




Mekong River
Basin Vision


Mekong River
Commission Vision

Mekong River
Commission Mission

ANNUAL REPORT 1998

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

 **MRC VISION:** A world class, financially secure, international river basin organization serving the Mekong countries to achieve the Basin vision

 **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 by implementing strategic programmes and activities and providing scientific information and policy advice

MEKONG RIVER COMMISSION

Background

The signing of the *Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin* on 5 April 1995 by the four Lower Mekong Basin countries: Cambodia, Lao PDR, Thailand and Viet Nam established immediately the Mekong River Commission (MRC). Its origin goes back to 1957 when the Committee for Coordination of Investigation of the Lower Mekong Basin (the Mekong Committee) was created by the same members under the aegis of the Economic Commission for Asia and the Far East. During the period 1978-1995, without Cambodia the Mekong Committee was known as the Interim Mekong Committee.

Structure

MRC enjoys the status of an international body, including entering into agreements and obligations with the donor or international community. The MRC consists of three permanent bodies: Council, Joint Committee and Secretariat. The *Council* (making policies and decisions) comprising one member from each participating riparian State at the ministerial and cabinet level convenes annually at least one regular session. The Chairmanship of the Council is for a term of one year and rotates according to the alphabetical listing of the participating countries. The *Joint Committee* (implementing policies and decisions) comprising also one member from each member country at no less than head of department level convenes at least two regular sessions every year. Its Chairmanship is for a one-year term and rotates according to the reverse alphabetical listing of the member countries. The Secretariat (rendering technical and administrative services) is under the direction of a Chief Executive Officer (CEO) appointed by the Council. Nominated by the CEO and approved by the Joint Committee (JC) Chairman, the Assistant to the CEO is of the same nationality as the JC Chairman and serves a co-terminus one-year term. The budget of the Commission consists of contributions from its members and the donor community. Formal

consultation with the donor community is proceeded through the Donor Consultative Group meeting convened once a year. Not covered in the Agreement, but acting as focal points for the Commission in each of the member countries are the National Mekong Committees. Also the principal implementers of MRC programmes and projects are the riparian line agencies. Their roles are increasingly more crucial for the successful operation of the MRC. The Commission holds a dialogue with two upper states of the Mekong River Basin: the People's Republic of China and the Union of Myanmar.

Areas of Cooperation

The parties agree to cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin, including, but not limited to irrigation, hydropower, navigation, flood control, fisheries, timber floating, recreation and tourism, in a manner 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.

Visions and Mission

The Council approved in 1998 the following visions and mission:

- *Mekong River Basin Vision:* An economically prosperous, socially just and environmentally sound Mekong River Basin;
- *MRC Vision:* A world class, financially secure, international river basin organization serving the Mekong countries to achieve the basin vision; and
- *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 by implementing strategic programmes and activities and providing scientific information and policy advice.

TABLE OF CONTENTS

Mekong River Commission	2	Management of Watershed and Resources...	20-21
Message from the MRC Council Chairman	3	Key Result Area 2: Environment Programme	21-24
An Overview of MRC Activities	4-5	Integration of Socioeconomic Factors...	25
Council and Joint Committee's Major Decisions ...	6	Key Result Area 3: Hydrology Programme	26
Structure of the MRC	7	Basinwide Spatial Database Development	27
Organization Chart of the MRC Secretariat	8-9	Map of Main Hydrological and Water	
Support from Donors	10	Quality Monitoring Stations in the LMB	28-29
Key Result Area 1: Progress on WUP	11	Key Result Area 4: HRD Activities	30
Commencement of BDP Process	12	Status of Projects 1998-99	31-34
Agriculture and Irrigation Programme	13	1998 Administrative and Financial Review	35-36
River Works and Transport Activities ...	14-15	Donors' Contributions Received: 1994-98	37-38
Hydropower Strategy Principles and...	16-17	Donors' Funds Disbursed: 1994-98	39
Mekong Cooperation through Fisheries	18-19		



MESSAGE FROM THE CHAIRMAN OF THE MEKONG RIVER COMMISSION COUNCIL

I would like, on behalf of the Mekong River Commission (MRC) Council, to present to the readers, MRC donor community, cooperating countries and international organizations who are interested in our Mekong cooperation programme our best wishes.

The MRC has, during 1998, overcome a number of initial challenges and brought our cause of cooperation for the sustainable development of water and related resources in the Mekong River Basin to a new stage. From the previous Work Programme including many projects/activities which have not yet reflected urgent projects/activities that require immediate and prior implementation, the Council during its Fifth Meeting in Ha Noi has approved the Strategic Plan that confirms the Vision for the Mekong River Basin, Vision for the MRC and MRC Mission in accordance with the 1995 Mekong Agreement.

On the basis of the approved Strategic Plan, the 1999 Work Programme has been basically changed to comprise four Key Result Areas. Although with limited time for preparation, the 1999 Work Programme, even in its transitional phase, has presented a number of the most priority programmes/projects for immediate fund-raising with potential donors. Among these, I would like to emphasize the Detailed Planning Phase of the Basin Development Plan and preparation of Rules for Water Utilization in the Mekong River Basin (Water Utilization Programme). These are the key project and programme of our Mekong cooperation cause.

Besides successful implementation of the above projects, the year 1998 also witnessed good results of a number of major activities, which would help the MRC to regain gradually the confidence of its donor community.

The MRC Secretariat, after over 40 years in Bangkok, has been successfully relocated in Phnom Penh. The timely moving of the Headquarters as decided by the Council, training and recruitment of Cambodian general service staff and filling up of many vacant professional posts have helped the Secretariat to maintain its capacity in management and execution of ongoing projects in accordance with the work plans as committed with donors.

To meet the donor community's concern, the MRC member states have agreed to increase their national annual contribution to the MRC operating expenses budget in 1999. Furthermore, the member countries have also committed, in addition to their traditional in-kind contribution to the implementation of the above-mentioned important projects, to pay salaries to certain staff working in related units of their National Mekong Committees.

All of these show our firm determination, not only in words but also in concrete works and actions. With the forthcoming launching of the projects Capacity-Building for Implementation of the MRC Strategic Plan, and Improvement of the Secretariat's Financial Management and Communications Systems as well as expected new commitments, and continued implementation of ongoing programmes/projects, I am confident that this will improve and strengthen the Mekong cooperation work and put it back on the right track.

A handwritten signature in blue ink, appearing to read 'Le Huy Ngo', written over a long horizontal line.

Le Huy Ngo
Chairman of the MRC Council for 1998-1999

1998 was another challenging year for the MRC when many activities and projects, which have a significant impact on the future of our Commission have been carried out. Since March, the MRC started an activity called **Strategic Plan for the Implementation of the 1995 Mekong Agreement** with technical assistance from UNDP. At its Fifth Meeting in October, the MRC Council approved the new Strategic Plan, Visions and Mission Statements and the corresponding Goals we plan to achieve over the next five years. The Plan describes the driving forces that would provide change; key result areas (KRAs) or core business comprising KRA 1: Natural resources planning and development, KRA 2: Environmental management and social consideration, KRA 3: Databases and information systems, and KRA 4: Organization management and cooperation; strategies to achieve our goals and criteria to measure our goals and success. By implementing the strategic planning process, we will be able to develop future annual Work Programme in a focused and logical manner resulting in work activities that contribute directly to our Vision. By adopting the Plan, the MRC shows that it cares about the concerns of the donor community who wishes to see their support follow a clear vision and strategy and that the MRC is moving towards achieving sustainable development as specified in the 1995 Agreement.

With the adoption of the new Strategic Plan, the Council also approved the MRC Environmental Policy and Environmental Impact Assessment Methodology, MRC Agriculture and Irrigation Programme, MRC Gender Strategy, Global Environment Facility (GEF)-funded Water Utilization Programme (WUP) Project, Principles for MRC Hydropower Development Strategy. The Council also agreed to consider the integration of socioeconomic factors and public participation in the MRC planning process and projects.

The **1999 Work Programme** completed in late 1998 takes a direct influence from the Strategic Plan and focuses primarily on the new, high priority, strategic programmes and activities in the four KRAs as mentioned above. However, in view of the transitional nature, it also contains some national projects and activities carried over from the 1998 Work Programme. Out of the total 28

programmes/projects seeking funding, the Council agreed to seek immediately assistance from donors for the following: 1) WUP; 2) Basin Development Plan (BDP); 3) Hydropower Development Strategy; 4) Formulation of Agriculture Irrigation Programme Components; 5) Capacity-Building Programme for the MRC; 6) Human Resources Development (HRD); 7) Participatory Approach in MRC Planning and Projects; 8) Fisheries Programme; 9) Harmonization of Navigation Aids along the Mekong and Preparation for Framework of Comprehensive Mekong Navigation Agreement; and 10) Comparative Study on Environmental Laws and Enforcement Capabilities.

There are 17 ongoing, fully funded programmes/projects/activities with a total secured amount of about USD 36 million, and 12 partly funded (USD 15 million) and 28 unfunded programmes, projects and activities totalling approximately USD 80 million for which funds are being sought from donors. The MRC is positive that programmes/projects presented in the 1999 Work Programme will attract more donor support. Main activities of the following projects were completed by the end of 1998: Natural Resources-Based Development Strategy for the Tonle Sap Area (UNDP), Mekong Forest Cover Monitoring (Germany), Sustainable Irrigated Agriculture-Consolidation Phase (Netherlands), Study for Improvement of Access Channel to the Bassac River (Belgium) and Sekong-Sesan-Nam Theun River Basins Hydropower Development Study (ADB project).

It is worthwhile mentioning that training and capacity-building activities have been included in almost every programme/project. In 1998 more than 900 officials from National Mekong Committees (NMCs), line agencies and MRC Secretariat staff participated in these capacity-building activities. The HRD programme itself has its own basinwide activities. The project Strengthening the Institutional Framework for Effective MRC HRD System: the HRD Focal Points (Switzerland), has been progressing well. Another project entitled Study on the Role of Women in Water Resources Development in the Lower Mekong Basin (New Zealand) produced recently a report on the Guidelines on Mainstreaming Gender in Water Resources Development in the Lower Mekong Basin.

RIVER COMMISSION'S ACTIVITIES IN 1998

Dialogue with the upper states has been continued through the Third Dialogue Meeting held in September. Areas of cooperation discussed in the meeting included hydrology, navigation, environment, tourism and human resources development. An MRC visit to China was agreed upon in principle at the meeting for further arrangements.

Dialogue with the donor community has been strengthened through two Informal Donor Meetings in February and June, and one Donor Consultative Group Meeting in October. The Joint Committee Chairman also led a delegation to visit some donor Headquarters in Europe in May. Much more mutual understanding and willingness to enhance cooperation and support have been developed. As a traditional donor, UNDP has continued to play a key role in institutional support.

Cooperation with the Asian Development Bank and the World Bank has been continued either through joint missions or with MRC acting as project executing/coordinating agency. Cooperation with the Murray-Darling Basin Commission has also been going on successfully with a new three-year programme to be assisted by the same donor (AusAID). Sharing experiences and exchanging views and information with other river basins/deltas have been initiated with the visits of the Executive

Secretary of the Niger Delta Environmental Survey in June and Panel of Experts of the Nile River Basin in November.

Last but not least the **relocation of the MRC Secretariat** from Bangkok to Phnom Penh was one significant event during the year and in the history of the MRC and its predecessor, the Mekong Committee, which was established 41 years ago. The Secretariat has been fully operational at its new Headquarters since September. The official inauguration of the new Headquarters is planned, however, to be carried out in the first quarter of 1999. Effort has been made to recruit and train local general services staff as well as to fill in vacant professional posts to maintain the same efficiency in implementing projects and activities.

In 1999, many activities in the field of capacity-building will continue with an even more emphasis. All member countries will undertake these challenging activities either with bilateral assistance or through MRC activities. Some NMCs committed themselves to restructuring of their organizations by increasing resources. Some important projects/activities are expected to start during 1999 such as WUP (GEF/co-financing donors), BDP Detailed Planning Phase (Sweden/Denmark) and MRC Capacity-Building (UNDP).



Mekong River at Pak Beng

MRC COUNCIL AND JOINT COMMITTEE'S MAJOR DECISIONS/DISCUSSIONS

Below are major decisions/discussions made in the meetings of MRC Council and Joint Committee in 1998:

30-31 March: Seventh Joint Committee Meeting, Vientiane

- ❖ Adoption of Rules of Procedures of the MRC Secretariat;
- ❖ Discussion on actions to be taken to regain donor support;
- ❖ Taking note of reports on cooperation with Murray-Darling Basin Commission and on current activities including Basin Development Plan, Water Utilization Programme, public participation, preparation of Agriculture and Irrigation Programme, Forest Cover Assessment and Monitoring of the Lower Mekong Basin, Sustainable Irrigated Agriculture;
- ❖ Agreement on MRC visit to China;
- ❖ Endorsement of the draft report to be presented to the ESCAP 54th Session;
- ❖ Taking note on notifications by the Governments of Viet Nam and the Lao PDR on their proposed activities; and
- ❖ Revision and agreement in principle on the draft Operational Agreement as prepared by a working group.

