also a threat, and will become more so as populations in the region increase. A regional programme is needed to deal with these major constraints.

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

### **Strategy**

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

### **Structure**

There are four components within the FP (Phase 2).

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

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

#### *Component 2: Fisheries Management and Governance.*

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

#### *Component 3: Fisheries Ecology, Valuation and Mitigation.*

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

*Component 4: Aquaculture of Indigenous Mekong Fish Species.*

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

**Implementation arrangements**

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

**Main Outputs (FP Phase 1)**

The main outputs of the FP are the following:

1. Governments, government officers and the general public informed at an appropriate level about the results and recommendations of the Fisheries Programme.
2. A regional Technical Advisory Body for Fisheries Management established at the regional level and in operation.
3. Fish migrations and valuation of the fishery described.
4. River and reservoir fisheries co-management capacity of all participating institutions, fishers and other local water resource users strengthened.
5. Economically feasible culture techniques tested and developed.

**List of agreements/projects**

<b>Project title</b>	<b>Start date</b>	<b>End date</b>	<b>Budget</b> (US\$ 1,000)	<b>Balance</b> (US\$ 1,000)	<b>Donors</b>
<b>Projects signed</b>					
Stock structure of Mekong Carp Species	01/01/04	31/12/05	76	66	Australian Center for International Agricultural Research
Swedish contribution to the technical Advisory Body	01/01/04	31/12/06	159	98	Sweden
Twinning arrangement with IFREDI (Inland Fisheries Research and Development Institute)	01/12/02	31/12/05	388	123	Denmark
Denmark support to FP and FP2	01/01/03	31/12/07	8,652	6,131	Denmark
<b>Project of the BDP project database</b>					
To be identified					



The year 2006 will be the start-up of Fisheries Programme Phase 2. The major task will be to initiate new technical work and operating procedures, which will be greatly facilitated by the networks and experiences from Phase 1. The main donor of this programme is Danida. Efforts will continue to be made to motivate other donors.

### **Planned outputs and activities for 2006**

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

Major milestones and indicators for 2006 include the following: 1.1. Coordination and overseeing of production of communication products from all components of the Programme, including translation and publishing of documents in riparian languages; 1.2. Production of the FP newsletter "Catch and Culture"; three editions per year in English, one amalgamated edition in each of the four riparian languages; 1.3. Annual Meeting combined with the Technical Symposium held in Viet Nam, with coverage of both FP work and other significant fisheries activities in the LMB.

#### *Component 2: Fisheries Management and Governance*

Major milestones and indicators for 2006 include the following: 2.1. A Survey of Fisheries of the Serepok River in the Central Highlands of Viet Nam completed; 2.2. An extension of activities of participatory water management in rice/shrimp culture from commune to district level in the Mekong Delta in Viet Nam (Soc Trang Province) initiated (2006-2007); 2.3. A pilot project for local management organizations ("RFMCs") in Lao PDR to develop improved fish marketing system completed; 2.4. A pilot project of 'local transboundary management' of deep pools in Lao PDR and Cambodia (Champassak and Stung Treng provinces) initiated; 2.5. Curricula development for inland fisheries management initiated; 2.6. A training course on regional issues of fisheries management delivered; 2.7. A second yearly cycle of community-based operations of four mobile/fixed small-scale hatcheries for stocking of water bodies and fish culture in Lao PDR and Cambodia completed and evaluated; 2.8. A pilot project for local management organizations ("Community Fisheries") in Cambodia to develop an example of a federated user organization comprising local, commune and provincial levels initiated; 2.9. 2 'TAB Updates', 4 TAB 'Mekong Fisheries Management Recommendations' and 1 MRC Development Series issue completed; 2.10. An inventory of research institutions in the LMB and an annotated bibliography of literature on regional issues of fisheries management in the LMB completed.

#### *Component 3: Fisheries Ecology, Valuation and Mitigation*

Major milestones and indicators for 2006 include the following: 3.1. Fisheries elements of Integrated Basin Flow Management document completed for MRC; 3.2. Work agreements established and work carried out by line agencies for monitoring of fishers' catches in Cambodia, Lao PDR, Thailand and Viet Nam; 3.3. Publication of documents on trends in fishers catches completed; 3.4. Work agreements established and work carried out by line agencies for monitoring of key fish markets in Cambodia, Lao PDR, Thailand and Viet Nam; 3.5. Publication of documents on trends in fish market sales completed; 3.6. Work agreements established and work carried out by line agencies for monitoring of fish fry/larval drift in Cambodia and Viet Nam; 3.7. Publication of documents on fry/larval monitoring completed; 3.8. Work agreements established and work carried out by line agencies for monitoring of Tonle Sap dai fisheries in Cambodia; 3.9. Publication of summary document and database from Tonle Sap dai monitoring; 3.10. Papers are prepared and

presented by counterparts at the MRC Technical Symposium; 3.11. One pilot project for capture fisheries improvement scoped and costed in each of Cambodia, Lao PDR, Thailand and Viet Nam.

#### *Component 4: Aquaculture of Indigenous Mekong Fish Species*

Major milestones and indicators for 2006 include the following: 4.1. Broodstock of AIMS2 priority species are conditioned and spawned by counterpart organizations; 4.2. Two priority species reach farmer extension stage and are transferred to extension agents; 4.3. contributions are prepared and presented at the MRC Fisheries Technical Symposium.

Other potential projects for 2006 in the field of fisheries could emerge from the BDP database or list of projects, promoted by the MRC.

The following are prerequisites for achieving the outputs: adequate funding is available for FP Phase 2; the commitment of line agencies to objectives and work programme of FP is maintained; FP continues to receive the cooperation of other MRC programmes; and all levels of government implement regional and national fisheries management agreements, as well as the recommendations of the FP relating to development of the fisheries sector.

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

#### **Donor reviews or appraisals planned in 2006**

A Programme Implementation Plan for the FP Phase 2 will be prepared and forwarded to the donors for approval.

### **3.12 Tourism Programme (TP)**

#### **Purpose**

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

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

#### **Approach**

The Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin (the 1995 Agreement) provides a broad framework for regional cooperation to work and cooperate

in all fields of sustainable development, including “recreation and tourism”. It is a major concern whether in addition to the economic rationale tourism might have adverse environmental effects. There is therefore a need to ensure that tourism can be promoted within the framework of the MRC for a sustainable development of the Mekong River Basin.

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

### Strategy

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

### Implementation arrangements

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

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

### List of agreements/projects

Project title	Start date	End date	Budget	Balance	Donors
<b>Active projects</b>					
No project signed					
<b>Projects of the BDP project database</b>					
To be identified					

### Planned outputs and activities for 2006

The main activity would be a study of the tourism sector and development of a comprehensive programme proposal. To this effect, tourism is considered with a baseline study under the Navigation Programme's component 1 (subcomponent 1 *regional master plan for the region*). Supply-demand analysis and investment opportunities for tourism as well as the strategy to stimulate growth of the cross-border waterborne tourism are major activities of the project. To undertake these activities a pilot project was developed. The Development of Waterborne Tourism from Luang Prabang to Simao Pilot Project is based on the conclusions, recommendations and lessons learned from existing tourist operations. The NAP envisages commencing implementing component 1 in 2006. Moreover, under the Environment Programme the Government of Sweden has agreed to support a focussed assessment on tourism opportunities and impact, using existing documents, studies and plans in the tourism sector. The study under component 3 “People and Aquatic Ecosystems” commenced in 2005 and will continue in 2006. It will link (where appropriate) to the socio-economic components of the relevant programmes (Navigation, Watershed Management and Fisheries). This assessment will also include an analysis of the MRC's comparative advantage in tourism, if any, thus allowing for future programme development. It will be important to look at the impact of both mass tourism and eco-tourism as they pertain to the

MRC's mandate. This programme development could be started up, subject to availability of funding.

Other potential projects for 2006 in the field of tourism could emerge from the BDP database or list of projects, promoted by the MRC.

### **Donor reviews or appraisals planned**

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

## **3.13 MRC Water Management Trust Fund**

### **Background**

The Mekong River Commission (MRC) was established by the 1995 Agreement on Co-operation for the Sustainable Development of the Mekong River Basin, between the Governments of Cambodia, Lao PDR, Thailand and Viet Nam. In accordance with this Agreement, the Mission of MRC is: "To promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well being by implementing strategic programmes and activities and providing scientific information and policy advice."

To this end the MRC is implementing Programmes covering all relevant sectors of Integrated Water Resources Management<sup>5</sup>.

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

### **Rationale**

The nature of the work of the MRC requires that it is able to respond with some flexibility to emerging demands and the need for formulating new projects and activities as new problem settings require to be cast into the ongoing integrated programme. Only on that basis can the MRC Secretariat seek both approval and funding to address new problems in Integrated Water Resources Management in the Mekong region. The established programme funding mechanism and the annual approval process through Council however do not provide for such flexibility and a complementary mechanism is needed

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

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

### **Objective**

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<sup>5</sup> MRC Programmes are Basin Development Plan; Environment; Information and Knowledge Management ; Integrated Capacity Building; Water Utilisation; Flood Management and Mitigation; Drought Management; Agriculture, Irrigation and Forestry; Navigation; Hydropower; Fisheries and Tourism.

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

### **MRC Water Management Trust Fund Activity Tracks**

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

#### Strategic Policy Development:

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

#### Transboundary Mediation Facility

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

#### Responsive Programme Development

- Programme development consultancies;
- Programme development and review workshops; and
- Cross-cutting evaluation consultancies.

### **Use and Implementation Arrangements**

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

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

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

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

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

### **Monitoring and Reporting**

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

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

### **Planned outputs and activities for 2006**

The MRC Water Management Trust Fund for Supporting Integrated Water Resources Management in the Mekong Basin has been created by a decision of the Joint Committee at its Twenty-second Meeting in Vientiane on 30-31 August 2005. France has indicated interest in allocating funds from 2006 on.

## 4 Progress of MRC Work Programme 2005

This section provides a brief account of progress of the activities under the MRC Work Programme in 2005. A comprehensive progress report for each programme can be found in the individual programme's periodical full progress reports. To be consistent with the Work Programme for 2005, the structure adopted in this section follows the structure of the Work Programme for 2005, and therefore programmes are presented under **core, support and sector programmes**; budget of programmes are those presented in the Work Programme for 2005. For each programme, the section provides the following information:

