

# MEKONG RIVER COMMISSION



ANNUAL REPORT 1996

TOWARDS SUSTAINABLE DEVELOPMENT



# MEKONG RIVER COMMISSION

## Background

The Committee for Coordination of Investigations of the Lower Mekong Basin (or The Mekong Committee) was established in 1957 with four members: Cambodia, Lao PDR, Thailand and Viet Nam, under the umbrella of the Economic Commission for Asia and the Far East (ECAFE), the predecessor of ESCAP.

The Committee was known later as the Interim Mekong Committee from 1978 to April 1995, due to the absence of Cambodia in the Committee. In 1991 Cambodia submitted its request to rejoin the Committee. Simultaneously, the recent and rapid economic and environmental changes in all four countries have indicated the need for a new organization with an expanded mandate to cope with the countries' requirements. In response to this new context, the Mekong Working Group (MWG), consisting of representatives from the four countries, was formed to prepare for the establishment of the new Mekong cooperation framework. The MWG, under the Chairmanship of UNDP, initialled the draft *Agreement on Cooperation for the Sustainable Development of the Mekong River Basin* at its final meeting in November 1994.

The *Agreement*, signed on 5 April 1995, immediately established the Mekong River Commission (MRC) replacing the former Mekong Committee (1957) and the subsequent Interim Mekong Committee (1978).

## Structure, Mandate and Areas of Cooperation

As an intergovernmental organization, the MRC has three permanent bodies, namely, the *Council* (at ministerial and cabinet level) making policies and decisions, the *Joint Committee* (at Department Head level) implementing policies and decisions, and the *Secretariat* rendering technical and administrative services (see pages 8, 30 and 31). The MRC's mandate is "to cooperate in and promote, in a constructive and mutually beneficial manner, the sustainable development, utilization, conservation and management of the Mekong River Basin water and related resources for navigational and non-navigational purposes, for social and economic development and the well-being of all riparian States, consistent with the needs to protect, preserve, enhance and manage the environmental and aquatic conditions and maintenance of the ecological balance exceptional to this river basin".

The four members 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, hydro-power, 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".

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Cover Pages: Aerial View of the Mekong, (Phnom Penh) at Chakdomuk confluence of the Mekong, Tonle Sap and Bassac Rivers.



## MESSAGE FROM THE CHAIRMAN OF THE MRC COUNCIL

The following pages of the *Annual Report 1996* reflect some of the efforts of the Mekong River Commission (MRC) in striving towards developing the resources of the member countries in a sustainable and sound manner. The MRC is strengthening its capacity to be able to better plan, coordinate, implement and manage programmes and projects for the development of the Lower Mekong Basin in such a manner that sustainability will be achieved and any negative environmental impacts will be prevented or minimised. The activities of the MRC will increase as the development in the region becomes more balanced, environmentally sound and sustainable for the future well-being of our peoples in the Basin. The MRC understands that if it is not careful today when planning and implementing projects, the costs to rectify mistakes could be enormous.

The MRC works hand in hand with the international community, especially the donor community, to alleviate the plight of some of the poorest countries in the world. As is well-known, the socioeconomic conditions of the countries in the Lower Mekong Basin are not the same. This is why it is heartening to observe that the more advanced countries in the region are helping to shoulder the socioeconomic development efforts of the least developed ones. This certainly reflects the "Mekong spirit" of friendship, cooperation and solidarity. For example, my country, the Lao PDR, in addition to being commonly classified as a land-locked State (because of its having no direct access to the sea), can today also be called a "land-linked" Nation because of the close ties with its neighbouring countries.

The MRC is identifying mechanisms to engage stakeholders: people concerned with or with an interest in the water and related resources in the Basin. The participation of such people and organizations in the process of designing and implementing water policy, strategy and projects is very important to make the plans or projects less top-down and more responsive to the needs of the people. Including stakeholders from the very beginning can help in the information gathering process, clarify the goals of policy and, most importantly, create a sense of commitment or "ownership" in the actual implementation of the projects.

During 1996 the MRC has been strengthening the human resources sector. This is one of the strategic factors enabling the MRC to cooperate in all fields of sustainable development, utilisation, management and conservation of the water and related resources. Among other things, the MRC is looking at possibilities of improving the riparian-on-stipend programme, assigning HRD focal points as well as environmental experts to the National Mekong Committees in the member countries and receiving assistance from the Capacity 21 Fund.

In order to improve the conditions of the riparian people through interdependent subregional growth and environmentally sustainable development of the Mekong River, the MRC must create an effective and dynamic organization in terms of capacity-building, programme preparation and coordination and mobilisation of resources to benefit the people in the

Basin. To be able to achieve this, the MRC Council has decided to restructure the Secretariat. One feature is the merging of units formerly separated in different divisions, such as the cross-sectorial environment and human resources development units (see page 30).