8-9 September: Eighth Joint Committee Meeting, Phnom Penh

- ❖ Discussion on how to increase donor support;
- ❖ Endorsement of the draft 1999 Work Programme;
- ❖ Agreement on the proposed list of most urgently needed programmes/projects;
- ❖ Discussion on activities that require commitment of the riparian countries including (1) expediting recruitment of qualified candidates, (2) increasing of national contribution by USD 10,000, (3) preparing an MOU to clarify the roles of all participants with regard to activities under the WUP, (4) authorizing the Secretariat to delete any project that does not fit in with the vision, strategy, criteria and Key Result Areas, (5) ensuring sustainability of the project after completion, and (6) appointing higher-level officials for sub-committees and seminars dealing with important policy issues;
- ❖ Endorsement of the draft Strategic Plan and Strategic Planning Process including the visions;
- ❖ Agreement on the draft TOR of the UNDP-assisted Preparatory Assistance, Stage 2;

- ❖ Endorsement of the Operational Expenses Budget for 1999;
- ❖ Endorsement of Global Environment Facility (GEF)-funded Water Utilization Programme Project proposal;
- ❖ Acknowledgement of the importance of the study on public participation;
- ❖ Endorsement of MRC Gender Strategy;
- ❖ Endorsement of the MRC Environmental Policy and Environmental Impact Assessment (EIA) Methodology;
- ❖ Endorsement of principles for MRC Hydropower Development Strategy;
- ❖ Endorsement of proposals for MRC-MDBC Joint Cooperation Programme for 1998-99;
- ❖ Review of the draft Operational Agreement as prepared by a working group;
- ❖ Acknowledgement of the necessity of integration of social and economic factors in MRC planning process and projects; and
- ❖ Acknowledgement of the importance of public participation.

27-28 October: Fifth Council Meeting, Ha Noi

- ❖ Approval of MRB Vision, MRC Vision, Mission and Strategic Plan;
- ❖ Approval of 1999 Work Programme;
- ❖ Approval of MRC Operational Expenses Budget for 1999;
- ❖ Approval of GEF-funded Water Utilization Programme Project;
- ❖ Approval of a six-point proposal of activities that require immediate commitment of the member countries.
- ❖ Approval of MRC Environmental Policy and EIA Methodology;
- ❖ Endorsement of the concept of integration of socioeconomic factors in the MRC planning process and projects;
- ❖ Approval of Agriculture and Irrigation Programme;
- ❖ Approval of MRC Gender Strategy;
- ❖ Approval of Principles for the MRC Hydropower Development Strategy; and
- ❖ Recognition of the importance of public participation.

STRUCTURE OF THE MEKONG RIVER COMMISSION

COUNCIL (MINISTERIAL AND CABINET LEVEL, POLICY AND DECISION-MAKING)



H.E. Mr Ing Kieth
of Cambodia



H.E. Dr Kithong Vongsay
of the Lao PDR



H.E. Mr Suwit Khunkitti
of Thailand



H.E. Mr Le Huy Ngo
of Viet Nam
Chairman of the Council
(1998-99)

JOINT COMMITTEE (DEPARTMENT HEAD LEVEL, IMPLEMENTING POLICIES AND DECISIONS)



H.E. Mr Khy Tainglim
of Cambodia
Chairman of the Joint
Committee (1998-99)



H.E. Mr Sitaheng Rasphone
of the Lao PDR



Dr Itthi Bijayendrayodhin
of Thailand



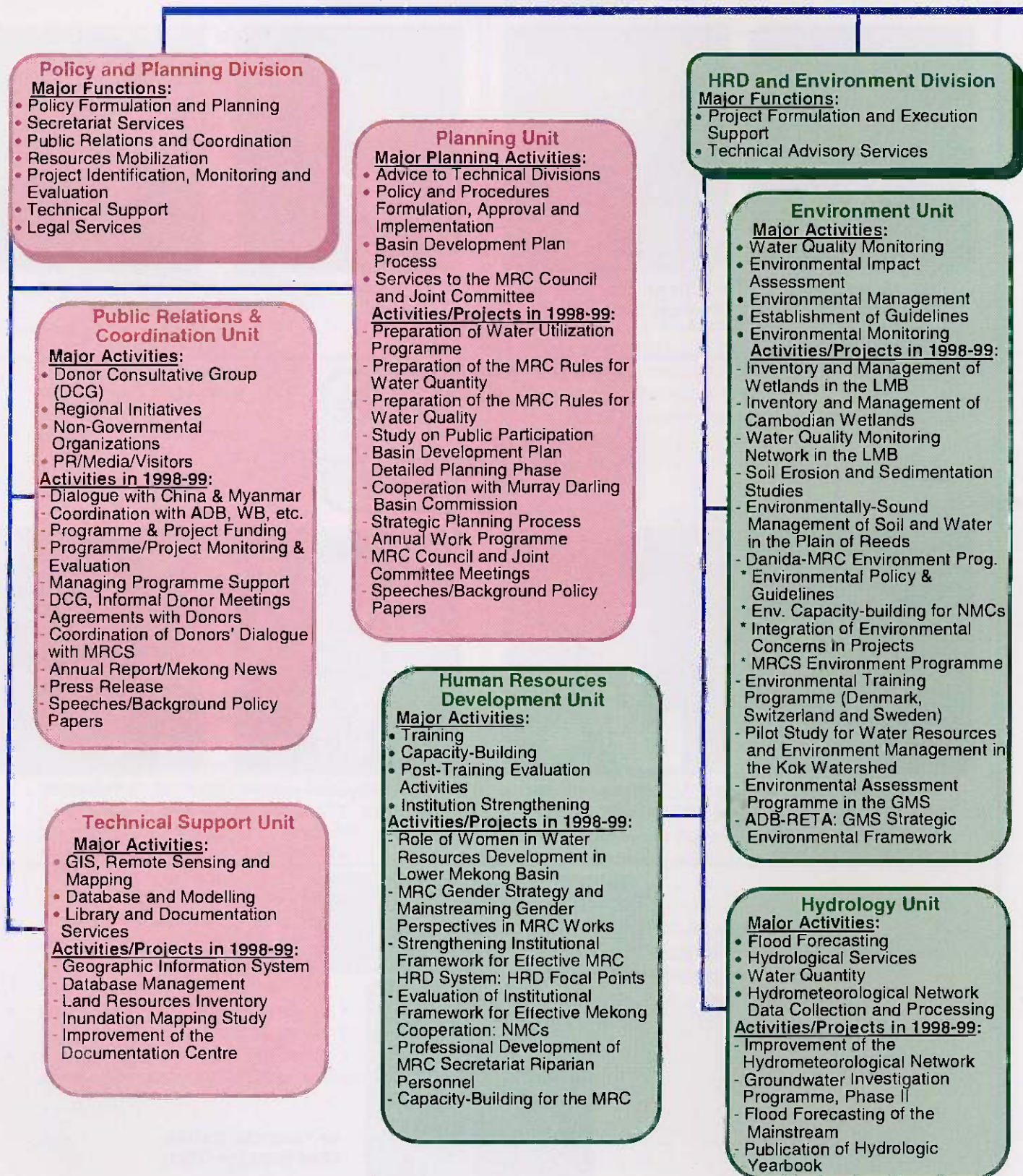
Dr Le Van Minh
of Viet Nam

SECRETARIAT (RENDERING TECHNICAL AND ADMINISTRATIVE SERVICES)



Mr Yasunobu Matoba
Chief Executive Officer

ORGANIZATION CHART OF THE MEKONG



MEKONG RIVER COMMISSION SECRETARIAT

CHIEF EXECUTIVE OFFICER

ASSISTANT CEO

Agriculture Division

Major Functions:
Project Formulation and Execution

Agriculture & Irrigation Unit

Major Activities:

- Agriculture
- Irrigation
- Rural Water Supply
- Socioeconomic Studies

Activities/Projects in 1998-99:

- Sustainable Irrigated Agriculture
- Natural Resources-Based Dev. Strategy for Tonle Sap Area
- Preparation of an Agriculture and Irrigation Programme & Components
- Modern Irrigation Technology Training Course

Forestry Unit

Major Activities:

- Watershed Management
- Watershed Analysis
- Forest Resources Assessment
- Forest Functions
- Farm and Agro-Forestry

Activities/Projects in 1998-99:

- Watershed Classification
- Forest Cover Assessment and Monitoring
- Sustainable Management of Natural Resources
- Watershed Management/Forestry Strategy Study

Fisheries Unit

Major Activities:

- Fisheries
- Aquatic Resources
- Aquaculture

Activities/Projects in 1998-99:

- Freshwater Capture Fisheries
- Reservoir Fisheries
- Assessment of MK Fisheries-Fish Migrations and Spawning & Impact of Water Management
- Rural Extension for Aquaculture Development in Mekong Delta
- Support to Fisheries Management & Dev. Cooperation
- Field Guide to Identification of Mekong Fish Species
- Preparation of Projects on Mekong Fisheries Statistics, Aquaculture of Indigenous Fish Species & Highland Fisheries Development

Resources Development Division

Major Functions:
Project Formulation and Execution

River Works & Transport Unit

Major Activities:

- Navigation and Transportation
- River Training
- Bank Protection
- Transport Studies

Activities/Projects in 1998-99:

- Updating of Hydrographic Atlas
- Upgrading of Ferry Facilities in Cambodia
- Study for Improvement of Access Channel to the Bassac River
- Harmonisation of Aids to Navigation Systems along the Mekong River
- Comprehensive Study on the Chaktomuk Area

Water Resources Unit

Major Activities:

- Hydropower Generation Studies
- Power Transmission Studies
- Water Resources Management
- Flood Control

Activities/Projects in 1998-99:

- Study on Microhydropower for Rural Electrification
- Hydropower Development Strategy
- Flood Control Planning for Development of the Mekong Delta
- ADB RETA: Sekong-Sesan and Nam Theun River Basins Hydropower Study

Tourism Unit

Major Activities:

Project Formulation

Finance and Administration Division

Finance & Accounting Unit

Major Activities:

- Accounting
- Financial Analysis
- Payroll
- Treasury
- Programme & Project Compliance Review
- Financial Controls and Internal Audit
- Financial Accounting Databases

Personnel Services Unit

Major Activities:

- Recruitment
- Staff Training
- Transfer
- Performance Review
- Secretarial Pool
- Support to Riparian-on-Stipend Programme

Administration Unit

Major Activities:

- Administration and Logistic Support
- Computer Support, Trouble Shooting/Maintenance
- Contracting of Procurement and Consultants
- Travel Arrangements
- Archives and Records
- Maintenance/Facilities Management

SUPPORT FROM DONORS

The new financial commitments by the donor community to the MRC in 1998 remained low compared to previous years. There are three main reasons that can be attributed to this situation. The first one might be derived from the donors' concern on the relocation of the MRC Headquarters from Bangkok to Phnom Penh, which took place in the middle of 1998. Anticipating some unavoidable physical and technical delays in the implementation of projects and programmes caused by the actual relocation process, donors refrained from making new commitments until they see the result of the relocation. The second one is due to delayed implementation of some funded and ongoing projects and activities for various reasons. The last one may be related to the MRC's ongoing efforts to streamline its activities and to set up a clear direction. Again donors were waiting for the outcome for their further review.

The situation as seen in 1999 will be totally different. Relocation was completed in a successful manner, without serious damage in operation of the Secretariat. Implementation of delayed programmes/projects has been gradually catching up with their schedule. Parties concerned including the donor community have appreciated the MRC's exercise to set up its vision, mission and strategy with UNDP assistance. However, there may still be some minor concerns from donors, which the Secretariat is making every move to resolve. All these efforts are of course only the starting point of an ongoing process for the MRC as a whole. After some groundwork has been completed as mentioned above, the MRC has now entered into the next stage where more challenges and pressures are expected in the years to come.

During the year of challenge, however, several new commitments have been expressed as follows:

- ◆ *Finland*: Internet facilities, Harmonization of the Navigation Aids along the Mekong River (joint MRC-ESCAP project);
- ◆ *Japan*: Chaktomuk Study, Project Formulation, International Training;
- ◆ *Switzerland*: Core support to MRC; and
- ◆ *UNDP*: Capacity-Building for Implementation of the MRC Strategic

It should be also noted that activities related to important projects and programmes, such as Water Utilization Programme Preparation Project (assisted by World Bank/Global Environment Facility) and Basin Development Plan (public participation study in 1998 financed by Sweden and preparation for detailed planning phase assisted by Denmark and Sweden) have been carried out throughout the year 1998 to pave the way for full implementation in 1999 (please see pages 11-12 for additional information). The MRC has been putting its utmost efforts to contribute to those activities.

Through formal Donor Consultative Group and informal donors meetings, the MRC and the donor community have kept exchanging information and views in a frank and friendly manner on various subjects of mutual interest. Both sides have agreed to continue this practice to promote mutual understanding and communication. These practices have considerably contributed to strengthening the relationship between MRC and its donors, and further facilitating the MRC to accomplish difficult tasks in order to achieve its overall goals.

PROGRESS ON WATER UTILIZATION PROGRAMME

The MRC has completed the preparation of an overall framework on the Water Utilization Programme (WUP) as specified in the 1995 Mekong Agreement. The WUP Preparation Project was implemented under the financial assistance of the Global Environment Facility (GEF) through the World Bank. Also the Government of Japan contributed to the preparation work by financing two workshops organized by the project. The Final Report was finalized at the end of 1998.

The WUP is conceived as a long-term programme aiming to develop, maintain and implement the rules for water utilization as well as related procedures and processes that would be needed to support its implementation. It is an umbrella programme covering planning, basin modelling, data collection, monitoring, and basin management. The main medium-term objectives of the WUP are:

- To provide the MRC Joint Committee with the capacity of undertaking the resource management role assigned to the Joint Committee under the mandate of the 1995 Mekong Agreement;
- To support the activities of the two sub-committees (rules for water quantity and rules for water quality) established by the MRC Joint Committee by providing them with data, information, tools and mechanisms necessary for implementation of their priority tasks;
- To support the MRC activities in the areas of hydrometeorological data, remote sensing and environment; and
- To strengthen capacity of management and staff of the MRC and the National Mekong Committees.