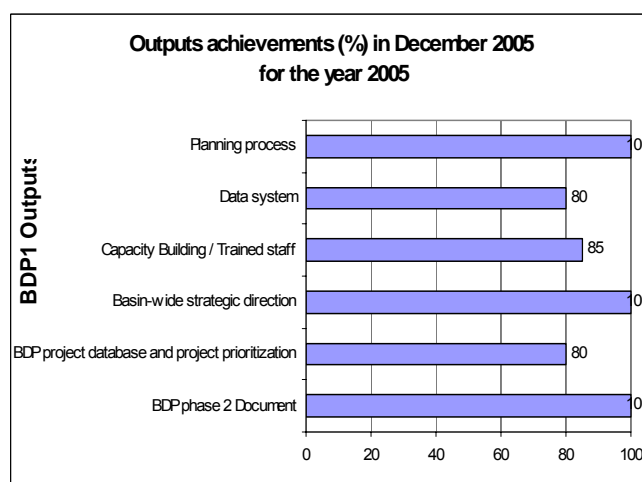
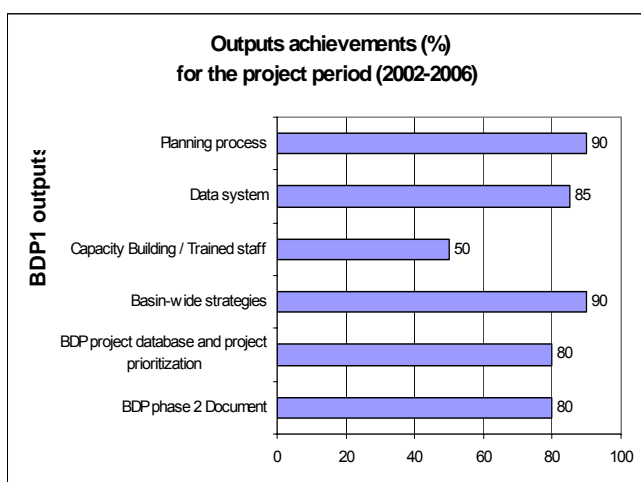
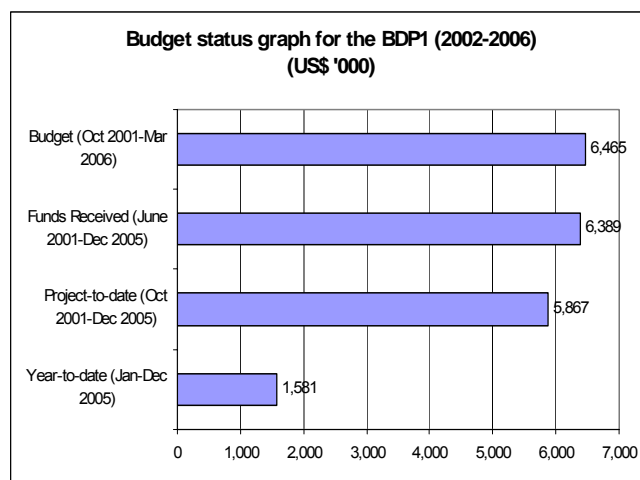
- Funding status graph, providing the reader with funding and expenditures information;
- Achievements graphs, presenting the progress made in achievement of the main outputs as selected by programmes for the year 2005 and for the programmes implementation periods;
- Planned outputs and achieved outputs for 2005;
- Significant problems encountered and corrective actions taken;
- Donor review or appraisals carried out in 2005;
- Relevant JC and Council decisions taken in 2005.

### 4.1 Core Programmes

#### 4.1.1 Basin Development Plan (BDP)

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2005, respectively.

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



## **Planned and achieved outputs for 2005**

Phase 1 of the BDP started in October 2001. It is a three year programme (2002-2004) that has been extended without provision of additional funds until July 2006. BDP Phase 1 has 13 separate outputs that can be summarized or grouped to five main achievements: A basin planning process established and ongoing; Data systems implemented and functional; Capacity built and training provided within MRCS, NMCs and national organizations; Sub-area and basin-wide scenarios and strategies formulated; A Projects Database (long-list) set-up and projects prioritized (short-list).

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

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

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

## **Donor reviews or appraisals**

The joint donor pre-appraisal mission (Danida, Sida, SDC, AsDB, AusAid) on BDP Phase 2 in April 2005 observed that the BDP Phase 1 is progressing well, despite of the delays. The review mission took note of the strong member country engagement, the participation of a large number of government officials and others in the four countries, and the improved format and data details on monitoring and reporting. Subsequently, an extension through July 2006 was instituted. It was also recommended that Danida would assist the BDP team in the preparation of the BDP Phase 2 proposal.

## **Relevant JC and Council decisions**

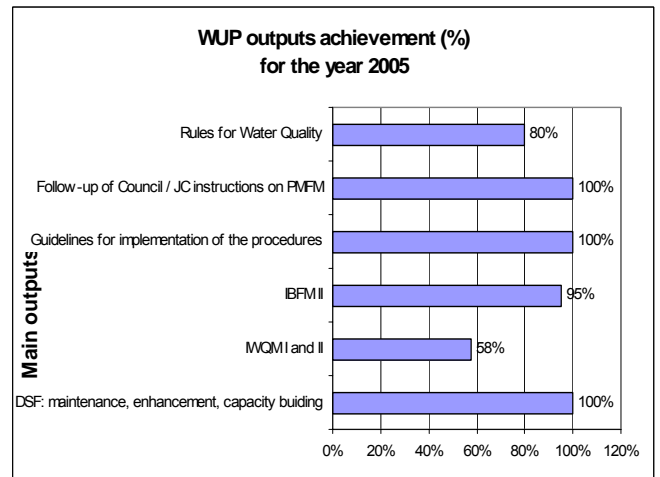
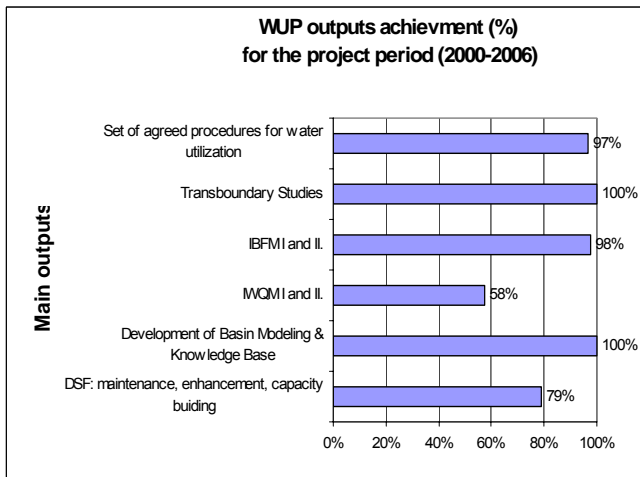
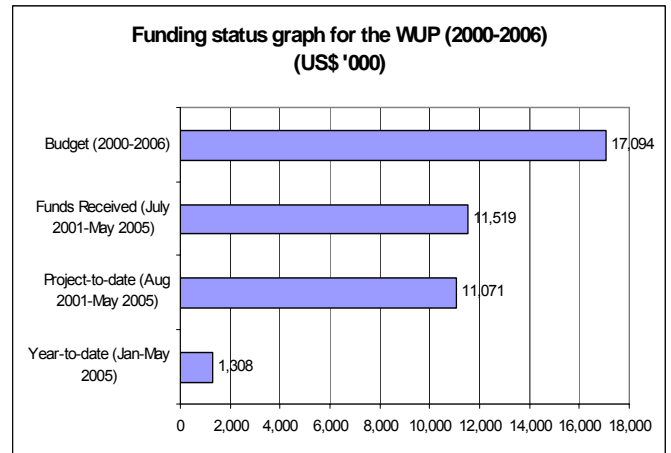
The BDP achievements were presented to the Twenty-first meeting of the Joint Committee in March 2005, including a revised BDP Phase 2 document, an initial list of BDP joint development projects, and the BDP planning cycle guideline. Regarding the BDP planning cycle guideline the Joint Committee agreed that it should be referred to as a working document with regular updates if deemed necessary. The JC at its 22<sup>nd</sup> Meeting in August 2005 endorsed the BDP's process of prioritization of joint projects to be placed on the BDP shortlist and agreed that the same procedure should be applied to national projects. The JC endorsed the first batch of projects to be placed on the BDP shortlist (provided in Annex 2); and agreed that information available in the Projects Database could be made available to outside parties for promotion of the projects. Also, the JC endorsed in principle the draft "Strategic Directions for IWRM in the LMB". At the Twelfth meeting of the Council in December 2005, the MRC Council approved the Strategic Directions for IWRM in the LMB, the initial screening process resulting on the first programmes and projects to be placed on the BDP shortlist, and the programme document for the BDP Phase 2.



#### 4.1.2 Water Utilisation Programme (WUP)

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2005, respectively.

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



note: the first graph provides expenditures only for the GEF contribution to the WUP

#### Planned and achieved outputs for 2005

Under Component 1: Basin Modelling and Knowledge Base, the DSF (Decision Support Framework) had been actively used within the MRC. The DSF clients were: the BDP, in preparation of scenario analyses, presented in the report entitled *Modelled Impacts of Scoping Development Scenarios in the Lower Mekong Basin (March 2005)*; and the Integrated Basin Flow Management (IBFM) Phase 2, in executing the flow regime and hydrological analyses in support of the May 2005 field mission and technical workshop. Capacity-building and training activities in the NMCs and with the MRC Secretariat modelling team continued following the work plan for 2005 and the *Strategy for WUP Training on the DSF* prepared in January 2005. An in-house review to assess the capacity of the MRC Member States in implement the DSF (DSF Assessment) was initiated following the request of the JC at its 21<sup>st</sup> Meeting in March 2005 and completed with a draft report in September 2005. The DSF improvements were carried out, most notably: SWAT model re-calibration in Lao PDR and Texas; ISIS re-schematization and re-calibration; IQQM model recalibration; and data and information collection and compilation with the assistance of TACT (Technical Assistance and Coordination Team). Continued collaboration activities with the WUP-Fin modelling team were made in finalization of their Phase 2 Inception Report and initiating Phase 2 activities. These included provision of technical support to BDP and active participation in IBFM Phase 2.

Under Component 2: Environmental and Transboundary Analysis, the IBFM Phase 2 activities were initiated with the completion of recruitment of most of the required international and riparian multi-disciplinary specialists; and successful preparation and execution of the two-week field visits and technical workshop in May 2005 with the full team, thus setting the stage for the subsequent analyses carried out in the period June-September 2005. A Drought Management Study provided an assessment of droughts in the region and a framework for a Drought Management Programme. The initiation of the Integrated Water Quality Management (IWQM) activities in technical support of the drafting of the Rules for Water Quality included national studies on water quality legislation and standards through four riparian consultancies; the revision of the IWQM approach to development of water quality objectives and targets from a beneficial uses perspective, the completion of the IWQM phase 1 including Technical Guidelines for Implementation of the Rules for Water Quality to be submitted to the TDG6 (Technical Drafting Group 6). A Sedimentation Study has been started under the overall technical supervision of the EP. The report Overview of the Hydrology of the Mekong Basin has been finalised in November 2005.

Under Component 3: Procedures for Water Utilization, the drafting process for the Rules for Water Quality was successfully initiated with a regional workshop and the 1<sup>st</sup> TDG (Technical Drafting Group) 6 meeting. Further drafting and regional meetings with the NMCs and through TACT were carried out to move forward with the finalization of a series of *Guidelines for Implementation* of the already approved procedures, namely: Procedures for Notification, Prior Consultation and Agreement; Procedures for Data and Information Exchange and Sharing; and Procedures for Water Use Monitoring. After revision, the PMFM were endorsed at the 22<sup>nd</sup> JC Meeting for submission to the Council in December 2005. MRCS has proceeded with the work on the *Technical Guidelines in support of the PMFM* through the continuing work of the IBFM Phase 2 – the outcome of which will provide a basis for assessing and agreeing *acceptable* flows on the mainstream under Article 6.

Under Component 4: Management and Institutional Strengthening, the revised WUP Progress Report and Work Plan was finalised and submitted on 26 January 2005, following the recommendations of the WB Supervision Mission, December 2004. A strategy for WUP training on DSF, and WUP awareness enhancement of both DSF and procedures/rules was completed in 31 January 2005. Four WUP Management Team (WMT) meetings were held, back-to-back with other WUP events, to ensure close collaboration and coordination with all NMCs in implementing overall WUP activities.

### **Donor reviews or appraisals**

A World Bank mission took place in October 2005.