To start up the WUP and to implement the main medium-term objectives as mentioned above, the MRC Secretariat and the World Bank Team jointly prepared, based on the WUP Preparation Project, a *WUP project proposal* for seeking financial support from the

GEF fund. The GEF-funded WUP Project (GWP) will support the establishment of several key components of the initial phase of the WUP and include three main components which are holistic and interrelated activities:

1. *Developing necessary analytical tools and a comprehensive basin simulation-modelling package to support MRC's basin management decisions; determining and monitoring the Rules; and putting functional information sharing mechanisms in place.*
2. *Drafting the Rules to establish minimum flows in the Mekong River and defining water allocation and utilization; preparing detailed information exchange protocols and procedures; preparing detailed review, notification, consultation and agreement protocols and procedures; and assisting in negotiations and consultation during formulation of the Rules.*
3. *Strengthening regional and national institutional capacity of implementation of the Rules; undertaking basin management functions, coordination with upper riparian and donor agencies, supervising and monitoring project implementation, financial and procurement management.*

The MRC Joint Committee endorsed the project proposal at its Eighth Meeting in September 1998; and the MRC Council approved it at its Fifth Meeting in October 1998.

On the basis of the approved Project Proposal, it is scheduled that a Project Concept Document (PCD) will be prepared for approval by the World Bank in January 1999. Once the PCD is approved, a World Bank Pre-Appraisal Mission will visit the MRC Secretariat and member countries in January 1999 to prepare a Project Implementation Plan for approval by the GEF Council and the World Bank in March 1999. The GEF fund then can be available in November 1999. The total cost of the GWP amounts to USD 17.5 million.

COMMENCEMENT OF BASIN DEVELOPMENT PLAN PROCESS

Detailed planning phase of the Mekong Basin Development Plan (BDP), one of the top priority projects of the MRC, finally started in late 1998 with selection of international consultants to carry out the work. Denmark (Danida) and Sweden (Sida) provided the financial support (in the amount of USD 529,000) to this project which is expected to be completed within six months from the commencement date.

The BDP, by definition and as stipulated in Articles 2 and 24 of 1995 Agreement, will be a general planning tool and process that will be formulated and used by the Joint Committee of the MRC to identify, categorize and prioritize projects and programmes to seek assistance for and to implement at the basin level. In this connection, formulation of the *tool and process* could take a few years to complete but the process is expected to be dynamic in nature, which is to continue to operate for years in the future. In line with the short-term goals of its Strategic Plan, the MRC was of a high hope to have this priority project completed at an early date and in this

respect, the *detailed planning phase* is expected to produce important basic documents aiming at an early completion of the formulation stage of BDP. The documents include (i) a review report of situations in the riparian countries and the MRC, (ii) a refined conceptual framework of the BDP, and (iii) the Project Document which would be used for a full appraisal by the same donors for funding of the formulation stage.

To accomplish the detailed planning phase, a seven-member team of consultants, selected in late 1998, would be working in close collaboration with the established team of riparian and international experts at the Secretariat and with assistance from four national planning analysts, one from each riparian member country. Additionally, the work would be carried out under the close supervision and guidance of the 12-member Sub-Committee on BDP established in mid 1996 by the MRC Joint Committee. According to the established work plan, this detailed planning phase of the BDP would be fully completed in July 1999.



Water birds at the Great Lake

AGRICULTURE AND IRRIGATION PROGRAMME

Formulation of Agriculture and Irrigation Programme

An Agriculture and Irrigation Programme for Cooperation Towards Sustainable Development of the Lower Mekong Basin (AIP) that will serve as a practical and integrated approach for agricultural development and will incorporate the achievement of higher levels of production and poverty alleviation while protecting the environment is needed to promote agricultural and irrigation development within the Lower Mekong River Basin (the Basin) in a sustainable and coordinated manner.

The AIP will be designed to address the problems and issues related to the sector's development in the Basin by involving the perspectives of all related stakeholders. It will serve as a strategic tool to the MRC and the riparian countries to improve the quality of decision-making and managerial performance in the planning, formulation and implementation of ongoing and planned agriculture and irrigation programme and projects.

An important step towards the formulation of the AIP was the finalization in July 1996 of the report *Integrated Land and Water Use for Sustainable Agricultural Development in the Lower Mekong Basin* financed by Denmark. An in-house special task force composed of specialists of various sectors was established for preparation of the AIP with assistance of international consultants. An Expert Consultation held in Bangkok in October 1998 involved stakeholders concerned from member countries, international and regional experts, representatives from major funding agencies and the donor community to discuss the third draft AIP. Findings and recommendations were provided concerning the completion and adoption of a common AIP agreement for sustainable AIP development and on the specific role and mandate of the MRC in the implementation of the AIP.

The Council approved in October 1998 the final draft AIP that took into consideration recommendations of the Expert Consultation. The Council also noted the AIP as priority programme and suggested focusing not only on irrigated areas but also existing farm areas.

A proposal for follow-up activities has been submitted to a donor. It will develop implementation strategy, action plan and formulate priority programmes/projects to develop agriculture and irrigation in the Basin following the guidelines of the AIP.

Development Strategy for the Tonle Sap Area

The objectives of the UNDP-supported project *Natural Resources Based Development Strategy for the Tonle Sap Area, Cambodia* are (1) to enhance capacity-building and institutional strengthening for coordination of development and management of the project area, and (2) to formulate a sound development strategy for water and related

resources of the Great Lake – Tonle Sap area together with an Action Plan.

In May 1998 a workshop was held in Phnom Penh to review the draft Final Report with participation of related experts on the development of the Tonle Sap area. The major activities of the project was successfully completed with the Final Report in June 1998 recommending development strategies and related project ideas to be considered for the Tonle Sap area.

The Cambodian project counterpart team continued its activity until the end of 1998 to identify and formulate priority projects for the follow-up of the project. The Secretariat will subsequently screen and review the proposals to be included in its Work Programme to seek financial support.

Sustainable Irrigated Agriculture Project

From 1992 to 1997, the Sustainable Irrigated Agriculture Project (SIRAP), financed by the Netherlands, was carried out. It contributed to development procedures as well as implementation method for sustainable irrigated agriculture in Lao PDR and Thailand.

Following the first stage, the SIRAP consolidation phase (April 1997 – December 1998) was implemented to confirm the results achieved during the previous phases with emphasis on the involvement of government and farmers in a development strategy based on the participatory approach. In the Lao PDR, SIRAP improved the irrigation management transfer process and legal aspects of the water user associations. In Thailand, SIRAP improved the group development process developed during the previous phase.

After completion of the consolidation phase, a request for the extension of the project due to transition phase was submitted to the Government of the Netherlands for funding consideration.

Modern Irrigation Technology and Extension Training Course

The MRC Secretariat organized the second regional training course on Modern Irrigation Technology and Extension in Hanoi, 15 February-6 March 1998 with financial support from the Republic of Korea and the State of Israel (the first course held in Khon Kaen in 1997).

The purposes of the training were: (1) to promote awareness of modern irrigation technology and extension as tools for improving crop diversification and production method; and (2) to get the participants familiar with the planning, design, and implementation of irrigation systems, methods and scheduling, and systems maintenance, and assessing of the need and possibilities for future modernisation of irrigation scheme. Thirty-two riparians from the four member countries participated in the training.

RIVER WORKS AND TRANSPORT ACTIVITIES

As a result of the new MRC vision and mission, and in accordance with the key result areas and criteria as set forth in the new MRC Strategic Plan, the 1995 Strategy on Navigation Improvement was presented as the International Navigation Programme that emphasizing basinwide projects to solve cross-border issues, facilitate transit procedures, and standardize basinwide navigation training and waterborne transport procedures. The MRC is the ideal forum for discussion on these issues and acts as the executing agency in the region.

The International Navigation Programme

The term *navigation* in the purely technical sense means no more than the movement of vessels; in this sense the term is used in regulations bearing on the technical conditions for the movement of ships. *International Navigation* however, the freedom of which has been established in international law and treaties, and in agreements, has quite a different meaning and as such forms one of the corner stones of all major river commissions. Each international agreement envisages the granting of freedom of navigation as an economic activity within a framework of cooperation, and welcomes this right as one of the tools in trying to develop 'mutual economic prosperity'.

- ◆ Not all stretches of the Mekong show the same "economic" potential for an adopted ship size or for better and safer navigation, but as far as possible, the MRC will assist in designing a common river transport infrastructure employing the natural potential of the Mekong River. In order to provide a *common base for international navigation along the Mekong River for the six riparian countries and to avoid further accidents*, it is important to have one regulatory uniform system of channel marking. The *Harmonization of Aids to Navigation Systems along the Mekong River*, a joint project by ESCAP and MRC (supported by Finland) will also demonstrate and enhance the cooperation and coordination between Upper and Lower Mekong Basins. The project is to start in April 1999.
- ◆ A major constraint on a sustainable increase in efficiency and productivity of waterborne trade is inadequate training of skilled waterway users. A basinwide approach to navigation training *for men and women* (in Viet Nam, 45% of the waterway users are women) will encourage the development of safety standards and will facilitate the use and recognition of prospective common navigation rules and regulations. The existing project proposal *Navigation Training Standards and Common Core Syllabi* focuses on the development of training standards to be in accordance with the qualifications and certification of competency, the Conventions, Recommendations and Guidelines of the

International Labour Organisation and the International Maritime Organisation.

- ◆ A river morphology favorable to maritime navigation in the Mekong Delta, economic development and investment opportunities, rehabilitation of ports such as Phnom Penh and Can Tho, fast growth of food production and foreign trade will in the future require a considerable expansion of the transport capacity. To cope with this development, a *well defined legal and regulatory framework governing the inland waterway transport in Cambodia and Viet Nam, and the transit of maritime traffic through Viet Nam* is required. The MRC should, as a river commission, be the agency to facilitate cooperation and assist in defining the respective operational and administrative responsibilities for future transit and international navigation.
- ◆ *Integration of environmental and socioeconomic considerations* into river works and transport programmes and activities, and active participation of the river works and transport team in the formulation of the *Basin Development Plan and Water Utilization Programme*.

Implementation of Projects during 1998

Geographically, the project *Updating of the Hydrographic Atlas - Completion Phases*, with financial assistance from the Finnish Government, is aiming at updating the Hydrographic Atlas as follows: the Mekong River from the sea to the Lao/Cambodian border, the Bassac River from its mouth to upriver and including the Vam Nao Pass, and the Tonle Sap River with the Great Lake. The objective is to improve sustainability of updating the hydrographic Atlas through provision of modern equipment and skilled technicians in hydrographic surveying and map production in the riparian countries. The maps are basic and necessary tools for the waterway operators as a guide for navigation, for every activity of navigation development planning, channel marking, dredging and river training works, etc. The acquired information will be extremely useful to the Water Utilization Programme. The establishment of a Hydrographic Office in Cambodia is an important component of the project. This office, together with its counterpart office at SUDEWAT in Viet Nam, will greatly contribute to an accelerated and effective improvement of navigation in the Mekong Delta.

Not only long-haul river transport was taken into account, but also essential cross-river carrier links have been duly upgraded. In this regard, the MRC Secretariat has, since early 1996, commenced the Danish-funded project *Upgrading of Ferry Facilities in Cambodia*. The project involves the construction of two new ferries and rehabilitation of three old ones, as well as improvement of landing facilities and civil

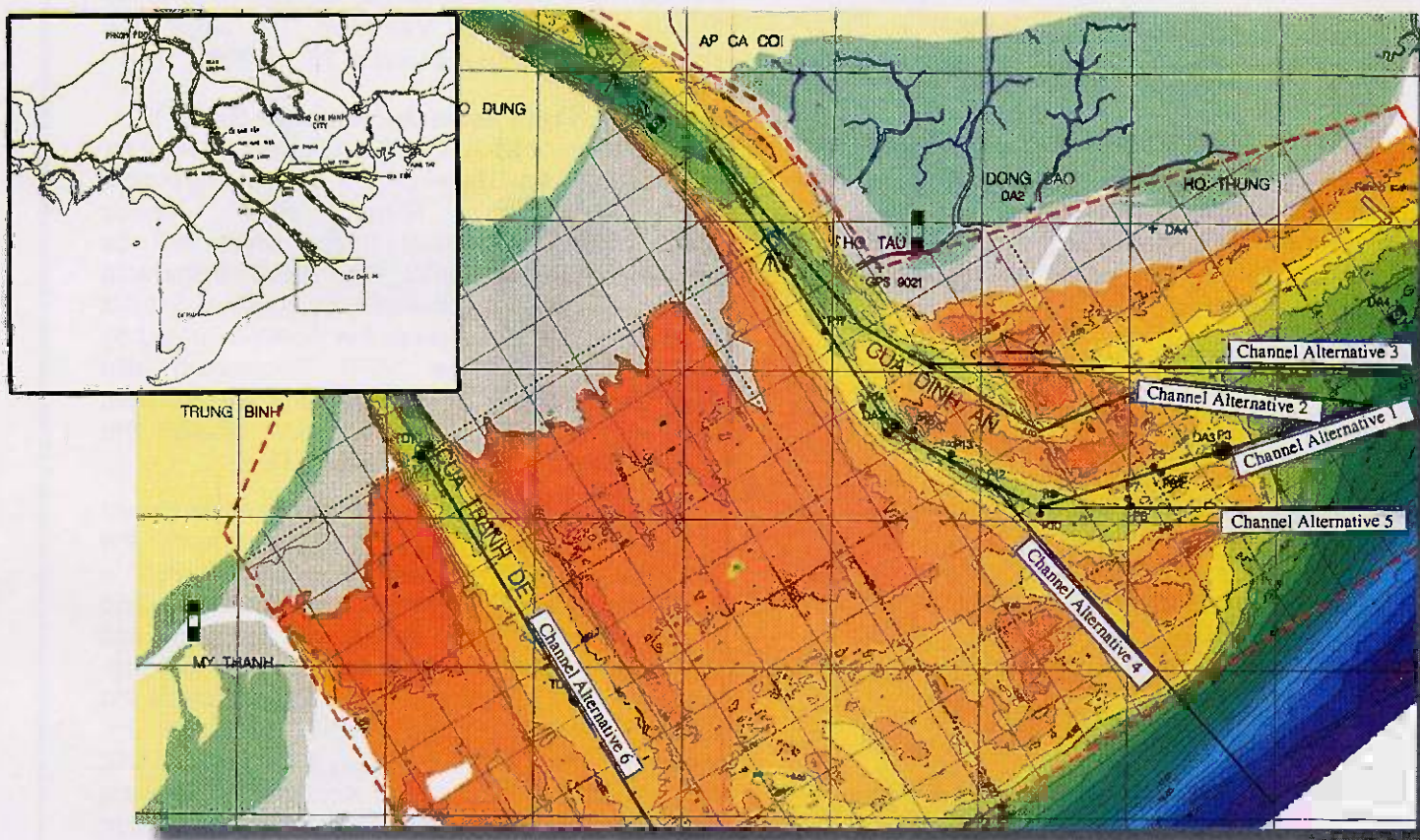
NAVIGATION PROGRAMME

works structures at key river crossings in Cambodia. Following the two new vessels *Ta Prohm* and *Vishnu*, the rehabilitation of *Peace 2* at Neak Leung Ferry Station was completed in April 1998. The rehabilitated ferry *Samaki 27* was handed over to the Cambodian Government in October 1998 for operation at Kompong Cham, and the third rehabilitation *Samaki 28* will be ready in February 1999 for operation at Prek Kdam. A full operational shipyard, adequate workshop facilities and an equipment centre have been established at Neak Leung for overhauling or necessary repairs of the vessels. The slipway can be used for future ship buildings as well.