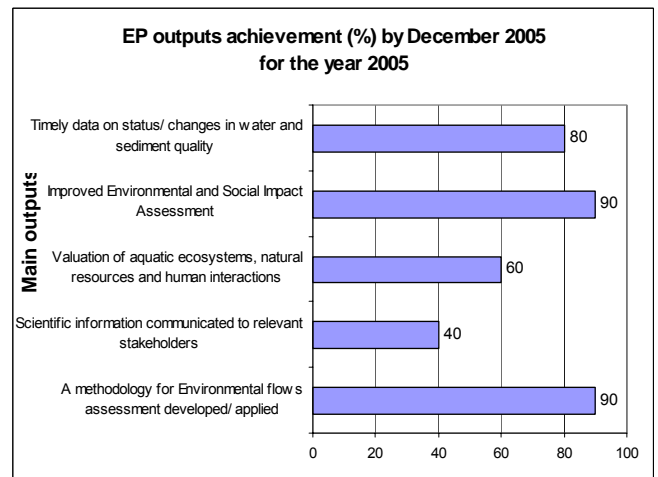
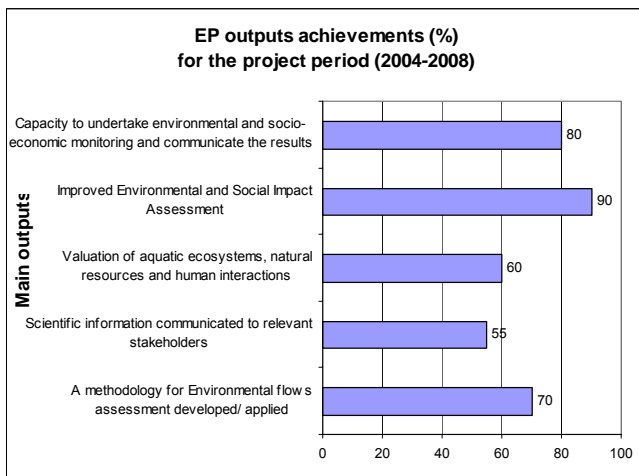
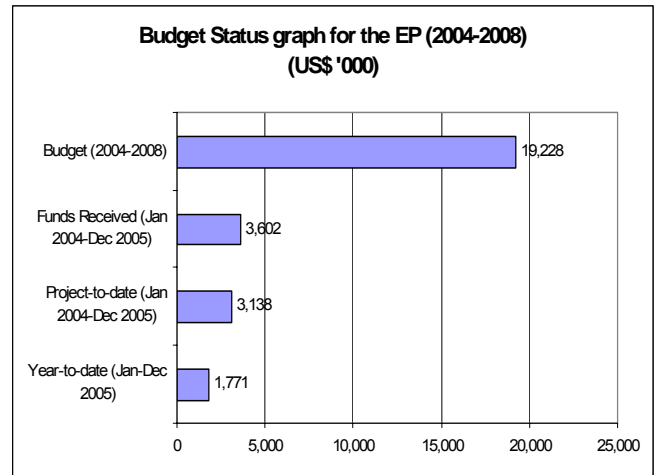
### **Relevant JC, Council decisions**

The *Guidelines on Implementation of the PNPCA* were approved at the 22<sup>nd</sup> Meeting of the JC in August. The PMFM document approved in principle by the Council at its 11<sup>th</sup> Meeting in December 2004 was revised in accordance with the instructions of the JC "...to assist the TDG5 in preparing a text defining an appropriate reference in the legal text to the interim guidelines so that the legal text could be approved separately", and then endorsed at the 22<sup>nd</sup> Meeting of the JC.

### 4.1.3 Environment Programme (EP)

The three following graphs provide: An overview of the budget status of the programme ; the outputs achievement for the full programme duration; and for the year 2005, respectively.

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



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

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

#### Planned and achieved outputs for 2005

Implementation of activities followed the Annual Work Plan for 2005, which is based on the prioritized component outputs developed by the Environment Programme Management Group (EPMG) and agreed to by the four NMCs.

Under Component 1: Environmental Monitoring and Assessment, the basin-wide water quality diagnostic study was completed. Sampling under the water quality monitoring network includes the new stations, and preparations for additional parameters are under way. The QA/QC programme was operated and audited in 2005. Ecological health monitoring initiated its three year cycle focusing in 2005 on the upper part of the Lower Mekong Basin as well as the Sekong/Sesan/Srepok sub-basins. Good progress has been made under the Indicative Mekong

River Basin Report Card on the Basin's environmental conditions. The social impact monitoring system is under implementation. The initial phase on water quality emergencies was completed in late 2005. The Environment Programme Annual Technical Meeting, held in November 2005, reported on basinwide diagnostic study on water quality, ecological health and environmental risk assessment.

Under Component 2: Environmental Decision Support, significant progress has been made in the formulation of the guidelines for a transboundary EA system. SEA procedures for BDP were developed together with the BDP and were applied to some PINs in the BDP project database. Ecological Risk Assessments is being initiated in the Chiang Rai/Bokeo area and for Takeo/Chao Duc area using multinational teams of riparian expert working with an international mentor. The risk assessment focuses on transboundary concerns on water quality. Work on cooperation / mediation mechanisms and conflict prevention was initiated within MRC Secretariat where the Programme is taking a lead role. The Programme undertook an assessment of MRC's potential role in promoting Clean Technologies.

Under Component 3: People and Aquatic ecosystems, a provisional basinwide map of important wetland types is completed and information on values will be added to create a tool for BDP Phase 2. Assessment of people vulnerable to changes in aquatic resources completed its collection of secondary information and will continue in 2006 with fieldwork. Field work to ground truth Radarsat images for wetland mapping was completed, although its utility was found to be limited. Work on environmental impact of tourism was initiated.

Under Component 4: Environmental Knowledge, the monitoring and analysis of water quality in the Sesan was completed. A study to review information on sediment transport is near completion and will be linked to Environmental Flows work and other work on sedimentation in the Tonle Sap.

Under Component 5: Environmental Flow Management, the Flow Management Component, undertaken in cooperation with WUP (as Phases 2 and 3 of IBFM) undertook field visits by the specialist team in the dry season, and the scenario workshop in November 2005 forms the basis for the preliminary impact predictions under the selected scenarios.

In addition, the MRC have progressed well in the framework of the Mekong River Basin Wetlands Biodiversity Conservation and Sustainable Use Programme (MWBP) led by UNDP Lao PDR, as a joint initiative between UNDP, IUCN-the World Conservation Union, and the MRC to promote conservation and sustainable use of the biodiversity of wetlands in the Lower Mekong Basin. The MRC is responsible for the parts of the programme dealing with environmental flows assessment, guiding principles for wetland biodiversity management and work on ensuring that biodiversity concerns are incorporated in the BDP.

### **Significant problems encountered, Corrective action taken**

The programme is affected by slow recruitment process of national consultants; where there is difficulty in identify suitable applicants. To counter this, the programme tries to provide the NMCs with the names of potential candidates or institutions which may have the suitable expertise. There are also difficulties with slow deliveries and delays of outputs from engaged consultants. To deal with this the programme spends a lot of time following up delayed work with the concerned consultants.

## Donor reviews or appraisals

The programme was reviewed in early 2004 by Danida, Sida and SDC. The review was very favourable and Danida pledged to continue support after the current agreement expired at the end of 2004.

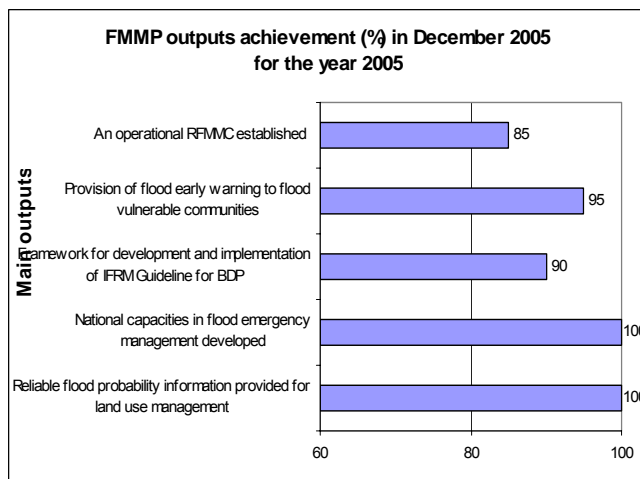
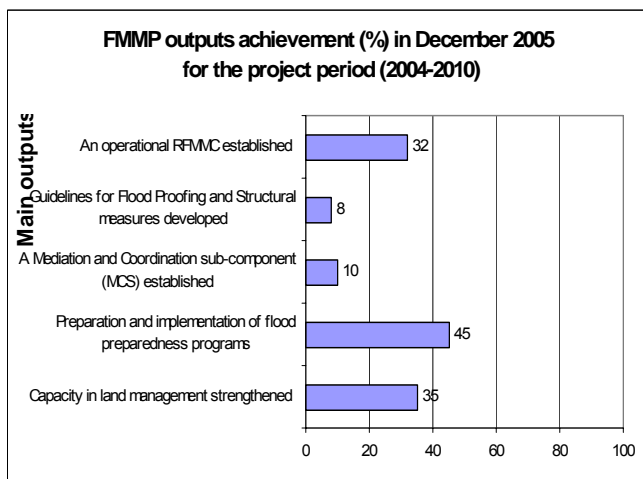
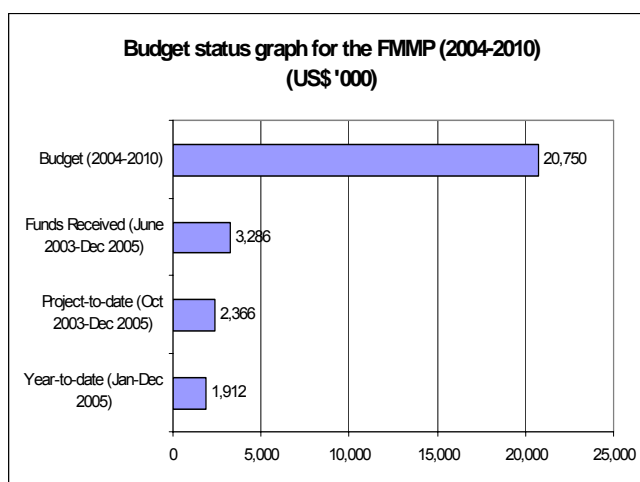
## Relevant JC, Council decisions

The JC at its 22<sup>nd</sup> Meeting in August 2005 requested the Secretariat to finalize the Indicative Mekong River Basin Report Card on Environmental Conditions (component 1) and the guidelines for a transboundary EA system (component 2). The monitoring of water quality in the Sesan was completed and overall results presented to the 22<sup>nd</sup> JC meeting (component D).

### 4.1.4 Flood Management and Mitigation Programme (FMMP)

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2005, respectively.

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



### Planned and achieved Outputs for 2005

A Draft Programme Implementation Plan was prepared by the MRC Secretariat and sent to the NMCs for further improvement. Major progress in 2005 has been:

Under Component 1: Establishment of a Regional Flood Management and Mitigation Centre, the design of the RFMMC new building was finalized at the end of January 2005. Funding from the Government of Japan for detailed design of the new RFMMC building is being taken care of by MOWRAM (Cambodian Ministry of Water Resources and Meteorology). The MRC Secretariat has

refurbished the ground and first floor of the former MRC Secretariat Office in Phnom Penh, provided by the Cambodian Government as the temporary RFMMC. The operation of the RFMMC started in April 2005. The forecasting function has been transferred from the MRC Secretariat in Vientiane to the RFMMC in Phnom Penh in June 2005, ready for the 2005 flood forecasting season. The third Annual Flood Forum (AFF) was successfully organized in April 2005 under the theme Flood Management and Mitigation in the Mekong River Basin. In the perspective of selecting, designing, testing and evaluating potential forecasting systems, MRC has been offered through USAID/OFDA to review the system of the Asia Flood Network (AFN) with the National Weather Service River and Flood Forecast System (NWSRFS). The AFN Programme seeks to strengthen the capacity of hydro-meteorological agencies in climate, weather, and hydrological forecasting while directly involving communities at risk in reducing vulnerability to hydro-meteorological hazards. The start-up activities of AFN are focused primarily on the Mekong River Basin. In addition, the MRC Secretariat received AFN support for activities that included 1. a contribution to the third Annual Flood Forum; 2. Training on satellite rainfall estimation; 3. Training on Radio Internet towards pilot programme applications; 4. Training on flash flood warnings.

The USAID/OFDA-funded project "Provision of Flood Early Warning to Flood Vulnerable Communities in the Lower Mekong Basin, Phase 1: Cambodia and Lao PDR" has entered its third implementation year. In Cambodia the project will continue working with the American Red Cross and Actions Contre La Faim (successor of Actions Against Hunger) for the same number of villages (40 villages) in the five flood prone provinces. In 2005, the project has launched its activities in the Lao PDR. The National Disaster Management Office (NDMO) and other relevant line agencies were selected as Lao project partners based on their mandate and existing capacity for flood disaster management at local communities. A field visit to flood vulnerable villages in Champasack province was conducted in mid January 2005. Following the selection criteria five most vulnerable villages were selected. In preparation for the upcoming flood season various activities have been carried out by partners and cooperating agencies, e.g. field survey, installation of flood marks and village billboard, etc.

After the endorsement of the Final Concept Document for the establishment of the Mekong Hydrological Cycle Observing System (Mekong-HYCOS) by all member countries a consultant was recruited for three months by AFD to formulate the Mekong-HYCOS project document. A series of national consultations was organised in January-February 2005. During the Regional Workshop on Mekong-HYCOS Project Formulation in March 2005, the first Draft Project Document was presented and agreed in principle with some suggested amendments. It was revised and submitted to the member countries for their official acceptance or final comments in May 2005. The Project Document was submitted to AFD for their pre-appraisal in late June 2005, and is currently under revision. After the PIP meeting of the FMMP in November, it was decided that Mekong-HYCOS will be part of the Information and Knowledge Management Programme.

Under Component 4: Flood Emergency Management Strengthening, the implementation of the activities have commenced in September 2004 by MRC and GTZ together with the Asian Disaster Preparedness Center (ADPC). The collection of baseline and other relevant data has been completed in March 2005 for the finalization of the logframe document. The recruitment process by ADPC started in November 2004. The Project Managers and National Coordinators are now on board.

Following the first phase of the project "Capacity Building for Preparedness, Planning and Response through the Use of Flood Information Products in the Lower Mekong Basin (Phase 1) funded by the European Commission Humanitarian Aid Office (ECHO), MRC collaborated with the Asian Disaster Preparedness Center (ADPC) to continue working on its second phase during the

year 2005. The proposed provinces and countries for project implementation are (1) Kratie and Kampong Cham for Cambodia; (2) Shortlisted provinces including An Giang, Dong Thap, Tien Giang and Can Tho for Viet Nam; and (3) Khammoune, Savanakheth, Saravanh and Champasack for the Lao PDR.

Under Component 5: Land Management, the GTZ project has officially started on 1 September 2004. It is financed by the German Government through GTZ and is implemented on behalf of GTZ by GFA Terra Systems (a German consulting company). The component's activities so far have focused on creating the pre-conditions for its technical work: 5.1. An office within MRC Secretariat has been established, equipped and staffed; 5.2. Two national coordinators (one each in Cambodia and Viet Nam) have been employed; 5.3. Start-up meetings have been held with the National Mekong Committees in Cambodia and Viet Nam (jointly with component 4); 5.4. in Viet Nam, two provinces for field activities have been selected together with the VNMC: An Giang and Dong Thap; 5.5. in Cambodia two provinces for field activities have been earmarked: Kandal and Takeo; and 5.6. extensive discussions and consultations have been held with GFA's partner company in Cambodia: Aruna Technology Ltd. and other stakeholders in preparation of a topographic survey to be conducted in the pilot areas of Cambodia. Aruna Technology Ltd. will use the data generated by this survey and those already available in Viet Nam to produce flood probability maps of the pilot areas.

#### **Significant problems encountered, Corrective action taken**

There have been no major problems encountered. The FMMP has gone through a preparatory phase in the first half of 2005 and since the key and support positions are on board, the programme gradually starts up its full implementation.

#### **Donor reviews or appraisals**

There hasn't been any programme review in 2005. A pre-appraisal of the AFD was held in late June 2005 for the Mekong-HYCOS project. It is envisaged that the project implementation be started in 2006 with funding support from AFD.

#### **Relevant JC, Council decisions**

The MRCS has regularly provided information on the progress of FMMP implementation at the JC and Council meeting. At the 21<sup>st</sup> Meeting of the JC in March 2005, the JC understood that the FMMP could not be fully implemented unless necessary human resources are in place. At the 22<sup>nd</sup> Meeting of the JC it was recommended to accelerate the recruitment process. At the 12<sup>th</sup> Meeting of the Council, the MRC Council commended the Secretariat to expedite the implementation of this important programme.

## 4.2 Support Programmes

### 4.2.1 Integrated Capacity Building Programme (ICBP)<sup>6</sup>

#### Planned and achieved outputs for 2005

Under Component 1: Integrated Training Programme, the implementation of the training programme for the Lao support staff funded by UNDP under the staff relocation training project in collaboration with LNMC ended in late 2005.

Under Component 2: Junior Riparian Professional Programme, the implementation of the Junior Riparian Professional (JRP) Programme (2000-2005) has continued. It was funded by the Swedish International Development Cooperation Agency (SIDA) and the United Nations Development Programme (UNDP). Funds are secured until mid 2006. Four Junior Riparian Professionals (batch 1) have completed in 2005 their three-year programme at the Secretariat. Two JRPs (batch 2) have completed their two-year programme in March 2005 and are continuing their training at the Environment Programme and Flood Management and Mitigation Programme. The third batch of JRPs joined the Secretariat in July 2004 and is currently receiving on-the-job training by the core programmes. There are currently five JRPs at the Secretariat. A review of the structure and approach of the JRP Programme took place in December 2005.

Under Component 3: River Basin Management, the Murray-Darling Basin Committee training activities ended in December 2004. Further activities are expected to be developed under this twinning arrangement.

Under Component 4: Gender mainstreaming in water and related resources development in the LMB, the funds for implementation have been secured, and the MRC has started the implementation of the project with the recruitment of the Gender Coordinator in July 2005.

Under Component 5: Information and Communication, information material on the MRC has been continuously produced to raise awareness on MRC activities with the Member Countries and the general public. The information material includes the Annual Report, quarterly newsletter (Mekong News), and regular updates and auditions to the MRC website as well as many documents for the internal use and to support the work of the programmes. In the first half of 2005 the communications office organised the Tenth Anniversary Celebration at the MRC Secretariat in Vientiane, distributed press information and produced supporting publicity materials for National Mekong Committees. A new poster series for each programme was launched as well as material highlighting the MRC's public participation work. The MRC also had information booths at several international conferences.

Under Component 6: Research Coordination, activities in 2005 focused principally on: 6.1. the management and implementation of the Challenge Programme on Water and Food (CPWF) in the Mekong River Basin. This is an increased activity given that the Research Coordinator's role within the CPWF has increased; 6.2. the design, planning and implementation of activities associated with the MRC's 10<sup>th</sup> Anniversary celebrations, including the coordination of celebrations on April 5<sup>th</sup>, 2005 and planning and implementation of the International Forum on the Integrated Water Resources Management of the Mekong River Basin; 6.3. the continued development of a periodical and website 'Mekong Research' on behalf of the GTZ Watershed Management Component of the AIFP; 6.4. contributing to the planning and coordination of the CPWF-funded 'Synthesising fisheries management institutional data at multiple scales for the Lower Mekong

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<sup>6</sup> In 2006, Component 5 has been removed because Communication has been merged in the International Cooperation and Communication Section; and Component 6 has been removed under the AIFP



River Basin' in collaboration with the Institute of Fisheries Management of Denmark; 6.5. contributing to the coordination and planning of the CPWF-funded Basin Focal Project (BFP) in the Mekong; 6.6. on behalf of the FMMP and WUP, the planning and implementation of inputs into the Southeast Asian Water Forum; 6.7. on behalf of the MRC, continued liaison with external research interests, such as the International Water Management Institute, the Stockholm Environment Institute and the Swiss National Centre of Competence in Research.

### **Significant problems encountered, Corrective action taken**

Components grouped under the ICBP contribute to an overall objective of building capacity in the region, but are managed independently. Coordination of the programme would need to be strengthened. There is also a need for a programme manager to be recruited and for a comprehensive programme documentation to be formulated (defining the objectives, outputs, activities...).

### **Donor reviews or appraisals**

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

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

At the 21<sup>st</sup> and 22<sup>nd</sup> Meetings of the JC, the JC members have been informed of the progress of the Integrated Capacity Building Programme.

## **4.2.2 Decision Support and Information Management Programme (DSIMP)**

This paragraph reports on decision support and information management activities that have been carried out in 2005, under the Technical Support Division.

### **Planned and achieved outputs for 2005**

Under Component 1: Data exchange and Sharing, the first comprehensive list of Primary Custodians was completed in end-2005. Guidelines for Implementation of PWUM were developed in collaboration with WUP and planned for finalization in late 2005. The Guidelines for Management of the MRC Hydrometeorological Network were approved at the 22<sup>nd</sup> Meeting of the JC in August 2005.

Under Component 2: Information Management, further progress in development of the MRC-IS and the MRC-IS Portal has been made, in preparation for an in-house launch of the Portal at the MRC Secretariat in November 2005. The Portal includes key information services such as interactive maps, geographically enabled metadata explorer with ISO format metadata for all spatial datasets, and a document management system for sharing of electronic documents. Requirements and issues in opening sections of the Portal for external access are still under investigation.

The Sustainability Plan for the MRC Hydrometeorological Network was accepted officially by all MRC member countries in March 2005. In its gradual implementation, MRCS has now assigned the Hydro-meteorological Network Coordinator, the Asset Manager and the Data Operator to existing staff at MRC. The Appropriate Hydrological Network Improvement Project (AHNIP), scheduled to end in March 2006, is now in its final stage. Unfortunately, the established telemetry system has failed to deliver timely and reliable data, with frequent malfunctioning of the equipment installed. The MOU for Management and Operation of the AHNIP Network was finalised in a

regional meeting in December 2004, and signed for the period of 20 March 2005 to 19 March 2006 by Cambodia, Lao and Viet Nam in April 2005. The MOU outlines the role and responsibility of the MRCS, NMCs and concerned line agencies, and the provision of funds for operation and maintenance of the AHNIP network.

The hydro-meteorological data collection and management in 2005 continued the collection and supply of improved quality, quantity and timely hydro-meteorological information to all MRC programmes for model improvement, forecasting and monitoring verification of scenarios and rules. The hydro-meteorological data collected from the member countries of up to 2002 were completely processed. The hydrologic yearbook in 2001-2002 in electronic version was reproduced and disseminated to the member countries in late 2005.

Under Component 3, Decision Support Systems, DSF support has been provided to the WUP and the BDP. DSF modeling and knowledge base enhancements have also been realized.

Under Component 4, Capacity Building and Institutional Strengthening, the implementation of the Procedures for Data and Information Exchange and Sharing and Procedures for Water Use Monitoring has continued in the Member Countries.

### **Significant problems encountered, Corrective action taken**

In order to investigate and bring clarity to the cause of the problems of the AHNIP telemetry system and to identify lessons learned for the upcoming Mekong-HYCOS project, an assessment of the MRC-AHNIP telemetry system was conducted by an independent consultant, during 6 weeks from 24 April, 2005. The assessment shows that the current MRC-AHNIP telemetry system is unreliable; that the equipment is somewhat outdated in terms of design and firmware/software, and that support from the manufacturer in repairing, replacing and/or improving the system has been insufficient and inadequate. Based on this assessment a proposal for replacement of the equipment, to that of another manufacturer, will be prepared and submitted to the AusAID for their consideration on funding.

### **Donor reviews or appraisals**

There has been no donor review or appraisal.

### **Relevant JC, Council decisions**

The Guidelines for Management of the MRC Hydrometeorological Network were approved at the 22<sup>nd</sup> Meeting of the JC. The Guidelines for Implementation of the Procedures for Water User Monitoring is scheduled for approval by JC in March 2006. At the 12<sup>th</sup> Meeting of the Council, the Secretariat was requested to pay more attention to information management.