The results derived from the extensive survey campaigns in the Bassac Estuary as part of the first component of the *Feasibility Study for the Improvement of the Access Channel to the Bassac River* have been processed to serve as a base for the flow, wave and sediment transport mathematical model to predict future sedimentation in the selected channel alternatives. In parallel hereto a detailed financial and economic analysis was carried out weighing costs against benefits to define the economic viability of deepening the channel and to what extent it is justified. By additional modelling to investigate alternatives such as a freight-sharing system for Can Tho/Saigon Port using lightened

larger vessels and reducing long-haul traffic, the under-estimation of the Bassac potential has now been refuted. In order to reach a consensus on the feasibility report among all parties and to seek the participation of the national experts and all beneficiaries concerned, a Project Participatory Workshop was organized in April 1998. During the seminar scheduled for January 1999 all stakeholders will again have the opportunity to participate before the report is finalized.

In December 1998 the Government of Japan decided to financially assist a similar project, the *Comprehensive Study on the Chaktomuk Area – Environment, Hydraulics and Morphology*. The downstream displacement of the Mekong-Bassac-Tonle Sap confluence (Quatre Bras) in comparison with the Phnom Penh City development and expansion has deregulated the habitual flow pattern of the Mekong, Bassac and Tonle Sap waters. Extensive survey campaigns, processing, modelling and analysis will allow the study team to predict the consequences of this disturbance to the Great Lake and to the upstream and downstream stretches of the Mekong and Bassac Rivers (i.e. increased salt water intrusion in the downstream Mekong Delta). Based on the results, the study team will make recommendations for an implementation strategy to remedy the situation.



Study of six alternatives for the optimal access channel to the Bassac River

HYDROPOWER STRATEGY PRINCIPLES AND WATER RESOURCES ACTIVITIES

Hydropower Development Strategy

To accommodate the prevailing economic, social and environmental changes in the Lower Mekong Basin, a review of hydropower development policy and subsequent formulation of an appropriate hydropower development strategy are required. For supplying energy to the Mekong region, hydropower could perhaps be a better option since it is renewable, relatively clean and does not cause air pollution and global warming. However, it creates inundation of lands and forests, impact on fisheries and other resources. It may also cause disturbance to the environment and population in terms of changes in flow regime and water quality as well as displacement. When developing power schemes, environmental impact assessment and social impact procedures and standards should be conducted and mitigation measures recommended for sustainable development.

The MRC Hydropower Development Strategy will identify the appropriate role of the MRC in development of the hydropower potential in the Mekong Basin, in consultation with the riparian countries, international organizations and other stakeholders, and with due consideration to the environment, social impacts and the well-being of the basin's population. Endorsed by the Joint Committee in September and approved by the Council in October 1998, the five principles for this strategy are as follows:

- ◆ Exchange of information among the MRC member states as well as the Greater Mekong Subregion countries;
- ◆ Close cooperation with international institutions such as: the Global Water Partnership and the World Commission on Dams and lending agencies for consultation on suitable ways and means for sustainable development of hydropower projects;
- ◆ MRC should concentrate its hydropower activities on the basis of integrated planning of the mainstream and basinwide sub-basins and investigation up to a certain level such as pre-investment stage. The construction and related detailed studies rest with the countries and lending agencies while the MRC should coordinate and monitoring basinwide activities. The MRC should also have a role in the preparation of regional transmission network;
- ◆ State-of-the-art of cumulative environmental impacts and socioeconomic aspects as well as mechanism for public participation by stakeholders in hydropower planning and development should be carried out by MRC in its efforts to promote the most effective use of the

natural resources in the Lower Mekong Basin; and

- ◆ MRC should encourage private sector to join its efforts in developing the Mekong hydropower potential with proper consideration to the environment and the well-being of the people living in the basin.

Rural Electrification

Started in late 1994, the Japanese-funded basinwide project *Study on Microhydropower for Rural Electrification* is to assess the needs and possibilities for rural electrification by developing microhydropower projects in the member countries. The study has identified several microhydropower projects in the Lao PDR and Cambodia for further feasibility studies and has selected the most suitable site for construction/implementation in Cambodia. The current stage is going to be completed soon and funds for implementation phase is being sought.

Flood Control Planning for Development of the Mekong Delta (Cambodia and Viet Nam)

The objectives of the project are to: (i) formulate an immediate action plan; and (ii) recommend short and long-term measures to reduce/alleviate damages from flooding to safeguard the people's life and properties in the project areas. The Government of the Republic of Korea has provided the project with USD 872,000 to cover the Mekong delta areas in both Cambodia and Viet Nam. The project will start in early 1999 for a period of 18 months.

Cooperation with Asian Development Bank

The Secretariat acts as Coordinating Agency for the two-year Asian Development Bank (ADB) project *Sekong-Sesan-Nam Theun River Basins Hydropower Development Study*, which will be completed in early 1999. The MRC Secretariat coordinates related activities with National Project Directors and ADB oversees the work performed by the Consultants. The MRC Secretariat also organized several meetings and workshops, especially the second workshop to discuss the Interim Report in Vientiane in March 1998.

Based on the formulated plans for development of hydropower potential in these three basins, the study recommended six suitable projects, through a screening process in terms of environmental and socioeconomic impacts as well as economic and financial indicators, for further investigation at pre-feasibility and/or feasibility levels. These include the Lower Sesan 2 and Lower Srepok 2 in Cambodia; the Nam Kong 1 and Xe Kaman 3 in the Lao PDR; and the Sesan 4 and Upper Kontum in Viet Nam. The last workshop to review the draft Final Report and the Third Project Steering Committee Meeting will be held in Ho Chi Minh City in January 1999.



The MRC Programme for Fisheries Management and Development Cooperation started in August 1995. It works in close collaboration with line agencies for fisheries of the four member countries, covers a "rolling" period of five years and is revised and extended for the next five-year period at the Annual Meeting in June. It comprises components for (1) Capture Fisheries and Aquatic Resources Management, (2) Small-scale Aquaculture Development, (3) Strengthening of Fisheries Institutions, and (4) Coordination and Information Dissemination. Under this "umbrella" arrangement, approx. USD 14 million have been received from Denmark since 1993 for the implementation of five priority projects under the Programme.

Three Levels of Fisheries Management

Management systems are developed at three levels under the Component for Capture Fisheries and Aquatic Resources Management. The Assessment of Mekong Fisheries Project focuses on management issues at a regional level. During its first year of operation in 1998 it has been carrying out a comprehensive basinwide assessment of the value of the aquatic species and quantifying national as well as trans-boundary effects of water management interventions on the living aquatic resources. The methodology and preliminary findings were presented at the First Technical Symposium on Mekong Fisheries in Phnom Penh, 7-8 December 1998. In future, this project will try to clarify fish migration routes as well as conduct several aquatic environmental impact assessments.

The Project Management of the Freshwater Capture Fisheries of Cambodia which began in 1994 is developing fisheries management systems at a national level. It is drawing up management strategies that may be adapted to neighbouring countries. It is now in a transitional bridging phase and awaits final clearance to begin Phase II later in 1999.

The Project Management of Reservoir Fisheries in the Mekong Basin is focusing on fisheries management at the local level, using the reservoirs and their often not fully utilized production potential as its direct target. It will develop management systems and guidelines that may also be used for other local water bodies such as lakes, wetlands or river reaches. Joint basinwide fisheries management schemes will be established in cooperation with the four riparian line agencies, if sufficient information is available.

Aquaculture Development Linked to the Environment

Under the *Small-scale Aquaculture Component*, the *Project Rural Extension for Aquaculture Development in the Mekong Delta* began in 1998. It aims to target fish production at small-scale farms directly. However, this is not in isolation to capture

fisheries since environmental impacts studied under the Assessment Project have repercussions for fish culture in rice fields and ponds as well as on the production of natural fry used for stocking of cages and water bodies in some aquaculture systems. Aquaculture may also influence the capture fisheries resources. Thus, preparations have begun to address two important issues: the development of aquaculture systems based on indigenous Mekong fish species, in order to replace the continuous introduction of exotic fish species in the Basin, and the development of aquaculture in mountainous areas conserving at the same time the existing natural fish resources. Several of these activities are relevant to the present Reservoir Fisheries Project. Stocking of reservoirs and pen and cage culture options for increasing the fish production from reservoirs are based on aquaculture activities, although stocked fish will end up being caught like wild fish, as will fry reared in pens and fish that have escaped from cages. The reservoir fisheries thus share some of the same environmental concerns as aquaculture production and in particular, the interest in developing fish culture of indigenous Mekong fish species.

On-the-Job Capacity-Building in 1998

Under the *Component for Institutional Strengthening* numerous training activities were arranged during the year, both in the riparian countries and further abroad. However, it is the overall strategy to improve institutions in direct connection with the implementation of projects under the Capture Fisheries and Aquaculture Components. To this end respective project offices are located within existing institutions in the region. So far, only the *Project Strengthening of Fisheries Information Systems*, now seeking funding, has been planned under this Component. The Project will establish a basinwide inland fisheries statistics system combining the results of all the projects together in an overview for national and regional economic planning purposes.

The MRC Joint Committee Selected Priority Fisheries Projects

The MRC Joint Committee earmarked three fisheries projects as "high priority" for 1999: (1) Establishment of a National Aquatic Resources Institute in the Lao PDR, (2) Management of the Freshwater Capture Fisheries of Cambodia, Phase II, and (3) Management of Reservoir Fisheries in the Mekong Basin, Phase II. If funded, these priority projects would generate over USD 9.8 million from external sources.

Component for Coordinating and Information Dissemination

Finally, this component comprises the activities of the MRC Secretariat under the *Project Support to Fisheries Management and Development Cooperation*. The MRC Secretariat assists with project execution, arranges Programme Annual

THROUGH FISHERIES

Meetings where results are shared and discussed, produces the quarterly newsletter, *"Catch and Culture"*, where information from the projects is disseminated, and supports the "Mekong Women in Fisheries Network", among other things.

Danida Review Mission in December 1998

After more than five years of support to fisheries development through the MRC, Danida reviewed the MRC Programme for Fisheries Management and Development Cooperation in December 1998. The Review Team spent a full two weeks conducting their investigations. The timing of the Review Mission made it possible for the Team to witness the First Technical Symposium on Mekong Fisheries, 7-8 December 1998 where they witnessed 42 scientific papers summarizing some of the activities of the Programme. The Team also attended three Project Steering Committee Meetings for the Aquaculture, Assessment and Reservoirs Projects, which took place back-to-back with the Symposium.

Although the Team supported the activities and the approach of the Programme, it recommended a stronger emphasis on the rural poor in the aquaculture component and on some of the potential negative environmental impacts of aquaculture. The Team was of the view to continue to build the capacity of existing staff.

What the Countries Think of the Programme

The line agencies for fisheries cooperate fully with the Programme during the implementation of the projects in their respective countries. Moreover, the NMCs participate in the Programme Annual Meetings.

All the NMCs have cited the importance of the Fisheries Programme in their respective countries. It was agreed that a Committee for Fisheries Management be established in order to share information among the four riparian countries and jointly manage the fisheries in the Mekong Basin.

The Cambodia National Mekong Committee also advised that the Programme should pay attention to external impacts such as deforestation, dam construction, pesticides, etc., upon the aquatic resources. Cambodia called for a way to find viable approaches to sustain the fisheries for the benefit of all in the basin.

The Lao National Mekong Committee representatives expressed satisfaction with the Programme in terms of reaching its goals toward food security. It especially cited the value of the fisheries information system and the institute to be established in the Lao PDR.

The Thai National Mekong Committee observed the importance of fisheries to the Thai people. It agreed that it is useful to improve knowledge on fisheries management in a basinwide context.

The Viet Nam National Mekong Committee appreciated conducting basinwide meetings to strengthen better coordination among the fisheries projects within the Programme. Viet Nam has consistently rendered firm support to the Programme. Rural people benefit substantially from MRC field-based fisheries projects.



The whole family gets involved in the cage culture along the Tonle Sap River.

MANAGEMENT OF WATERSHED AND RESOURCES FOR SUSTAINABILITY OF THE MEKONG BASIN

Environmental degradation, pollution of air and water, soil erosion, threats to biodiversity are phenomena related to human intervention in different ecosystems. These problems are of transboundary nature. The mitigation of detrimental effects on human and the environment therefore requires concerted efforts. Main activities of the watershed and forestry sector are the assessment of the watershed and forest cover for both monitoring and management purposes while the remaining ones focus on information gathering and planning for watershed protection. They are closely coordinated and complement each other. Implementation of the following projects should provide an optimum combination for the forestry sector.

Implementation of Projects during 1998

The Government of Switzerland has funded the project *Watershed Classification* since 1992 with the aim to elaborate a watershed classification system for the Lower Mekong Basin and to make a cartographic assessment of the watershed using the classification developed. Watershed classification describes the potential topographic soil erosion risks of a landscape on the basis of its physical and/or environmental features. It is oriented towards the upstream areas and calculated by means of the topographic features of a landscape (elevation, landform and slope).

The project was designed to provide an analytical tool for land use planning and watershed management in the Lower Mekong Basin. While Phase I of the project (1992-96) focused on data generation and finalizing the Watershed Classification Map for the Lower Mekong Basin, Phase II (1997-99) addressed technology transfer and training issue as its first priority.

The transfer and training activities concern the enhancement of Geographic Information System capacity at the Secretariat, strengthening of the national watershed classification organizations, and watershed classification transferring and monitoring activities. These new skills would facilitate the MRC Secretariat and national watershed classification organizations to apply the watershed classification data generated under Phase I into regional and national planning process. Phase II will also complete and refine the watershed classification database with the inclusion of the Thai part, the rest of Cambodia in digital form, and the two crucial elements for watershed planning and management namely geology and soils data.

While the Watershed Classification Project concentrated on land classification, the German Technical Cooperation (GTZ) project *Forest Cover Assessment and Monitoring* focused on forest resource of the Lower Mekong Basin. After six years of operation this project will be completed at the end

of January 1999. Through the assessment and monitoring of the forest and land cover in the Lower Mekong Basin, the project produced the forest cover maps and created new database containing a large volume of valuable data in digital form at the national and regional levels (scale: 1: 250,000). The results are useful to the riparian departments and institutes concerned for their future planning of their forests and watershed management. Moreover these results can be incorporated with those of Watershed Classification Project in planning of hydropower generation, irrigation facilities at regional level and constitute the relevant source of information for decision-making on land use policy at national and regional levels.

In terms of capacity-building, six years of activities have significantly improved the technical planning capabilities of the riparian land use planning agencies. They have also strengthened the professional ties between riparian countries and the MRC Secretariat.

With a view to securing a high degree of sustainability in human resources and technical capabilities, the post project support will continue until December 2000. The follow-up activities have been merged with the following other GTZ project *Sustainable Management of Resources Project*.

The GTZ Sustainable Management Resources Project is to achieve sustainable upland natural resources utilization, conservation and rehabilitation in harmony with the development and use of water resources downstream in the Lower Mekong Basin.

One outstanding result of Phase I was the Information System designed to: (1) support the project's efforts in identifying and analyzing concepts and methodologies in participatory natural resource management (PNRM) within the region, and (2) provide the MRC Secretariat and its riparian counterparts with access to compiled information on PNRM in order to complement ongoing and future project designs. In October 1998 the regular annual planning workshop was held in Ha Noi to discuss the project's achievements and the plan for the coming year.

Phase II (1998-2001) is to achieve the methodologies and concepts which allow for due consideration of the multitude of variables in the process of planning and implementation of the development programmes and for the sustenance of investments made thereby. The development of such methodologies and concepts will be carried out on the basis of the experience made to date in ongoing resources and watershed management projects in the riparian countries (the Forest Cover Assessment and Monitoring Project for example) and in the region.

(cont'd on page 21)

ENVIRONMENT PROGRAMME

In the Mekong Basin sub-region there has been increased awareness on environmental issues. The recent MRC strategic planning exercise confirmed the need to integrate environment, economic and social considerations into all MRC programmes. The objective of the MRC *Environment Programme* classified under Key Result Area 2 in the 1999 Work Programme, is to integrate environmental aspects at all steps of the project cycle in the development of the Mekong River's water and related resources. It can be summarized as follows:

1. To ensure that projects for development of water and related resources are planned and implemented in such a manner that sustainability is achieved and negative impacts are minimized;
2. To help create a better understanding, in both the riparian countries and the MRC Secretariat, about environmental problems and risks in the Lower Mekong Basin;
3. To increase the institutional and human resources capability of riparian countries for environmental planning, screening and impact assessment;
4. To continue the integration of Cambodia in the Environment Programme; and
5. To assist the riparian countries in achieving the goal of sustainable development in their national plans.

With financial assistance from the Governments of Sweden, Denmark, Switzerland and the United Kingdom, the following ongoing projects and activities were carried out during 1998.

Water Quality Monitoring Network Project, Phase III

Supported by Sweden, the water quality monitoring activities was carried out in cooperation

with national counterpart agencies. In early 1998, implementation plan of Phase III was prepared following a review and assessment of achievements in Phases I and II, including the existing monitoring system as well as the data management. Its main goal is to strengthen the capabilities of the counterpart staff in the riparian countries and MRC Secretariat through provision of training, technical support, tools and procedures for data analysis and interpretation, quality control, and equipment to carry out the monitoring activities in a sustainable manner.

Some of the activities planned in Phase III are: (a) a diagnostic survey to assess potential ecological impairment from industrial chemicals, fertilizers and pesticides in different reaches of the Mekong River; (b) redesign of the monitoring network by evaluating the existing stations and developing station profile; and (c) review and replacement of laboratory equipment. The output of the Water Quality Monitoring Network Phase III will support the Water Utilization Programme through provision of data from an updated network, and a much improved data management system.

Inventory and Management of Wetlands in the Lower Mekong Basin, Phase II

Wetlands in the Lower Mekong Basin including marshes, flood plains, tidal backwaters, mangrove swamps and rice field and accounting for about nine million hectares, provide vital benefits to the economies and people in their daily life, ensure functions such as flood buffering, ground water recharge, nutrient processing and habitat for a tremendous variety of organisms, and serve to store the national assets including unique biological diversity and cultural heritage.

MANAGEMENT OF WATERSHED AND RESOURCES (cont'd)

A Need for an MRC Watershed Management and Forestry Sector Strategy Study

To fully coordinate and programme all these ongoing and future activities, there is an urgent need to draw up a strategic framework for the preparation and implementation of an MRC medium and long-term watershed management and forestry programme. This strategic framework, once available, will be an important input to the formulation of the Basin Development Plan.

The six-month Swiss-funded study is expected to commence in May 1999. It will:

- (1) review watershed management and forestry sector in the riparian member countries;
- (2) elaborate a strategy on how to address watershed management and forestry sector efficiently and effectively in the MRC framework;
- (3) design a programme for the development of the MRC watershed management and forestry sector and a corresponding plan; and
- (4) devise a mechanism for effective coordination with other regional initiatives and bilateral technical assistance.

ENVIRONMENT

The main objectives of this Swedish-funded project are: (1) to further enhance the capacity of relevant line institutions in Lao PDR, Thailand and Viet Nam in wetlands management, including wetland monitoring, economic assessment of wetland values and public awareness promotion; (2) to further develop institutional collaborating networks or mechanisms at regional and national levels; and (3) to improve the data inventory, data management and results compilation to support the realization of the MRC Vision and Strategic Plan, as well as related users and collaborators.

During 1998, to prepare for a full takeoff of the project in 1999 the following activities were carried out: settlement of the Chief Technical Advisor in Vientiane, finalization of the Review and Assessment Report of Phase I and Project Document for Phase II, the routine wetland monitoring activities for pilot wetland sites for the dry season of 1998 (hydrology, water quality, aquatic organisms; plants; soil surveys and socioeconomic surveys), check-up and review of wetland database; detailed work plans and budget for 1999.

Soil Erosion and Sedimentation Studies, Phase II

Soil erosion and sedimentation remain the critical and important issues in the Lower Mekong Basin associated with ever-severe deforestation and increased development activities. The main objectives of the project are: (1) to prepare national overviews and identify areas affected or likely to be affected by erosion and sedimentation problems,

including updated soil erosion risk mapping of scale 1:250,000 for each country; (2) to compile basinwide sediment data and evaluate new tendency in rivers/reservoirs sedimentation, including data management and distribution for supporting the realization of the MRC Strategic Plan; (3) to support selected areas in application of preventive and ameliorative strategies and plans for the protection of water and land resources from degradation caused by erosion and sedimentation, including public awareness enhancement; and (4) to fully integrate the Cambodian counterparts into the project.

Funded by Sweden, the project formulated in 1998 the country work plans including maintaining the monitoring activities and compiling the results for distribution. The project accomplished some important activities such as finalization of the Review and Assessment Report of Phase I and Project Document for Phase II; Final Report on Soil Erosion and Sediment Measurement in Se San and Srepok catchments; initiation of Cambodian component; soil erosion and sediment database check-up; and preparation of country work programmes and proposals for Phase II

Environmentally Sound Management of Soil and Water in the Vietnamese Plain of Reeds and the Cambodian Flood Plains

A regional workshop for final preparation of the draft project document was held in Ho Chi Minh City with 40 representatives from NMCs,



Proposed wetlands site in Chiang Saen Basin.

PROGRAMME (cont'd)

agencies concerned in Cambodia and Viet Nam and the MRC Secretariat. Participants endorsed the Review and Assessment Report on Management of Acid Sulphate Soil, Phase I and draft Project Document on Study on Environmentally Sound Management of Soil and Water in the Vietnamese Plain of Reeds and the Cambodian Flood Plains. The Project Document, prepared as the continuation of the project Management of Acid Sulphate Soil with the inclusion of the Cambodian component, was submitted to Sida for funding approval in May 1998. In coordination with other parallel outputs and activities, the project will enhance the capacity-building of the Cambodian and Vietnamese counterparts in water management and environmental impact assessment. The guidelines and recommendation for agricultural and natural resources development in the Plain of Reeds will be recommended to farmers and the governments of both countries.

Inventory and Management of Cambodian Wetlands Project

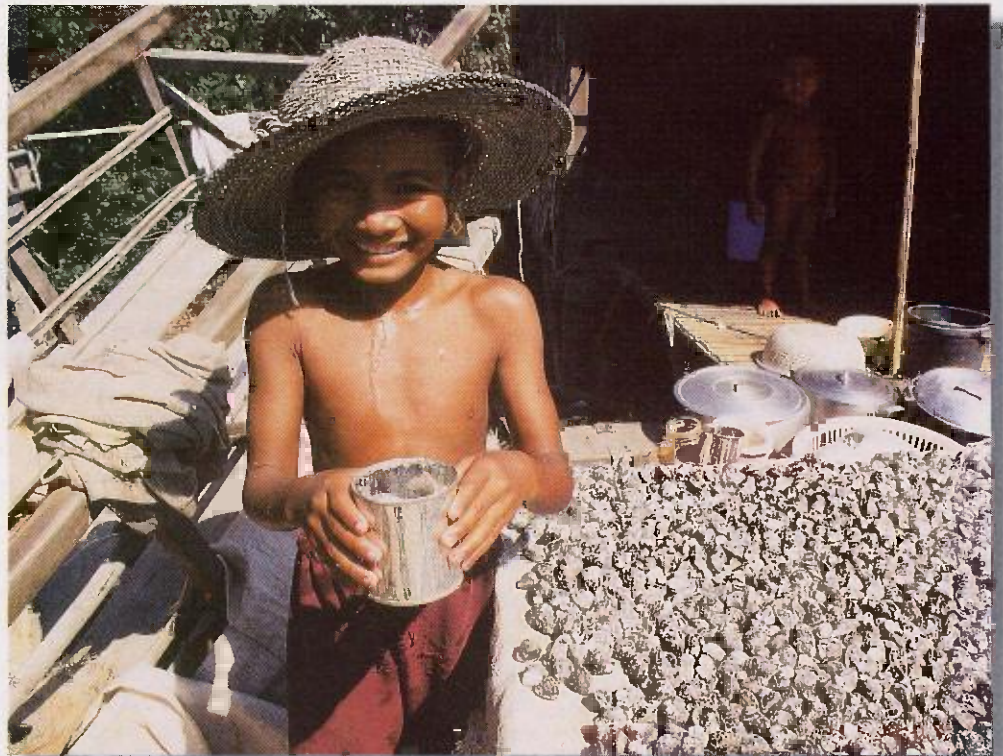
The project started in September 1997 and will complete in August 1999. Training of counterpart staff on project management, hydrology, computer, community participatory approach, wetlands management and classification, map interpretation, social and environmental aspects of development policy was progressing well. The project, in collaboration with the MRC Improvement of the Hydrometeorology Network Project, collected regularly data of water level and river flow from 17 stations around the Great Lake and along the Mekong, Bassac and Tonle Sap Rivers. Daily, monthly and annual discharge data are being processed and discharge-rating curve are developed. Data processing was completed for Kampong Thmar (Stung Chinit), Kampong Thom (Stung Sen), Kampong Chen (Stung Staung), Chrou Chang Var and Chaktomuk stations. Sediment samples were analyzed for sediment concentration by laboratory of the Ministry of Water Resources and Meteorology. Data on flora, fauna, socioeconomic,

agricultural and fisheries aspects have been recorded for 11 sites in Stung Treng, six sites in Kampong Cham and four sites in Kampong Thom. The Ramsar wetland classification is being adapted to the local situation to suit the Cambodian circumstances.

Danida-MRC Environment Programme

The Danida support to MRC environment programme is to strengthen the capability of the MRC, NMCs and line agencies in the member countries to plan, implement and manage basinwide and national activities for the development of water and related resources in the Mekong River Basin, in such a manner that sustainability is achieved and any negative environment impacts are prevented or minimized. Phase I of the Programme covers a three-year period (1997-1999) with a commitment of USD 3.3 million. In 1998 following activities were implemented:

1. *Environmental Policy and Guidelines*: its objective is to recommend policies and guidelines for integration of environmental concerns in the MRC and counterpart institutions at policy, planning and project level. In order to promote adoption of common regional environmental impact assessment procedures and guidelines, a proposal on the MRC environmental policy and a framework of an environmental impact assessment (EIA) methodology for basinwide projects was formulated and approved by the MRC Council in October 1998.