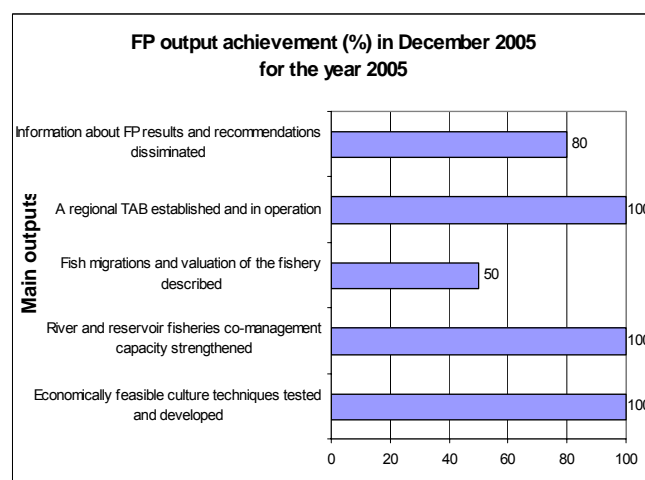
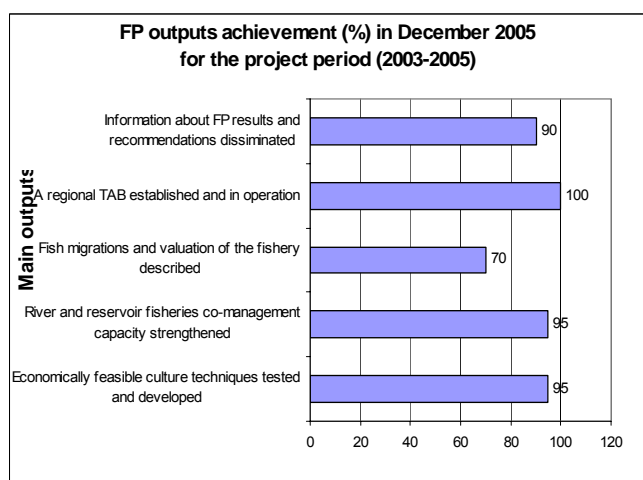
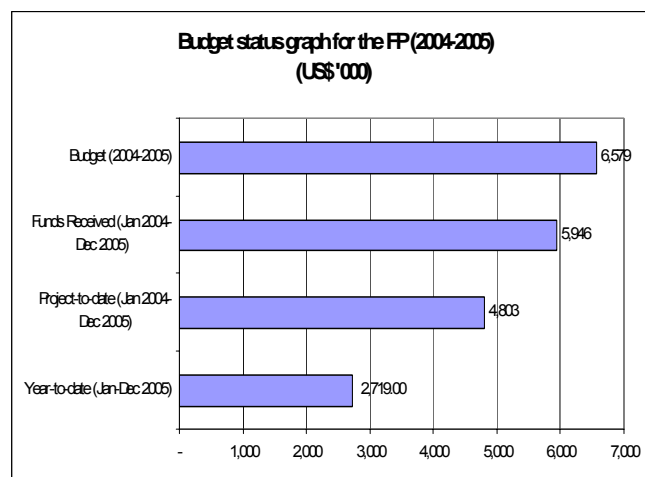
## 4.3 Sector Programmes

### 4.3.1 Fisheries Programme (FP)

The progress is made on the Fisheries Phase 1, which is ending in 2005.

The three following graphs provide: A overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2005, respectively.

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



Notes: TAB= Technical Advisory Body. Exact outputs titles are:

Output 1: Governments, government officers and the general public informed at an appropriate level about the results and recommendations of the Fisheries Programme

Output 2: A regional Technical Advisory Body for Fisheries Management established at the regional level and in operation

Output 3: Fish migrations and valuation of the fishery described

Output 4: River and reservoir fisheries co-management capacity of all participating institutions, fishers and other local water resource users is strengthened

Output 5: Economically feasible culture techniques tested and developed

### Planned and achieved outputs for 2005

Progress is presented according to the 5 main outputs (or group of outputs) of the FP.

*Output 1: Governments, government officers and the general public informed at an appropriate level about the results and recommendations of the Fisheries Programme*

Many technical publications were produced through 2005. These have been published in MRC Conference Proceedings, Technical Series and Development Series reports. FP has also continued its policy of posting its publications onto websites, particularly MRC, Mekonginfo and FAO sites. The Programme produced Version 2 of its Fisheries Information CD, containing all

reports and databases from the programme over the last 10 years, as well as many maps and photos. The fisheries newsletter *Catch and Culture* entered its 10<sup>th</sup> year of continuous production (English version) in 2005, and the third year of producing it in the languages of the MRC-member countries. A film of the fisheries in the Mekong Delta in Vietnam was produced, and films are in the process of being completed on fisheries of Laos and the Mekong in Thailand.

The Programme organised the translation and publication of many of its technical reports in riparian languages during 2005. This makes the information available to a much wider audience than can be achieved with just the English versions. The FP has also sponsored the production of several books in riparian languages during the last year, covering issues such as fishing gears in the Songkhram Basin in Thailand, and larval fishes of the Mekong.

The FP supported a tour of the fisheries of the Tonle Sap and the Great Lake in Cambodia by senior officials from the Thailand Department of Fisheries. This was highly successful in informing all participants of the importance of fisheries in the rural areas of the Basin, as well as the significance of fish trade from the Great Lake into northern Thailand.

The Fisheries Programme Annual Meeting was held in Siem Reap in June 2005. Colleagues from national fisheries agencies and the NMCs attended the meeting, as well as representatives from other regional organisations. A highlight of the meeting was presentations from stakeholders – in this case a fisherman, a woman fish trader, a representative from a community fisheries organisation, and an aquaculture farmer. Their talks amply demonstrated the relevance of the Fisheries Programme to poverty alleviation in the region. The scope of the meeting was expanded to include presentations from agencies other than MRC, effectively making the meeting a symposium on Mekong Fisheries. This change was greatly appreciated by the participants.

*Output 2: A regional Technical Advisory Body for Fisheries Management established at the regional level and in operation*

The Technical Advisory Body on Fisheries Management (TAB) continued the implementation of its 2004-2006 work plan. Organizationally the TAB is now well established, being supported in its work by a functioning secretariat with presence at both the regional and national levels.

Major achievements in 2005 were studies into cues for fish migration in the Mekong system, the importance of fisheries for livelihoods of poor people in the Mekong, and the role of gender and women in inland fisheries in the LMB. All of these have relevance to the management of fish stocks by and between the four riparian countries. Issues of Mekong fisheries management and development and the TAB's work were presented by TAB members at a number of regional and global meetings and conferences. In addition to the "TAB Update" newsletter informing on its promotion of fisheries management activities in the Basin, the TAB has now started the production of "Mekong Fisheries Management Recommendations", a series of short publications providing orientation on particular fisheries management issues to policy makers. And, finally, the implementation learning activity aiming at capacity-building in regional issues of fisheries management in the Lower Mekong Basin was initiated.

In order to be able to monitor its progress and impact, the TAB developed a set of indicators and milestones. The main proof of the acceptance of its efforts will be the promotion of events to explain linkages between food and livelihood security and cross-scale fisheries management, as well as agreements between fisheries and water sector line agencies, not by the TAB itself but by national fisheries and water sector line agencies and other concerned organizations. Thus, a major step towards the TAB's main objective of increasing the uptake of information on fisheries management and development into government policies and action plans has been the promotion of events by TAB members from National Mekong Committees and fisheries line agencies to

present and discuss aspects of regional fisheries management and development in their organizations at large.

*Output 3: Fish migrations and valuation of the fishery described*

Reports on fish migration patterns have been produced in several formats (technical and popular publications, and a CD). Most of the work to date has comprised documenting local knowledge of fish migration. Further studies are currently being conducted using tagging of fish, with a view to validating the local knowledge information. This work will be completed in 2005 and published early 2006. The programme has cooperated with other agencies using hydroacoustic techniques to monitor the use of deep pools by fish. The results have confirmed the importance of deep pools as habitats which fish congregate in during the dry season.

The major activity planned on valuing the fisheries of the Mekong has been delayed, due to difficulties in recruiting an experienced economist to run the project (see next section on significant problems encountered).

*Output 4: River and reservoir fisheries co-management capacity of all participating institutions, fishers and other local water resource users is strengthened*

In 2005, emphasis was put on the consolidation and propagation of examples of participatory local fisheries management, which can serve as models for the Lower Mekong Basin as a whole. In addition, fisheries agencies were supported through a large number of capacity-building events to identify and take cross-scale linkages into consideration, address requirements and make use of opportunities at local, national and international levels.

This meant a continuation of activities towards improving fisheries management through such measures as systematic stocking of reservoirs, maintenance of no-fishing zones in critical habitats and seasons, and enforcement of fishing regulations, which has resulted in increases of production and income and reduction in illegal fishing. Participatory decision-making routines are in place and functioning at numerous water bodies in Cambodia, Lao PDR, Thailand and Vietnam, and water body managers have entered their 5<sup>th</sup> yearly cycle of planning, implementation, monitoring and evaluation. MRRF supported the establishment and strengthening of five more Community Fisheries at reservoirs and rivers in Cambodia. In Lao PDR, important steps were undertaken to bring together fishers and local government authorities to initiate the coordinated management of fishing areas of regional significance on Champassak's Khong Island. A large stakeholder meeting was conducted on the Songkhram River, one of the Mekong's major tributaries, which should lead to the reduction of conflicts between users and government agencies in this region. Based on the positive experiences made with applying participatory resource management in rice/shrimp-culture, this approach is now being scaled up to 14 districts in Vietnam's Soc Trang Province in the Mekong Delta.

An important activity of management implementation has been the dissemination of a regionally developed technology of decentralized breeding of fish in mobile and stationary hatcheries to local users, the training of users in operating this equipment, and finally the handing-over of it to user organizations and local government staff. In 2005 alone, a total of nine such hatcheries have been made operational.

Capacity-building also aimed at the identification and establishment of alternative or complementary sources of income from non-fishery activities, activities as handicrafts, trading, food processing and fish-culture. In addition to better family livelihoods, these activities have shown to be an important source of self-funding of community-based management organizations and provide an incentive for their members to participate. In Lao PDR, a major case in point has been the development of an integrated marketing/management system for reservoirs in Vientiane

Province. This went a long way towards providing conditions for sustainable co-management by enabling community management organizations to obtain a large enough share of the profits realized in fish marketing to support management costs by participating, at least partly, in the arrangements regarding the sale of fish.

In Thailand, a data collection and sharing system originating from Huay Luang Reservoir in Udon Thani Province has been established to address inefficiency in information flow and lack of coordination, which had been identified as the major obstacle for better aquatic resources management. Data collection and sharing will now comprise not only fisheries and aquatic resource use in the wider basin of the Huay Luang, including both the reservoir and upstream areas, but also a wider scale of resource users, from fishers to domestic users, irrigators and tourism operators.

*Output 5: Economically feasible culture techniques tested and developed*

The development of aquaculture of indigenous Mekong fish species is showing steady progress. Although alien species are still commonly cultured in the Lower Mekong Basin, in particular on small aquaculture farms, indigenous species are increasingly the preferred option.

The priority is on nine indigenous species, selected for their potential to replace alien species in small scale aquaculture. Although there is great scope for improvement, spawning can now be achieved in captivity for all the priority species. This has been possible thanks to exchange of information and knowledge between the countries and focused training events, on technical as well as management issues.

The domestication of *Cirrhinus microlepis*, one of nine indigenous priority species, has seen further progress. A joint effort by the four countries has brought this popular species closer to what is required to make it widely cultured. Brood stock has now been successfully induced to spawn in Lao PDR, Thailand and Viet Nam. Other related studies include short-term preservation of sperm and a study on nutritional requirements.

A study comparing small scale aquaculture using indigenous species with aquaculture of alien species is nearing completion. The preliminary results indicate that indigenous species are economically feasible and also preferred by farmers.

Stocking of semi-natural water bodies such as reservoirs is a common enhancement approach in the basin. Work has been directed at enabling the production of sufficient quantities of indigenous species for this purpose. The seed to be stocked need to be of appropriate genetic composition to support production as well as to minimize biodiversity impacts. To this end, a mobile hatchery has been developed that has been used with some success in the basin.

### **Significant problems encountered, Corrective action taken**

The FP advertised for a fisheries economist, and encountered difficulties to fill the position of Advisor, Fisheries Valuation. This situation has resulted in the start-up of the study being delayed by six months. The position of Advisor for the Assessment of Mekong Capture Fisheries component will also need to be filled in early 2006.

### **Donor reviews or appraisals**

A joint appraisal of the Fisheries Programme Phase 2 was conducted in April 2005 by Danida and Sida. The outcome was very positive, with the Danida indicating that it could fund Phase II for the years 2006 to 2008. The Secretariat continues to work with other donors, seeking co-funding for the Programme.

## Relevant JC, Council decisions

The JC and the Council have been informed on the progress of the FP through the regular JC and Council meetings. The 12<sup>th</sup> meeting of the Council in December 2005 approved the programme document for the Fisheries Programme Phase 2.

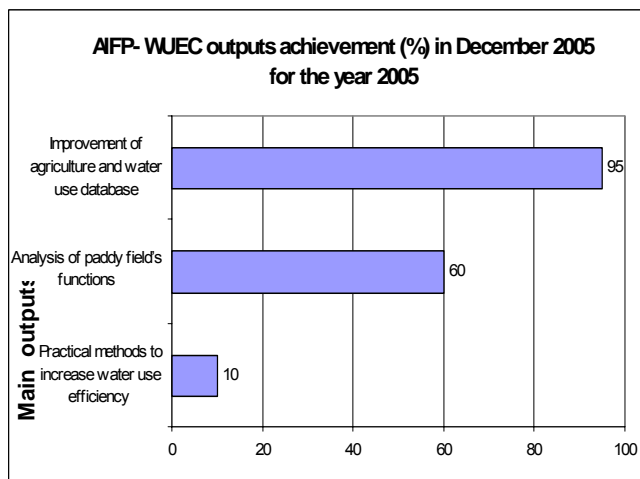
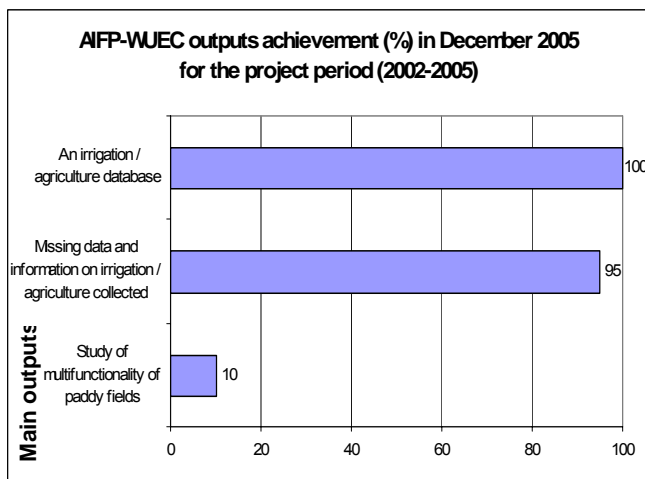
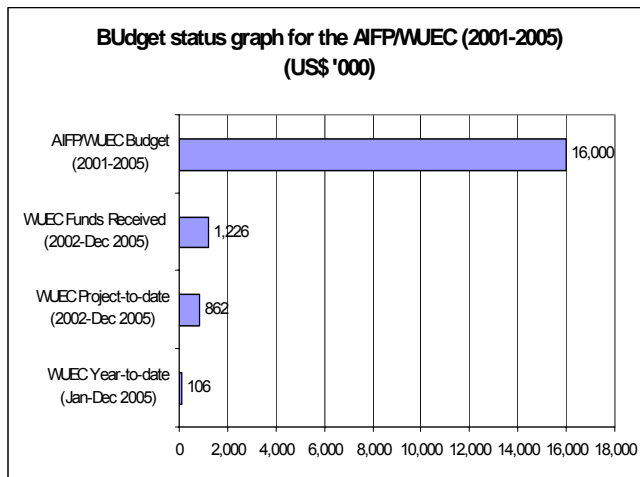
### 4.3.2 Agriculture, Irrigation, and Forestry Programme (AIFP)

2005 is the final year of AIFP based on the current programme document. However, funding from the German and Japanese Governments has been committed beyond 2005.

#### Water Use Efficiency Component<sup>7</sup>

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2005, respectively.

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



Notes: The outputs as presented for the year 2005 and the overall project are not exactly the same, because the original timeframe of the project mentioned in the project proposal (June 2001) is for 5 years from 2002 - 2006, but as decided by the Government of Japan, funding support for the year 2006 has been revised. As a result, project implementation schedule has been shortened to make it more realistic, and both outputs and activities for 2005 have been modified. The progress of the overall implementing period of the project is assessed based on the original project proposal. The progress for the year 2005 is assessed based on the revised outputs and activities.

The outputs as planned in the original project document have proved to be too ambitious to achieve within the current project timeframe. With new funding from the Government of Japan for another 3 years from 2005 – 2007, a revision of the current project outputs and activities is needed. This will be done with inputs from the new Senior Advisor from Japan who joined the AIFP recently.

<sup>7</sup> In 2006, this component has been renamed Irrigation and Agriculture

## **Planned and achieved outputs for 2005**

### *Watershed Management Component (WSMC) – GTZ Watershed Management Project (WSMP)*

A Project Progress Review (PPR) of the Watershed Management Project (WSMP) was conducted by a GTZ Team and AIFP Coordinator in March.

Under output 1: WSM approaches developed, documented and disseminated, the project organised a Training Workshop in June 2005 on “Understanding Organizations and the Management of Organizational Change” in Ho Chi Minh City, Viet Nam. Participants were national coordinators of WSMP, and representatives from NMCs and line agencies from the four Member Countries. This training workshop is one of a training series under the capacity building package of the project to strengthen capacity of the NMCs and staff from line agencies involved in watershed management in the country. A workshop on “Watershed Management Awareness” was organised in Cambodia and Viet Nam by the end of June to help officials from different line agencies and other stakeholders involved in watershed management better understand the concepts and principles of integrated watershed management. It was expected that the workshop would raise awareness of different stakeholders and lead to better collaboration among them. In September 2005, a workshop on Natural Resources Governance and a Regional Policy Dialogue on Institutional Requirements for Watershed Management were carried out. The first workshop addressed the issue of incentives of different stakeholders in their land use practices that may or may not favour sustainable watershed management and how to cope with them. The latter was the second dialogue in the series of this project which provided forum for policy makers to exchange their views and experiences on institutional requirements and the changes needed to support sustainable watershed management.

Under Output 2 (Analysis of national policies and guidelines) and output 3 (Regional collaboration), the WSMP aimed at allowing more flexibility for the National Working Group for Watershed Management in the four member countries to redefine their membership, mandate and role. National Working Group (NWG) meetings were organized in the four countries in May and June to present Project Progress Review (PPR) findings to the NWG members and allow them to discuss country specific issues emerged from the PPR exercise. As a follow up of the national working group meetings in May and June, a joint workshop for National Working Groups on Watershed Management was organised in Siem Riep, Cambodia to allow NWG members from the four countries to : update and agree on the mandate and roles of the working groups in line with country driven activities; exchange experiences among the four countries regarding mandate and roles; identify needs for coordination and cooperation between NWG member institutions and possibilities for improvement; and Identify options for cooperation and exchange of experiences between the four NWGs regarding watershed management issues.

Under Output 4: Information and knowledge management, from mid July till mid August, the project organised a training course on “Information and Knowledge Management” started from Thailand, Lao, Cambodia and Viet Nam. About 15 participants were invited from NMCs, different line agencies and relevant institutions. The workshop aimed to help participants familiar with basic Information Management Concepts and effectively use the Internet for information searching.

Efforts to improve coordination with other programmes within MRC have been made in various occasions. Examples are discussion with BDP on how WSMP could contribute to project identification and formulation through BDP process and how the pilot watersheds identified by



WSMP fit the list of BDP projects. Both AIFP and MRC-GTZ Coordinators also actively contributed to the Strategic Planning Exercise of MRC.

#### Water Use Efficiency Component (WUEC):

The progress made since December 2004 under the project to Demonstrate Multi-functionality of Paddy Fields (DMPF) includes the followings:

Under output 1: Improvement of agriculture and water use database, irrigation, land use and rice crop data has been reviewed. Meetings with Member Countries for mutual understanding and improving of the programme implementation on data collection were conducted. Improvement of data collected in Thailand and Cambodia has been made through sub-contracts with TNMC and CNMC to collect data and to execute on-farm experiments to measure water circulation around paddy field. Conversion of the data collected by Member Countries into GIS format has been completed. GIS dataset on rice farming has been established. A consultant was hired to review the work carried out under DMPF to date and assess how the existing data could be applied to prepare estimates of irrigation water use over the whole LMB. Project final report 2002 including financial report has finally been completed. Final report of 2003 and 2004 are being prepared. Country reports on data collection from the four member countries have been revised and completed.

Under Output 2: Analysis of paddy field's functions, the 3rd regional workshop on the DMPF was organized in late July to sum up the findings from DMPF Phase I. The workshop also discussed and identified potential consultants who would be able to assist the project in developing the methodologies appropriate for the analysis of multi-functionality of paddy field which is the next step of DMPF.

Under Output 3: Practical methods to increase water use efficiency, a new project under AIFP was funded by the Government of Japan in June 2005. Basic concept of this project proposed by the donor is to focus on effective water use, and it will contribute to Output 3 Water Use Efficiency Component of AIFP. Detail work plan for this project is still under preparation. Concept note of the project is prepared, discussed among AIFP, OPD and with CEO, and basically agreed. Collaboration with the FAO is proposed for effective project implementation and enhancement of expected outputs. A series of discussions with the FAO headquarters based on said concept note reached mutual understanding for collaboration in principle. Drafting of project document is now in process. Draft project document is to be distributed to NMCs and discussed in early 2006.

#### **Significant problems encountered, Corrective action taken**

The programme as per current programme document will be finished by the end of 2005. The programme document will need revision in the light of actual programme implementation. A consultant has been recruited in late 2005 to prepare the second phase of the AIFP.

WUEC: There has been a significant delay of planned activities of the project for 2005 due to various reasons, e.g., the delay of activities in the previous years, reports submitted were not satisfactory, relocation of MRC Secretariat. Drought that took place in late 2004 and continued to early 2005 has also contributed to the delay of the planned activities.

#### **Donor reviews or appraisals**

WSMC: The Project Progress Review took place in March 2005. The purpose of this exercise was to review the progress made to date and provide recommendations for improvement for the second Phase of the project. The review has shown a positive result of the project and recommended that the project should be continued for a longer time frame and the 2<sup>nd</sup> Phase of

the project be planned for 2006-2008. Financial support of 2 million Euros from the German Government has been officially confirmed for the new Phase of WSMP.

A Mission of the KfW from Germany also took place in March to assess the feasibility in providing financial assistance to the Lao Government to work on the pilot watershed selected by WSMP. Both PPR and KfW Missions presented their findings to the CEO and Minutes of the Meetings have been signed. A proposal on how MRC and KfW would work together under WSMP has been drafted.