A Cambodian kid is proudly presenting his catch of freshwater ark shells

ENVIRONMENT PROGRAMME (cont'd)

The approved environmental policy is to *promote cooperation and collaboration among the riparian member states in the utilization, conservation, management and maintenance of the Mekong River Basin's environment assets and ecological balance.*

The framework of an EIA methodology classifies a programme/project into three types: type A which requires a full EIA, type B requiring a partial EIA and type C which requires no EIA. Detailed EIA methodology has been currently prepared with reference to national EIAs, other relevant regional initiatives, the 1982 Interim Mekong Committee Environmental Impact Assessment-Guidelines for Application to Tropical River Basin Development, and in close collaboration with National Mekong Committees (NMCs) and relevant institutions in the riparian states. The EIA process will be an essential tool in the WUP, BDP and all future MRC programmes and projects.

2. *Environmental Capacity-Building*: its objective is to provide the NMCs in Cambodia, Lao PDR and Viet Nam with institutional support. Job description of advisors to be seconded to NMCs was revised and their secondments await Danida's approval. Training opportunities to enhance riparian capacity to integrate environmental concerns in projects will be materialized through the Environment Training Programme (ETP).

3. *MRC Environment Programme*: its aims are to develop and implement a strategy for the MRC's environment programme with a clear regional focus. The coordination with other donor-assisted programmes or initiatives has been made through participation in meetings organized by other actors in the region.

4. *Project Preparation Capacity-Building*: the enhancement of the capacity for coordination, preparation and implementation of projects among the staff of MRC Secretariat, NMCs and national counterpart institutions will be made through the ETP below.

MRC Environmental Training Programme

The three-year ETP, developed on a basis of a training need assessment conducted in the riparian countries in early 1998, is jointly funded by the Governments of Denmark, Switzerland and Sweden.

Its main objective is to strengthen the capacities of MRC Secretariat, NMCs and line agencies concerned in the riparian member countries in environment and natural resources management and planning. The ETP has been designed to directly contribute to the achievement of objectives of Key Result Areas 1 and 2. It covers a set of coherent and integrated environmental training courses, some being general in focus and some covering in-depth training. To ensure a long-term impact of the training and the multiplier effect of

knowledge and skills transfer a training of trainer component is included. The implementation of the ETP is due to start in May 1999 with conducting of training courses on environmental awareness and sustainable development, environmental management and introduction to environmental management systems (ISO 14000), integration of environmental concerns in natural resources planning and management, regional EIA and cumulative environmental assessment.

Pilot Study for Water Resources and Environment Management (Kok River Basin)

The objectives of the UK-funded study are: (1) to establish a water resources and environmental management plan for the Kok River Basin in northern Thailand, (2) to develop water resources guidelines for water pollution and solid waste management, and (3) to integrate water resources development in the Kok watershed commensurate with natural resources and environmental conservation.

The study would be carried out in such a way that its outputs could be applied as a model for the development of water resources and environment management of the other sub-basins of the Mekong River Basin. The project will be guided by a Steering Committee consists of representatives from the Thai National Mekong Committee, Office of Environment Policy and Planning, Royal Irrigation Department, Royal Forestry Department, Land Development Department, Chiang Rai Province, MRC Secretariat, etc. Mathematical models will be used as analytical tools to formulate water resources development plans and environment management plans. The techniques applied and developed in the Kok Basin study will also be shared with other riparian countries.

ADB-RETA: Strategic Environmental Framework (SEF) for the Greater Mekong Subregion (GMS)

The overall goal of this ADB project is to improve environmental protection by helping to ensure the environmental sustainability of economic development undertaken within the context of the GMS programme specifically and within the GMS generally.

The primary objective is to prepare a strategic environmental framework that promotes the integration of environmental considerations in economic development planning and implementation within the GMS programme.

The MRC Secretariat acts as coordinating agency of the project that was initiated in December 1998 and will run for 22 months. Besides, an MRC Secretariat environment specialist was assigned to work for the project as Task Manager of MRC Secretariat/Associate Team Leader of SEF Project.

INTEGRATION OF SOCIOECONOMIC FACTORS IN THE MRC PLANNING PROCESS AND PROJECTS

The MRC has been always considering the people at grassroots level as an ultimate target group of beneficiaries of its development projects and activities. It may be said, however, that socioeconomic factors have not yet been systematically constituted an essential element of the MRC work.

There are several MRC ongoing projects and activities targeting socioeconomic development and poverty alleviation. The MRC Fisheries Programme, for instance, has small-scale farmers of the basin as the direct or ultimate target group, as fish or fishery resources are their important food security and source of income. For agricultural and water resources development projects, normally, socioeconomic(s) are involved at both the planning and implementation stages. Socioeconomic surveys have been carried out to assess baseline situations, as well as to assist in setting up the required development goal(s) for specific target groups. Often these surveys cover a wide range of subject matters such as demographic data, gender issues, social infrastructure, etc.

The MRC projects on Sustainable Irrigated Agriculture, Rehabilitation of Irrigation Schemes, Reservoir Fisheries Development, Microhydropower Development, etc. are expected to help alleviate poverty of the rural poor by means of the increase in their farm produce, improved food nutrition, rural electrification and eventually, improved quality of their lives in general. Poverty alleviation is being emphasized by all concerned as a criterion for socioeconomic considerations. It is for this reason that a number of small and national projects are still included in the Work Programme because of their potential and immediate impacts, particularly on the rural poor in remote areas of the basin.

The MRC has recognized the importance of public participation in the context of MRC and involving women in its development activities, both as beneficiaries and as change agents. Therefore, integration of gender concerns as part of the socioeconomic considerations has been taken up through the project Study on Role of Women in Water Resources Development. Also the MRC is facilitating the establishment of Mekong Networks of Women in Fisheries in each of its four member countries. A basinwide Mekong network will be created when all the national networks are set up.

Under the ADB project Sekong-Sesan-Nam Theun River Basins Hydropower Development Study where

the MRC Secretariat serves as its coordinating agency, resettlement issues and adverse effects on ethnic groups are also taken into consideration in selecting a possible site and size of project and the sub-basin development plan.

With the endorsement of the concept of integration of socioeconomic factors into the MRC planning process and projects by the MRC Council in October 1998, it is assured that in the future socioeconomic considerations will be integrated more fully in MRC activities to maximize the benefits from limited resources, by identifying and prioritizing projects of greatest needs to people of the Lower Mekong Basin.

It is expected that the MRC will establish guidelines for the integration of social and economic factors into its programmes, projects and other activities. To help speed up the process, a project proposal on integration of socioeconomic considerations and poverty alleviation into MRC activities was included in the MRC Work Programme 1999. Funds are being sought for implementation of the study to achieve the following objectives:

1. To provide the analytical framework for the integration of social and economic factors into MRC planning activities;
2. To provide the necessary quantitative and qualitative social and economic data to address relevant factors associated with the alleviation of poverty in the Mekong riparian countries; and
3. To propose methodologies on how to integrate social and economic considerations into MRC planning processes.



Women help increase family income.

HYDROLOGY PROGRAMME

The overall objective of the *Hydrology Programme* is to achieve a reliable and sustainable hydrometeorological information system of the Lower Mekong Basin which will provide basic scientific information necessary for common understanding of the basin water resources among stakeholders. The following two core activities: (1) regular and problem-oriented observation of the hydrometeorological conditions of the river basins; and (2) database management and hydrologic analysis for routine and specific purposes, are closely interrelated with each other for this purpose. Their outputs will directly or indirectly support the strategic planning and development of water and related resources, especially the *Water Utilization Programme* and the *Basin Development Plan*.

Improvement of the Hydrometeorological Network Project is being carried out with financial assistance of the Governments of Japan and Australia. The training of technical staff from riparian line agencies is essential to establish a reliable and sustainable observation network of the basin. Two training courses were organised for this purpose in 1998: one on hydrometry and instrumentation in Vientiane in March and one on data processing and database management in Phnom Penh in October. More than 50 riparian hydrologists in total were trained by the project.

The operation of important key stations in the basin is supported through this project to ensure reliable and equitable data collection at these stations. *Joint Hydrologic Measurement of the Mekong River by the Lao PDR and Thailand* has been continued at seven stations located at the national boundary between the two countries. *Discharge Measurement of the Great Lake Basin in Cambodia* has been started. *Intensive Measurement at Tan Chau and Chau Doc in Viet Nam* provided reliable dry season discharge data at the entrance points of the Viet Nam delta.

Flood Forecasting of the Mekong Mainstream has continuously been carried out during the flood

season in cooperation with the national agencies. When the MRC was relocated to Cambodia in September, a new information network has been established among the riparian countries for the flood forecasting. Through the new network using radios and internet in combination, the Secretariat in Phnom Penh, an information centre of the network, successfully collected daily hydrometeorological data at more than fifty stations in the basin within the morning every day. During the 1998 flood season, the overall precipitation records in the basin were historically low. This is expected to cause shortage of water in the following dry season.

In March, the *Joint Workshop by MRC and FAO on Flood Management and Mitigation of the Mekong River and its Tributaries* was held in Vientiane for discussion on improvement of the existing systems in the riparian countries. Many suggestions were made by international participants for the improvement of the present flood forecasting operation of the MRC.

Groundwater Investigation Programme, Phase II has continued under the financial support of the Government of Sweden to monitor groundwater quality at almost four hundred wells in the basin. All the activities in riparian countries in this field were reviewed and the groundwater quality database has been updated.

Under the Murray-Darling Basin Commission-MRC Joint Cooperation Programme, an *Initial Scoping Workshop on A Hydrologic Model for the Mekong River System* was organized in June. The scope of work was defined in the context of the WUP to establish a trial hydrologic model for the river system management of the Mekong.

The Government of New Zealand has continued to provide support for the printing of the *Lower Mekong Hydrologic Yearbook*. It covers more than one hundred hydrologic data and almost two hundred rainfall data collected in the basin.



Panoramic view of the Chaktomuk Point (Quatre Bras) in Cambodia – The scarce rainfall in the 1998 flood season caused a very low water level at the downstream of the Mekong

TECHNICAL SUPPORT ACTIVITIES: BASINWIDE SPATIAL DATABASE DEVELOPMENT

Under the programme for the development of an information system, the MRC Secretariat has continued to develop a spatial database on the natural resources and physical environment of the Lower Mekong Basin, using remote sensing and Geographic Information System (GIS) technology combined with conventional methods. In 1998, the MRC Secretariat carried out the following activities with riparian line agencies:

Under the MRC component of the *Subregional Environmental Monitoring and Information System Project* supported by ADB, the MRC Secretariat has linked the Mekong GIS with the hydrological database and the water quality database.

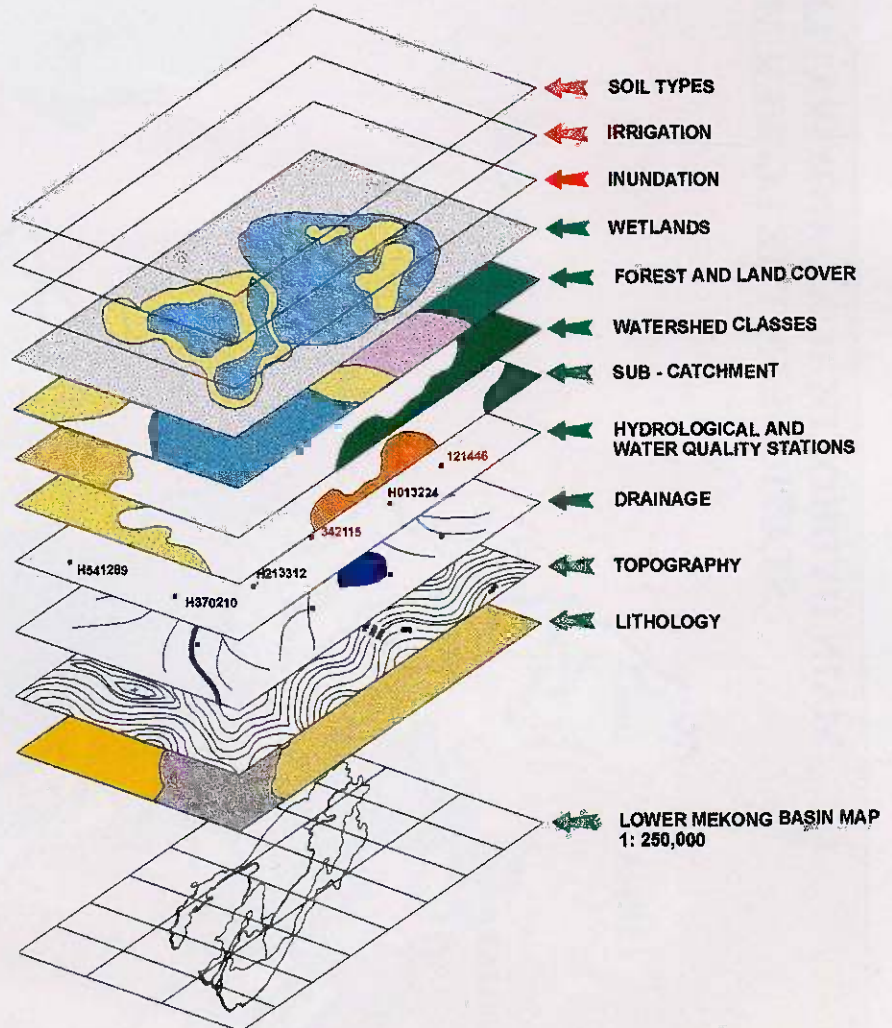
The linkage facilitates the use of both spatial and statistical databases for the monitoring of water and related resources in the Lower Mekong Basin and its sub-catchments. Basinwide spatial data layers on land cover and lithology have been compiled under the project at scale of 1:250,000, and the drainage data layer updated with open water bodies. These baseline data layers are supplementing the other basinwide data layers developed earlier by the Mekong GIS and recently developed by the Wetlands, Forest Cover Monitoring and the Watershed Classification projects.