WUEC: Financial support from the Government of Japan through the Ministry of Agriculture, Forestry, and Fisheries (MAFF) for DMPF will end by the end of 2005. New funding under a different project to improve irrigation efficiency has been committed from 2005-2007. Under this new funding, collaboration between MRC and FAO is expected. Discussion and preparation of a joint concept paper has taken place. However, project title, objectives, outputs and activities are to be clearly defined.

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

There has been no decision from the Council and the JC in 2005. The AIFP provided documents for information.

#### **4.3.3 Hydropower Programme (HP)**

##### **Planned and achieved Outputs for 2005**

Since 2003, Hydropower experts together with the BDP Team are carrying out surveys on hydropower sector in LMB.

In 2005, a Task Force has been established at the MRC Secretariat for the development of a new Hydropower Development Programme. A regional consultant was engaged for the preparation of a concept paper.

##### **Significant problems encountered, Corrective action taken**

In spite of its significance, the Hydropower Programme within the present MRC organization plays a modest role compared to that in other sectors. The programme has very limited resources at its disposal. Therefore, a wider Hydropower Programme is under formulation at the MRCS. A programme document defining objectives, structure, outputs etc. is expected for the coming year.

##### **Donor reviews or appraisals**

There has been no donor review or appraisal.

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

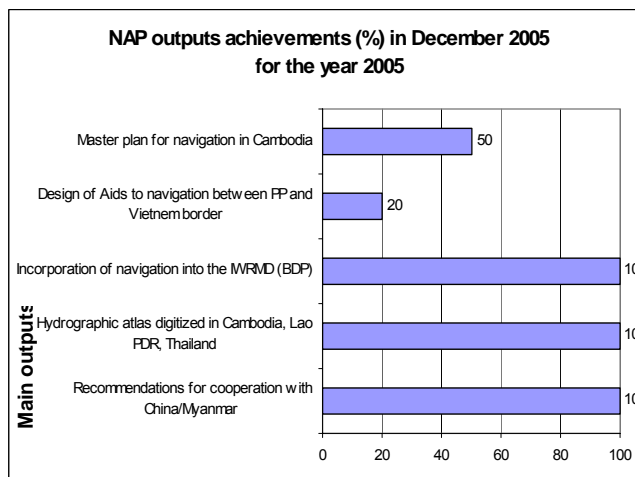
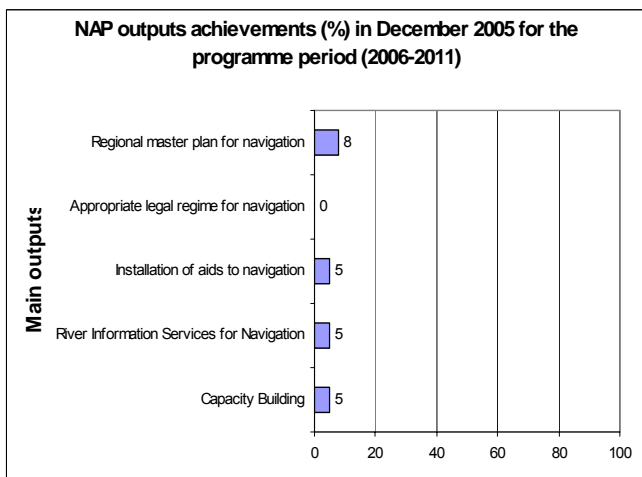
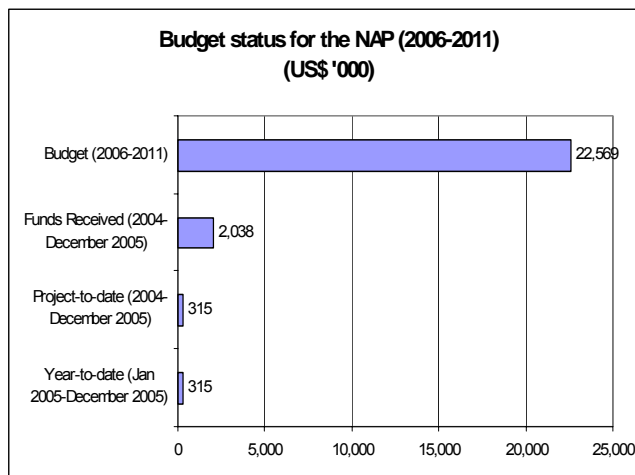
In December 2004, the Council endorsed the creation of a Hydropower Programme (ex-Hydropower Component of the Water Resources Management Programme) to better reflect the new orientations of the MRC. The concept paper was drafted in July 2005 and approved by the JC at its 22<sup>nd</sup> Meeting in August 2005.

#### 4.3.4 Navigation Programme (NAP)

The three following graphs provide: An overview of the budget status of the programme; the outputs achievement for the full programme duration; and for the year 2005, respectively.

As the programme period will officially start in 2006, the outputs completion for this period is therefore at its early stage.

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



Note: budget status include the bilateral project for the Regional Master plan in Cambodia, because this project is part of the overall budget of the programme

Notes: Graph for the programme duration:

Output 1: Regional Master Plan for Navigation (component 1)

Output 2: Appropriate legal regime for navigation on the Mekong River (component 2)

Output 3: Installation of Aids to Navigation (component 3)

Output 4: River Information Services (RIS) for Mekong Navigation (component 4)

Output 5: Institutional Strengthening, Capacity Building (IS/CB) and Training (component 5)

Graph for 2005:

Output 1: Master Plan for Waterborne Transport on the Mekong River System in Cambodia (component 1)

Output 2: Detailed Design of Installation of Aids to Navigation between Phnom Penh Port and Cambodia-Viet Nam Border (project formulated according to the request from the CNMC, for bilateral assistance between the Belgian Technical Cooperation and Cambodia; results will be incorporated into output1 component 3 'Installation of Aids to Navigation').

Output 3: Incorporation of navigation into the Integrated Water Resource Management and Development Strategy

Output 4: UHA Digitizing in Cambodia, Lao PDR and Thailand. The final outputs in different formats

Output 5: Recommendations for cooperation between China/Myanmar and MRC on Mekong Navigation Development (will contribute to the achievement of the output 2 Subcomponent 3 of the Component 4: 'Coordination between upper and lower Mekong navigation')

#### Planned and achieved outputs for 2005

Under Component 1, the project Master Plan for Waterborne Transportation on the Mekong River System in Cambodia - funded by the Government of Belgium - is a bilateral project with regional

significance. It aims at rehabilitating and improving the rural, domestic and international transport network using the Mekong River system in Cambodia.

The Master Plan is being designed to contain an efficient development programme with a short, medium and long term action plan in order to plan, monitor and implement inland waterway transport and maritime navigation. The project started in April 2005 and is currently preparing the long term strategy.

Under Component 3, the Installation of the aids to navigation on the Mekong River from Phnom Penh in Cambodia to Vam Nao Pass in Viet Nam started its preparatory phase in 2005.

Under Component 4, recommendations for cooperation between China/Myanmar and MRC on Mekong Navigation Development have been developed based on the Chinese navigation strategy and the MRC policy on improving waterborne transport on the Mekong River System. The proposal involves activities on navigation, research and training.

#### **Significant problems encountered, corrective action taken**

Preparatory programme work started-up in year 2005. However, funds received were limited and therefore, the first major activities and outputs are planned for year 2006.

#### **Donor reviews or appraisals**

An agreement for navigation project implementation with the Government of Belgium was signed in October 2005 with the provision of a 1 Million Euro contribution to the NAP.

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

The JC and Council have been informed on the progress of the start up of the NAP through the regular JC and Council Meetings.

#### **4.3.5 Tourism Programme (TP)**

Tourism has been considered under the approved Navigation Programme's subcomponent 1 regional master plan for navigation. Supply-demand analysis and investment opportunities for tourism as well as the strategy to stimulate growth of the cross-border waterborne tourism are major activities of the project. To undertake these activities a pilot project was envisaged. The Development of Waterborne Tourism from Luang Prabang to Simao Pilot Project is based on the conclusions, recommendations and lessons learned from existing tourist operations. Subject to availability of funds, the implementation of Navigation Programme's subcomponent 1 is envisaged to begin in 2006.

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

At the 12<sup>th</sup> meeting of the MRC Council, the Secretariat was requested to pay more attention to Tourism.

## ANNEX 1: MRC Strategic Plan 2006-2010 logframe

Goals / objectives What is our purpose? What do we want to achieve?	MRC Key actions / outputs What are the goods and services to be delivered?	Lead Programme/ Section *	Priorities (High, medium, low)	Funding status (Funded, partial, none)
<b>GOAL 1: To promote and support coordinated, sustainable, and pro-poor development</b>				
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	<ul style="list-style-type: none"> <li>• Upgraded modelling toolkit and decision support framework (DSF)</li> <li>• Water supply and demand maps</li> <li>• Basin-wide water resources development scenarios and options</li> <li>• A series of water accounts and verifiable water use indicators to guide decisions-making and development strategy formulation</li> </ul>	WUP WUP BDP BDP	High High/Medium High Medium	Partial None None None
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	<ul style="list-style-type: none"> <li>• Baseline thematic maps of water and related resource and beneficiaries</li> <li>• Consolidated trade-off analysis of development scenarios based on assessed and quantified net impacts on economic, ecological and social values</li> <li>• Process of discussions on trade-offs and mutual benefits in basin development, including forum/ policy dialogue meeting.</li> </ul>	BDP BDP BDP	Medium High High	None None None
1.3 To produce a regularly updated rolling plan applying the planning process for identification, categorization and prioritization of projects and programmes	<ul style="list-style-type: none"> <li>• An IWRM rolling plan</li> <li>• Collaborative basin development planning processes for project identification and prioritization in water related sectors</li> <li>• Integrated Water Resource Management (IWRM) Strategy supported by assessed development scenarios and options</li> <li>• MRC projects and programmes database</li> <li>• Cumulative impact assessment studies of development scenarios</li> </ul>	BDP BDP BDP BDP BDP	High High High High High	None None None None None

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

<b>Goals / objectives</b> What is our purpose? What do we want to achieve?	<b>MRC Key actions / outputs</b> What are the goods and services to be delivered?	<b>Lead Programme/ Section *</b>	<b>Priorities (High, medium, low)</b>	<b>Funding status (Funded, partial, none)</b>
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 <sup>8</sup>	<ul style="list-style-type: none"> <li>• Support to identification and preparation of balanced sustainable development options in partnership with donors, development partners and investment banks.</li>   <li>• Support to Line Agencies with knowledge and expertise in preparation of project proposals, focusing on joint and basin-wide projects and national projects with significant basin impacts</li>   <li>• Project promotion and fund-raising services for joint and basin-wide projects</li> </ul>	BDP   BDP   BDP	High   Medium   Medium	None   None   None
1.4.1 To support sustainable land and water development through more effective and integrated utilization of agricultural, irrigation, drought, and watershed management systems	<ul style="list-style-type: none"> <li>• Watershed management policy guidelines and proceeding</li> <li>• Best practises on watershed management and technologies</li> <li>• Support to Line agencies in identification and preparation of BDP watershed management projects</li> <li>• Basin-wide irrigation efficiency improvement strategy</li> <li>• Institutional and managerial guidelines to improve irrigation efficiency</li> <li>• Assessment of irrigation efficiency in the basin</li> <li>• Assessment of groundwater potential for irrigation</li> <li>• Support to Line Agencies in identification and preparation of BDP priority irrigation development and rehabilitation projects</li> </ul>	AIFP  AIFP  AIFP  AIFP  AIFP  AIFP  AIFP  AIFP	Medium  Medium  Medium  Medium  Medium  High  Low  Medium	Partial  Partial  Partial  None  Funded  Partial  None  None

<sup>8</sup> Supported by sector specific objectives: 1.3.1 through 1.3.7.