The *Land Resources Inventory for Agricultural Development Project*, supported by the Ministry of Agriculture Forestry and Fisheries of Japan, will develop basinwide spatial databases at the scale of 1:250,000 on soil types, inundation and a spatial database with information on irrigation. Guidelines on the development of these data layers have been developed for use by the riparian line agencies in their respective parts of the Mekong Basin.

The joint pilot study with the Japanese Institute for Irrigation and Drainage to map inundation using new remote sensing technology such as radar imagery is progressing. The inundation data to be developed under

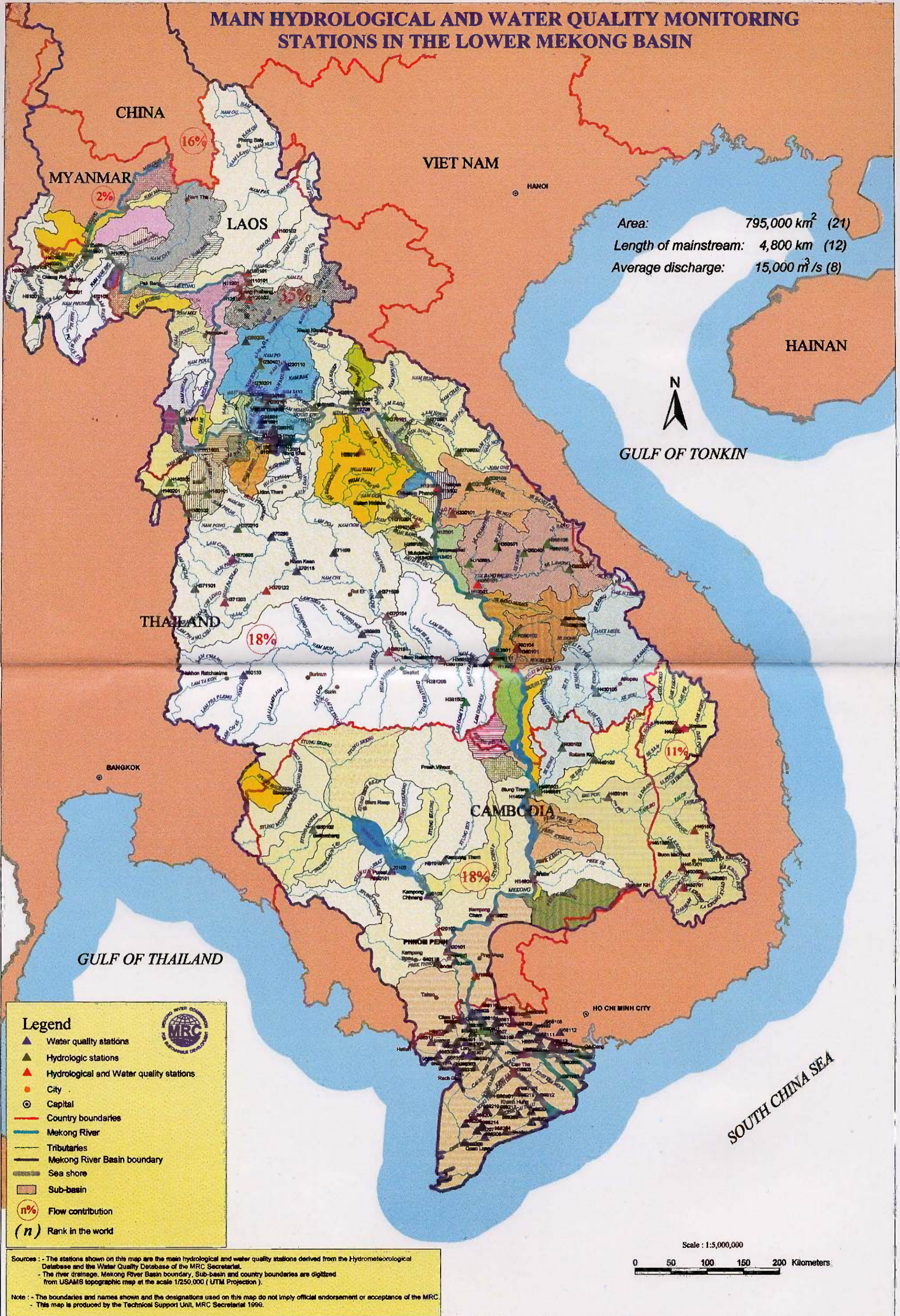
the study will be of use for the Land Resources Inventory Project. Upon their completion, these data layers will supplement the existing Mekong GIS and water resources databases, of which data will in return serve the needs of the project to conduct land evaluation.

The MRC Secretariat will continue its efforts to build an updated and integrated database at a basinwide level to provide the necessary tools for proper monitoring of the environment and management of the water and related resources within the Lower Mekong Basin. The developed baseline spatial data layers and statistical databases developed under various programmes/projects of the MRC will be useful for the coming Water Utilization Programme and Basin Development Plan.



SPATIAL DATABASE DEVELOPMENT

MAIN HYDROLOGICAL AND WATER QUALITY MONITORING STATIONS IN THE LOWER MEKONG BASIN



HUMAN RESOURCES DEVELOPMENT ACTIVITIES

Strategies for development, which is sustainable, must be accompanied by comprehensive investment in human beings. The success of Human Resources Development (HRD) Programme in 1998 was evidenced by the establishment and strengthening of the HRD Focal Points in the four riparian countries, the development and approval of MRC Gender Strategy, the inclusion of Capacity-Building Goals in MRC Strategic Plan, and the continued cooperation and assistance of the four riparian governments and the donor community.

1998 is the year of strengthening HRD focal points. Commenced in 1997, the project *Strengthening the Institutional Framework for Effective MRC HRD System: the HRD Focal Points*, supported by the Government of Switzerland, has been progressing well.

A total of 87 HRD focal points have been established in the four National Mekong Committees (NMCs) and line agencies of the member countries (Cambodia: 23, Lao PDR: 20, Thailand: 21 and Viet Nam: 23). Applying the human development strategy of Learn to Do, Do to Learn, Learn to Share and Share to Learn, all HRD focal points went through the planned capacity-building process of intensive ten-day National Workshops on HRD Planning which took place in the 2nd quarter of 1998. Following the training sessions, all the HRD focal points worked on "Work-based Assignments" which aimed to provide them with practical experiences. These practical experiences were shared by the participants in the Integration and Evaluation Workshops organized in the four countries in the last quarter of 1998.

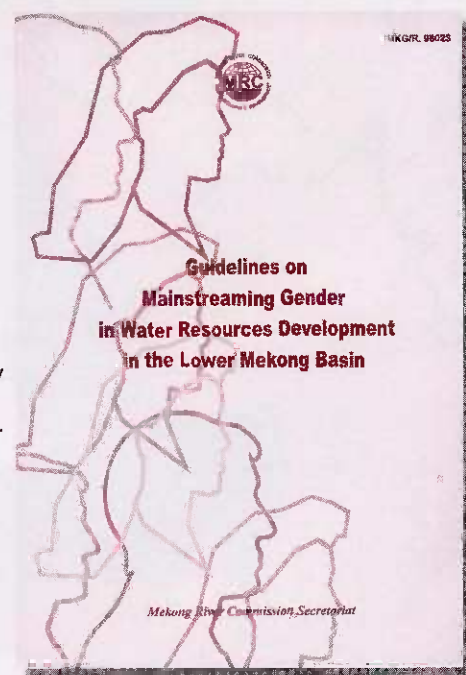
This will be followed by the emerging of HRD network among line agencies as well as among the HRD focal points in the first quarter of 1999. Coordinated by HRD focal points of NMCs, Strategic MRC HRD Programme corresponding to the basinwide and national needs and priorities is being formulated. The HRD programme for the next three years will be integrated at the regional HRD Workshop to be held in March 1999.

The *Study on Role of Women in Water Resources Development* funded by New Zealand bears a remarkable outcome: a *Gender Strategy for Water Resources Development*. The MRC Council approved the Gender Strategy at its annual meeting in October 1998. The strategy was formulated through the compilation of concerns and recommendations of riparian countries. It aims to integrate gender perspectives in the policies, plans, programmes and projects of the MRC. Following the approval of MRC Gender Strategy, Gender Mainstreaming Guidelines and Checklists were developed and published in English and four riparian languages. In December, a three-year action plan has been formulated with active participation of 19 gender focal points from four riparian countries to

mainstream gender into all programmes of the MRC, especially in the Basin Development Plan, the Water Utilization Programme and the Institution Strengthening of MRC and NMCs. All the 19 gender focal points will participate in an intensive Training of Trainer Workshop to be facilitated by the Gender and Development Research Institute in Bangkok in February 1999. After the training, these trainers will form a core Gender Training Team in each riparian country and carry out training and gender mainstreaming activities in the Lower Mekong Basin.

Evaluation of the Institutional Framework for Effective Mekong Cooperation: National Mekong Committee was another thrust of HRD programme this year. Supported by Japan, three NMCs (CNMC, LNMC and VNMC) have been conducting the self-evaluation studies to identify areas of improvement in the capacities of the NMCs and its Secretariat in performing their mandated roles and functions. The self-evaluation process comprises of three major steps: organizational review and functional analysis, integration and evaluation session with all line agencies, and the development of three-year capacity-building programme. This project commenced in September 1998 and will be completed in February 1999.

HRD encompasses and integrates all aspects of the basin development such as an enabling environment, legislation, institutional arrangements and organizational structures, policies, processes and procedures. All of these together, among others, are vital for progress of the MRC. Major HRD activities in 1999 include the setting up and strengthening of HRD Network basinwide, execution of project UNDP *Support to the Mekong River Commission*, launching of the Swiss-funded Professional Development of Secretariat Riparian Personnel, and implementing of Gender Strategy and mainstreaming gender perspectives in all sustainable development activities in the Lower Mekong Basin.



STATUS OF PROJECTS 1998-1999

The time frame, available funds and funding source for ongoing projects and projects expected to be started in the near future are illustrated by the chart below:

PROJECT AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1994	1995	1996	1997	1998	1999	2000	
Key Result Area 1:								
Policy and Planning								
Mekong River Water Utilization Programme (World Bank) \$350,000								Two regional workshops in Jan. and May 98. Project proposal approved by Council in Oct. 98. GEF-funded WUP project supposed to start in Oct. 99.
Preparation of MRC Rules for Water Quality (France) \$600,000								Co-financing part of the planned GEF-Water Utilization Programme
Preparation of MRC Rules for Water Quantity (Japan) \$200,000								Supported in 1998 two regional workshops for WUP.
Preparation of Mekong River Basin Dev. Plan (Sweden: Consultancy Fun: \$405,000 (Denmark: Consultancy Fur \$265,000)								Study on public participation finished in Sept. 98. Detailed planning phase will commence in Jan. 99 and complete in July 99.
Watershed Management and Forestry								
Strategy study on development of watershed management/forestry sector in Lower Mekong Basin (Switzerland) \$202,000								TOR prepared. Consultants are being recruited. Study will start in April 99.
Watershed classification in Lower Mekong Basin (Switzerland) \$2,600,000								Ongoing activities are GIS training in watershed classification database, GIS manuals and GIS database in the Lower Mekong Basin
Forest cover assessment and monitoring (Germany) \$4,067,000								Project to be completed end of January 99. Follow-up activities to be merged with SMRP.
Sustainable management of resources (SMRP) (Germany) \$4,300,000								Phase II launched in Dec. 97 and will be completed in Nov. 2001. Annual planning workshop held in Oct. 98. Plan of operation for 99 finalised.
River Works and Transport								
Ferry facilities (Cambodia) (Denmark) \$18,600,000								Two newly built ferries and two rehabilitated ferries were in service at Neak Leung and Kompong Cham river crossings in 97-98. The last one will be completed in February 99.
Updating of the hydrographic atlas (Finland) \$4,700,000 (Finland), extension \$1,920,000								Components for Lao PDR and Thailand completed and a handover of the prints-out held in May 97 for Lao PDR and in July for Thailand. The components for Cambodia and Viet Nam will be completed respectively in April and August 99.
Study for improvement of access channel to Bassac River (Belgium) \$1,772,000								First component: data acquisition and survey completed. Second component: technical and economic feasibility study will complete in early 99.
..... Expected extension								