<b>Goals / objectives</b> What is our purpose? What do we want to achieve?	<b>MRC Key actions / outputs</b> What are the goods and services to be delivered?	<b>Lead Programme/ Section *</b>	<b>Priorities (High, medium, low)</b>	<b>Funding status (Funded, partial, none)</b>
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	<ul style="list-style-type: none"> <li>• Review and update assessment of hydropower potential in the Mekong Basin</li> <li>• Update basin-wide hydropower development strategy</li> <li>• Update hydropower database of planned and existing dams</li> <li>• Impact assessments of hydropower projects</li> <li>• Best practices to mitigate negative impacts of hydropower focussing on environmental and social impacts</li> </ul>	Operation Division  Operation Division  Operation Division  Operation Division  Operation Division	Medium  Medium  High  High  High	None  None  Partial  None  None
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	<ul style="list-style-type: none"> <li>• Regional master plan for navigation</li> <li>• Legal Framework for Cross-border Navigation</li> <li>• Aids to Navigation Systems</li> <li>• Traffic safety management system</li> <li>• Improved risk and emergency management capacity as related to navigation</li> <li>• Navigation emergency management plan</li> <li>• Navigation pollution control system and environmental management tools and best practices for navigation and river works.</li> <li>• Mekong River Navigation Information Systems</li> <li>• Support to Line Agencies in identification and preparation of BDP priority navigation development projects</li> </ul>	NAP  NAP  NAP  NAP  NAP  NAP  NAP  NAP	High  High  High  High  High  High  High  Medium  Medium	Partial  Partial  Partial  Partial  None  Partial  Partial  Partial  Partial





<b>Goals / objectives</b> What is our purpose? What do we want to achieve?	<b>MRC Key actions / outputs</b> What are the goods and services to be delivered?	<b>Lead Programme/ Section *</b>	<b>Priorities (High, medium, low)</b>	<b>Funding status (Funded, partial, none)</b>
	<ul style="list-style-type: none"> <li>• Increased capacity of local and national fisheries bodies</li> <li>• Technologies for aquaculture of indigenous species adopted</li> <li>• Coordination services in the field of sustainable fisheries development</li> <li>• Support to Line Agencies in identification and preparation of BDP priority sustainable fisheries development projects</li> </ul>	FP FP FP FP	High Medium Medium Medium	Partial Partial Partial Partial
1.4.6 To develop the tourism potential of the Mekong benefiting local economies	<ul style="list-style-type: none"> <li>• Tourism development strategy to benefit local people</li> <li>• Development of tools and best practices to reduce negative impacts of tourism on environment and social conditions</li> <li>• Support to Line Agencies in identification and preparation of BDP priority sustainable tourism development projects</li> </ul>	Operations Division Operations Division Operations Division	Medium Medium Medium	None Partial None
1.4.7 To assess domestic water supply and sanitation options to ensure adequate protection and improvement of peoples' lives and the environment	<ul style="list-style-type: none"> <li>• Report on domestic water supply and sanitation needs in the basin</li> <li>• Water supply and sanitation development strategy</li> <li>• Support to identification of BDP priority water supply and sanitation projects</li> </ul>	Operations Division Operations Division Operations Division	Low Low Low	None None None
<b>GOAL 2. To enhance effective regional cooperation</b>				
2.1 To increase MRC's function as a transparent and effective cooperation mechanism among Member States and develop and demonstrate enhanced linkages, compatibility and complementarities of partnerships with other regional organizations and initiatives such as GMS, the World Bank's MWRAP, ACMECS, ASEAN, etc., including sub-basin organizations	<ul style="list-style-type: none"> <li>• Increased cooperation between MRC Member States</li> <li>• Partnership agreements (MoUs) with developments partners, International River Basin Organisations, and research institutions</li> </ul>	ICCS ICCS	High High	Partial None

<b>Goals / objectives</b> What is our purpose? What do we want to achieve?	<b>MRC Key actions / outputs</b> What are the goods and services to be delivered?	<b>Lead Programme/ Section *</b>	<b>Priorities (High, medium, low)</b>	<b>Funding status (Funded, partial, none)</b>
2.2 To complete, adopt and make applicable mechanisms, procedures and guidelines as required under the 1995 Mekong Agreement	<ul style="list-style-type: none"> <li>• Technical guidelines for implementing the procedure for maintenance of flows on the mainstream</li> <li>• Guidelines for transboundary environmental impact assessment</li> <li>• Procedures/Guidelines for water quality</li> <li>• Technical guideline for implementing the procedures for water quality</li> <li>• Adopted procedures are implemented</li> </ul>	WUP  WUP  WUP  WUP  WUP	High  High  High  High  High	Partial  Partial  Partial  Partial  Partial
2.3 To identify potential transboundary issues for negotiation, mediation and conflict prevention; and develop mediation and conflict management capacity	<ul style="list-style-type: none"> <li>• Increased capacity for managing transboundary issues</li> <li>• Development of awareness of tools and approaches to mediation and conflict management in natural resources issues</li> <li>• Inventory of issues and areas with potential for conflicts in use and impacts related to water</li> <li>• Development of mechanisms to address environmental issues</li> </ul>	WUP  WUP  WUP  WUP	High  High  High  High	Partial  Partial  Partial  Partial
2.4 To promote and improve dialogue and collaboration with China and Myanmar.	<ul style="list-style-type: none"> <li>• Increased cooperation with upstream riparian countries through joint studies and projects</li> </ul>	OCEO	High	Partial
<b>GOAL 3. To strengthen basin-wide environmental monitoring and impact assessment</b>				
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	<ul style="list-style-type: none"> <li>• Environmental water quality monitoring system</li> <li>• Social impact monitoring system</li> <li>• Mekong River ecological health monitoring system</li> <li>• Model of the Mekong Basin's aquatic ecosystems</li> </ul>	EP  EP  EP  EP	Medium  High  High  Medium	Partial  Partial  Partial  Partial

<b>Goals / objectives</b> What is our purpose? What do we want to achieve?	<b>MRC Key actions / outputs</b> What are the goods and services to be delivered?	<b>Lead Programme/ Section *</b>	<b>Priorities (High, medium, low)</b>	<b>Funding status (Funded, partial, none)</b>
3.2 To regularly report on the environmental condition of the Mekong River basin and disseminate this information widely	<ul style="list-style-type: none"> <li>• Updated environmental status report</li> <li>• Updated State of the Basin Report</li> <li>• Updated Basin Report Cards on environmental and on social conditions</li> <li>• Guideline on best environmental management practises</li> </ul>	EP EP EP EP	High High High Medium	Partial Partial Partial Partial
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	<ul style="list-style-type: none"> <li>• Training modules on the use of EIA, SEA, and other tools</li> <li>• Environmental educational kits</li> <li>• Environmental awareness on transboundary issues</li> </ul>	EP EP EP	Medium Medium High	Partial Partial Partial
3.4 To ensure that development initiatives are planned and implemented with a view to minimize negative environmental impacts;	<ul style="list-style-type: none"> <li>• To support line agencies in identification and preparation of BDP priority environmental management projects and protection</li> <li>• Upon request of Member Countries, screening of projects for environmental impacts(Technical support to project level SEA, independent review of EIA)</li> <li>• Promote and support the implementation of transboundary EIA</li> </ul>	EP EP EP	High High High	None None None
3.5 To ensure that social, economic and environmental concerns are incorporated into basin-wide water resources development strategies	<ul style="list-style-type: none"> <li>• Strategic environmental impact assessment (SEA)</li> <li>• Environmental impact assessment (EIA)</li> <li>• Promote stakeholder discussions to identify valuable assets in water resources which are to be protected</li> <li>• Providing information and knowledge to decisions makers through the IBFM process on economic benefits and environmental and social impacts of development as related to changes in the flow regime.</li> <li>• A set of spatial tools to enable planners to take into consideration environmental and social aspects of development plans and projects. Initially covering, wetlands, protected areas, vulnerability and dependence on aquatic resources.</li> </ul>	EP EP EP EP EP	Medium Medium High High High	Partial Partial Partial Partial Partial
<b>GOAL 4. To strengthen the Integrated Water Resources Management capacity and knowledge base of the MRC bodies, NMCs and Line Agencies and other stakeholders</b>				

<b>Goals / objectives</b> What is our purpose? What do we want to achieve?	<b>MRC Key actions / outputs</b> What are the goods and services to be delivered?	<b>Lead Programme/ Section *</b>	<b>Priorities (High, medium, low)</b>	<b>Funding status (Funded, partial, none)</b>
4.1 To improve management systems to allow MRC to operate as a highly effective, transparent and innovative International River Basin Organisation	<ul style="list-style-type: none"> <li>Management policies, systems and manuals</li> </ul>	OCEO	Medium	None
4.2 To establish a technical coordination capacity for preparing and coordinating the implementation of MRC's Work Programme applying IWRM principles	<ul style="list-style-type: none"> <li>Technical coordination advisor and efficient programme coordination mechanisms in place</li> <li>Annual work programmes</li> <li>Harmonized project progress reports</li> </ul>	OCEO  OCEO  OCEO	High  High  Medium	Partial  Funded  Partial
4.3 To enhance and maintain a common GIS-based information and knowledge management and dissemination system to support all MRC activities	<ul style="list-style-type: none"> <li>Operational information system and information management and dissemination tools (GIS, Remote Sensing, portal) supporting all MRC programmes</li> <li>Information and datasets provided to outside users</li> </ul>	IKMP  IKMP	High  High	Partial  Partial
4.4 To maintain partnerships with leading organizations, universities and civil society stakeholders for programme-focussed collaboration of common interest	<ul style="list-style-type: none"> <li>Network of partners (universities, research institutes, civil society and other interested and relevant organizations) established</li> <li>Assessment of research priorities to support MRC's mission</li> </ul>	ICCS  OCEO	High  Medium	None  Partial
4.5 To strengthen the human resources capacities of the MRC, NMCs and the Line Agencies	<ul style="list-style-type: none"> <li>Capacity needs assessment reports</li> <li>Training modules and toolkits</li> <li>Training sessions and study tours of JC, NMCs, MRCS staff and line agencies</li> </ul>	ICBP  ICBP  ICBP	High  High  High	None  None  None
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	<ul style="list-style-type: none"> <li>Regional assessment tools available and promoted for use by NMCS and Line Agencies</li> <li>Training/Orientation sessions in the use of assessment tools for NMCs and Line Agencies</li> </ul>	ICCS  ICCS	High  High	Partial  Partial

## Short-List of Projects and Programmes (1<sup>st</sup> Batch) of the Basin Development Plan (BDP) as agreed by the Joint Committee and the Council

### BDP Phase I

This initial draft short list of projects and programmes (1<sup>st</sup> batch) has been developed jointly by the MRC member countries through the BDP planning process.

The BDP planning and project/programme identification process involved:

1. Stakeholders in the project areas concerned,
2. Relevant BDP Sub-Area Working Groups,
3. Officials from riparian countries participating in different Trans-boundary Meetings,
4. Sector Projects in MRCS
5. BDP Teams in the National Mekong Committees,
6. BDP Team at MRCS.

Project / Programme Code	Project/Programme Title	Initial Budget Estimate in \$	Member State	Class
P 1	Mekong Bank Protection Management	21.7 million	C, L, T, V	B
P 2	Capacity Building in Integrated River Basin Planning and Management	24.5 million	C, L, T, V	A
P 3	Cooperation for Sustainable Tourism Development and Promotion	8.1 million	C, L, T, V	D
P 4	Improved Water Use Efficiency in Irrigated Agriculture Development	66 million	C, L, T, V	A
P 5	Integrated Watershed Management Programme	100 million	C, L, T, V	C
P 6	Water Supply and Sanitation in Selected Areas	54.1 million	C, L, T, V	B
P 7	Flood and Drought Management and Mitigation	40 million	C, L, T, V	C
JP 021	Technical and Investment Promotion in Hydropower Development	0.5 million	3T, 4L	E
JP 036	Development and Improvement of Navigation Facilities and Transport Linkage	50 million	6C, 6L, 5T	C