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Study for improvement of access channel to Bassac River (Belgium) \$1,772,000		■	■	■	■			First component: data acquisition and survey completed. Second component: technical and economic feasibility study will complete in early 99.
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PROJECT AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1994	1995	1996	1997	1998	1999	2000	
Water Resources Development								
Rural electrification (Japan) \$120,000								Cambodian site was selected through a feasibility study. Funds for implementation are being sought.
Natural resources-based development strategy for Tonle Sap area, Cambodia (UNDP) \$988,000								Final report completed in June 98. Counterpart team still worked till end of 98 prepared project follow-up proposals.
Flood control planning for development of the Mekong Delta (Republic of Korea) \$872,000								Consultancy firm selected in October 98. Work to start in early 99 for a period of 18 months.
Sekong-Sesan-Nam Theun river basins hydropower study (ADB) \$133,000								Final workshop to be held in Jan. 99 to discuss draft final report and six selected schemes for further studies at pre-feasibility or feasibility levels.
Fisheries								
Assessment of Mekong fisheries (Denmark) \$5,213,000								Project started in Sept. 97 and will complete in August 2001. National project offices established in riparian countries and activities started up. All expatriate staff assigned.
Management of reservoir fisheries, Phase I (Denmark) \$3,491,000								Project has suffered delay, but is now on track and will complete in June 99. Reviewed recently. A proposed Phase II being prepared.
Cambodian capture fisheries project (Denmark) \$2,269,000								With approval of the bridging period, the project will end in July 99. Phase II appraised by Denmark. Final decision on financing pending.
Support to fisheries management and development cooperation (Denmark) \$1,056,000								Project to be completed in Dec. 99. Going according to plan. Problems: vacancies all through 98 and manpower shortage.
Aquaculture extension in the Mekong Delta (Denmark) \$1,893,000								Project started in Viet Nam in January 98 and in Cambodia in July 98. Completion date: January 2001.
Agriculture and Irrigation								
Sustainable Irrigated Agriculture (Netherlands), SIRAP I \$6,667,000								Consolidation phase completed end of December 98, concentrating on implementing irrigation management transfer in the Lao PDR and on farm plan and improvement of group development process in Thailand.
Consolidation Phase \$1,009,827								
Integrated planning and management of land and water resources for agriculture in the Mekong river countries-towards sustainability (Denmark) \$117,000								Programme was approved by the Council in October 98. Remaining funds proposed to fund the preparation of the programme formulation stage.
Modern irrigation technology and extension training course (Rep. of Korea/Israel) \$66,000								To promote awareness of modern irrigation technology and extension as tools for improving crop diversification and production.
Key Result Area 2								
Environment Sector								
Environmental sound management of soil and water in the Plain of Reeds (VN and Cambodia) (Sweden) \$1,440,000								Project Document being revised as requested by Sida. Implementation expected to start in 99.
	----- Expected extension							

PROJECT AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1994	1995	1996	1997	1998	1999	2000	
Inventory and management of wetlands in the Lower Mekong Basin (Sweden) \$825,000	[Green bar from 1994 to 1998]							Project document for Phase II prepared. Inception workshop planned during April 99.
Inventory & management of Cambodian wetlands (Denmark) \$1,899,000	[Green bar from 1997 to 1999]							Operational from September 1997. A six-month extension till Aug. 99 is approved. Phase II is being prepared to submit to Danida.
Water quality monitoring network in the Lower Mekong Basin (Sweden) \$929,000	[Green bar from 1994 to 1998]							Phase III due to start in 99. Monthly monitoring of water chemistry and bacteria analysis.
Soil erosion and sedimentation studies (Sweden) \$422,000	[Green bar from 1994 to 1998]							Project document for Phase II prepared. Implementation expected to complete during 99.
Danida-MRC Environment Programme including (Denmark) \$1,177,000	[Green bar from 1997 to 1999]							Phase I covers 1997-99. CTA started in March 98
* Environmental policy and guidelines	[Green bar from 1998 to 1999]							MRC Environmental Policy and EIA Methodology approved by Council in 98. Elaboration of methodology under preparation.
* Environmental capacity-building for NMCs (Cambodia, Lao PDR and Viet Nam)	[Green bar from 1998 to 1999]							Preparation for implementation has been carried out in 98. Implementation expected to start in 99.
* Integration of environmental concerns* in projects	[Green bar from 1997 to 1999]							Ongoing. Via application of guidelines and procedures, project planning and implementation and training (see ETP).
* MRC Environment Programme	[Green bar from 1998 to 1999]							Collaboration with other donors-assisted programmes and initiatives.
Environmental Training Programme (ETP) * Danida component \$653,000 * SDC component \$330,000 * Sida component, Phase II \$270,000	[Green bar from 1998 to 1999]							Preparation of ETP framework and implementation plan carried out in late 98. Training expected to commence in May 99. Training need assessment (SDC component) on EMS carried out in Feb. 98. Training need assessment report (Sida component) submitted in Jan. 98.
Pilot study for water resources and environmental management (UK) \$625,000	[Green bar from 1998 to 1999]							CTA started in July 98. Approach & Methodology Workshop to be carried out in January 99.
Environmental assessment programme in the Greater Mekong Subregion (UNEP) \$393,000	[Green bar from 1994 to 1998]							Activities related to environmental assessment, reporting and capacity-building.
Key Result Area-3								
Hydrology Sector								
Groundwater investigation programme (Sweden), Phase I \$525,000 (Sweden), Phase II \$75,000	[Orange bar from 1994 to 1999]							Review of all activities made with line agencies and sampling of groundwater at more than 350 observation wells made basinwide.
Improvement of the hydromet. network (Japan) \$1,941,000 (Australia) \$1,039,000	[Orange bar from 1994 to 2000]							Rehabilitation and improvement of basinwide hydrometeorological network, including provision of logistics and training on hydrometry and data processing.
----- Expected extension								

PROJECT AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1994	1995	1996	1997	1998	1999	2000	
Remote sensing, GIS and database								
Geographic Information System (ADB) \$700,000 (Switzerland) \$345,000 (UNEP/GRID) \$242,000								Producing basinwide thematic layers and linking GIS with water resources statistical databases are ongoing. The linkage of the Mekong GIS with hydrologic and water quality databases was completed in March 98.
Land resources inventory for agricultural development (Japan) \$949,000								Soil, irrigation and inundation spatial databases of Lower Mekong Basin will be developed for sustainable agricultural development and planning. A pilot study on inundation mapping is being conducted at Thabok.
Key Result Area 4								
Human Resources Development								
Role of women in water resources development in the Lower Mekong Basin (New Zealand) \$300,000								Major output: MRC Gender Mainstreaming Strategy approved by the Council in October 98. Project extended till June 99 to complete the gender training programme.
Strengthening the institutional framework for effective MRC/HRD system (Switzerland) \$280,000								87 HRD focal points established so far. HRD Action Plan for NMCs in the next three years being prepared. Arrangements being made for new phase 1999-2001.
Programme Support								
Support for Mekong programme (UNDP) \$2,815,000								Outputs of UNDP assistance in 98 were the formulation of MRC Strategic Plan and the Capacity-Building Programme for MRC and NMCs to implement the Strategic Plan. Arrangements being made for implementation of the UNDP assisted programme.
MDBC-MRC Cooperation Programme (Australia) \$571,428								Activities mainly executed by MDBC include: (1) Joint Meeting at Council and Joint Committee levels, (2) Exchange of technical visits, (3) training on Integrated Quantity and Quality Model (capacity-building), and (4) Streamwatch/Rivercare pilot programme (initial stage).
Australian consultancy fund (Australia) \$490,000								Funds are used for various studies and training.
Swedish consultancy fund (Sweden) \$1,250,000								Funds are used for studies and training.
Japanese contribution to the Commission (Japan) \$384,000								Funds are used for various studies.
Others								
Improvement of Documentation Centre (UNDP/France) \$34,000/114,000								Improvements ongoing. The Centre has been equipped with new computer and software.
Core contribution to the MRC (Switzerland) \$1,496,000								Funds allocated for staff establishment, restructuring of the Secretariat, HRD and Secretariat running cost. Another 3-year contribution being arranged.
Mekong Trust Fund (UNDP, Japan, NZ, Switz., MRC) \$664,000								Funds allocated for key posts at MRC Secretariat and capacity-building at NMCs.
								Expected extension

1998 ADMINISTRATIVE AND FINANCIAL REVIEW

I. HEADQUARTERS RELOCATION

The year 1998 was characterized with the relocation of the MRC Secretariat from Bangkok to Phnom Penh. The move was successfully carried out in two phases during July-September with minimum disruption of work and less staff turnover than anticipated. Twenty-five Cambodian support staff were trained extensively by a business school in Bangkok and later on-the-job training at the Secretariat in order to be able to provide the same services when some of the other riparian support staff return to their respective home countries.

It can be observed that at the end of 1998 the MRC Secretariat was housed in a very appropriate Headquarters building. It was well equipped and

manned in an appropriate way to be able to discharge its functions in supporting the new challenging Basin Development Plan process and Water Utilization Programme Project in addition to other ongoing and coming projects for the benefit of the peoples in the Lower Mekong Basin.

II. ADMINISTRATION /PERSONNEL

At the end of 1998, the total number of staff at the MRC Secretariat is 103 persons including 13 expatriate professional, 24 riparian professional, one Junior Professional Officer, five riparians-on-stipend and 60 general services. Besides, there are 17 field staff comprising 15 project staff and two Junior Professional Officers.



New Headquarters of the Mekong River Commission, Phnom Penh

1998 ADMINISTRATIVE AND FINANCIAL REVIEW (cont'd)

III. FINANCIAL INFORMATION

3.1. Project Funds

Detailed schedule of donor contributions received and funds disbursed in 1998 is shown as below:

DONOR CONTRIBUTIONS RECEIVED AND FUNDS DISBURSED 1994-98 (USD'000)

Fiscal Year	Donor Contributions Received	Donor Funds Disbursed
1994	8,891	7,863
1995	8,084	7,788
1996	12,285	9,057
1997	8,868	8,205
1998	7,947	9,993
TOTAL	46,076	42,907

Note: In 1998, donor funds disbursed exceeded donor contributions received due to acceleration of project implementation including pending activities. Breakdowns of donor contributions received and donor funds disbursed prepared by the MRC Secretariat are presented on pages 37-39.

3.2 Administrative Funds

The Secretariat administrative budget is financed by member countries' annual contribution, Secretariat support cost of project disbursements, treasury management and other contributions.

The Administrative Reserve Fund (ARF) which reflects the balance of the Administrative Budget outcome and currency fluctuations ended up in

deficit due to reduced treasury management income and charging of the cost of relocation of the Secretariat to the ARF.

The Programme Reserve Fund carries a balance of USD 80,000 to the year 1999.

The table below summarizes the administrative budget figures for the last five years

INCOME AND EXPENDITURE FIGURES 1994-98 (USD'000)

Fiscal Year	Income	Expenditure ^a	Balance
1994	1,258	1,419	(161)
1995	2,509	2,218	291
1996	2,919	2,244	675
1997	2,011	2,139	(127)
1998	1,726	2,249	(523)

3.3 Annual Audit Report

The PricewaterhouseCoopers conducts an annual financial audit for the MRC Secretariat after its closing of accounts. The results are compiled in the Annual Auditing Report, of which related parts are forwarded to the member states as well as the MRC donor countries. The excerpt of PricewaterhouseCoopers' Opinion Statement contained in the 1998 Audit Report is presented here below for information.

QUOTE:

Basis of Opinion

We conducted our audit in accordance with International Standards on Auditing. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements, made by the secretariat in the preparation of the financial statements, and of whether the accounting policies

are appropriate to the Commission's circumstance, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance as to whether the financial statements are free from material misstatement. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements. We believe that our audit provides a reasonable basis for our opinion.

Opinion

In our opinion, the financial statements give a true and fair view, in all material respects, of the financial position of the Commission as at 31 December 1998 and of the results of its operations for the year then ended, in conformity with the accounting policies... UNQUOTE.

DONORS' CONTRIBUTIONS RECEIVED: 1994-1998 (Calendar Year)

(AMOUNTS IN U.S. DOLLARS)

DONORS	1994	1995	1996	1997	1998	TOTAL
Australia	435,982	784,025	1,213,468	0	21,647	2,455,122
Canada	0	52,632	0	0	0	52,632
European Union						
Austria	219,000	0	0	0	0	219,000
Belgium	0	235,830	0	425,328	782,220	1,443,378
Denmark	1,247,796	2,834,470	6,897,396	1,981,724	2,809,130	15,770,516
Finland	627,233	0	616,915	843,008	544,340	2,631,496
France	181,836	137,238	0	0	0	319,074
Germany*	27,164	42,373	37,219	24,598	98,400	229,754
Italy	0	0	0	0	0	0
Netherlands	1,576,911	1,128,700	900,000	276,833	438,848	4,321,292
Sweden	1,419,440	657,506	0	1,861,082	221,832	4,159,860
United Kingdom	37,300	0	38,441	0	312,500	388,241
Commission of EC	164,000	0	0	0	0	164,000
Sub-total - EU	5,500,680	5,036,117	8,489,971	5,412,573	5,207,271	29,646,612
Israel	0	0	5,000	31,500	33,000	69,500
Japan	857,000	807,000	1,125,000	455,459	1,230,832	4,475,291
Republic of Korea	175,000	200,000	344,990	284,401	633,000	1,637,391
New Zealand	47,850	38,868	158,777	93,000	5,462	343,957
Switzerland	90,000	629,990	90,774	1,559,000	0	2,369,764
UN Agencies:						0
UNDP/Cambodia	692,371	175,900	109,428	350,661	0	1,328,360
UNDP/Thailand**	579,600	0	422,816	230,748	416,496	1,649,660
UNDP/OPS	28,500	0	0	249,591	0	278,091
UNDP/World Bank	0	0	0	0	0	0
UNEP/AIT	98,000	98,000	197,324	0	0	393,324
UNEP/Nairobi	80,000	219,980	91,750	0	0	391,730
UN/FAO	113,562	0	0	70,900	0	184,462
WHO	0	0	0	0	0	0
Sub-total - UN Agencies	1,592,033	493,880	821,318	901,900	416,496	4,225,627
Others:						
Asian Development Bank	167,252	21,385	36,000	30,000	79,862	334,499
Japan Institute of Irrigation and Drainage	0	0	0	0	141,751	141,751
Murray-Darling Basin Commission	0	0	0	0	84,976	84,976
World Bank**	0	0	0	100,000	57,439	157,439
Miscellany	25,500	20,040	0	0	35,973	81,513
Sub-total - Others	192,752	41,425	36,000	130,000	400,001	800,178
Total	8,891,297	8,083,937	12,285,298	8,867,833	7,947,709	46,076,074

* Secretariat support cost only, all other project contributions were managed by the donor.

** Excluding direct payments from sources.



MRC Secretariat and a part of its compound, Phnom Penh

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