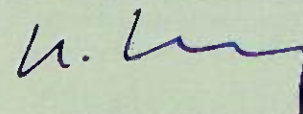
To achieve environmentally sound and sustainable development in the Lower Mekong Basin, which is a major goal of the MRC, we have to mobilise the flow of substantial resources. The challenge is how the MRC can best secure the type and quantity of resources required to attain the goals and objectives of the *Mekong Agreement*. An effective mechanism is necessary in accordance with not only the rapid growth in the region, but also with the transition to more dynamic and comprehensive regional cooperation and the forthcoming *Basin Development Plan* (BDP).

The MRC has to coordinate more actively with other initiatives in the Mekong region. The MRC, with 40 years of experience, is still the most active agency and will remain so in the future, as it has more than 40 programmes/projects under implementation. The ADB Greater Mekong Subregion initiative has started the implementation of some of its more than 100 project proposals. The MRC has, with the ADB, a well-functioning mechanism for coordination. Other initiatives are still discussing possible projects. The MRC welcomes these and other proposals and is grateful that so many organizations are ready to assist the riparian peoples in the region. The MRC is satisfied with the outcome of the first Dialogue Meeting with the People's Republic of China and Union of Myanmar held in Bangkok in July 1996. It is hoped that the two upstream countries will be joining the MRC in the not too distant future.

One of the most important decisions taken by the third MRC Council Meeting held in Vientiane, back-to-back with the first Donors' Consultative Group Meeting, in October 1996, concerned the rotation of the MRC Secretariat Headquarters between Vientiane and Phnom Penh every five years starting in Phnom Penh within two years. It is pleasing to note that the Government of Cambodia is preparing to welcome the staff to its new quarters close to the banks of the Bassac River in Phnom Penh. Renovation work will continue through 1997 in order to prepare the facilities which will ensure the smooth operation of the Secretariat in the years to come.

On a personal note, I encourage our readers to review the progress made during 1996 in this *Annual Report*. Several programmes which are elaborated in the *Work Programme 1997* are highlighted here and plans for the future are emphasised. All of this shows that the "Mekong family" will ensure that the development in the Mekong Basin is sustainable for all its peoples.

May I also thank the donors for their increasing contributions in 1996 and it is my profound hope that we can continue to truly work together as "Partners in Development".



Dr Kithong Vongsay  
Chairman of the MRC Council for 1996-97



## MESSAGE FROM THE CHAIRMAN OF THE MRC JOINT COMMITTEE

1996 was another year of steady progress for the Mekong River Commission. During the second year since the signing of the *Agreement on Cooperation for the Sustainable Development of the Mekong River Basin* in April 1995, the Council met twice in January and October, and the Joint Committee held its third and fourth meetings in March and July. A number of initiatives launched since the signing of the *Agreement* have taken shape, thanks to the kind understanding and support of the donor community as well as the cooperation and efforts of the National Mekong Committees of the member countries and the Secretariat. Apart from the programme/project activities highlighted in this *Annual Report*, I have pleasure to bring your attention to some of the major efforts and accomplishments during 1996.

### The Donors' Consultative Group

The MRC's endeavour to strengthen ties with the donor community resulted in the establishment of the Donors' Consultative Group (DCG) in April 1996 and the first meeting was held in October 1996 in Vientiane, the Lao PDR (see page 9 for details).

A good relationship with the donor community is one of the valuable assets of the MRC, which we have appreciated since the days of our predecessor, the Interim Mekong Committee. I cannot mention all the donors here, but let me reiterate that their support has made it possible to pursue our endeavours as can be found in this *Annual Report*. I am glad to say that today the partnership with the donor community is even stronger through the continuous efforts of the Secretariat.

### Dialogue Process

It was my honour to chair the historic gathering of the first Dialogue Meeting with the People's Republic of China and the Union of Myanmar held in July 1996, following two previous exploratory meetings in November 1995 and March 1996. The Dialogue Meeting adopted the objectives and framework for future meetings to address topics of mutual interest and concern in pursuit of greater cooperation and understanding among the four MRC Members and two Dialogue Partners, and to continue to explore ways and means for all riparians to participate under the common framework of the new *Mekong Agreement*.

### Basin Development Plan (BDP)

As a continuous and long process of development since mid-1995, efforts were made in implementing projects and activities which would help ensure effective commencement of the BDP, starting with a study of relevant experiences from similar organizations world-wide, preparation of the Terms of Reference (TOR) for formulating the BDP and carrying out other related activities including consultations with the riparian countries and communication with the public. In 1996, the following was achieved:

- Jointly with UNDP, the BDP Insight Workshop in Bangkok was organized in April with a view to

learning from relevant experiences on basin development plans in other major river basins throughout the world. The workshop was also attended by representatives of the riparian countries, NGOs and the media.

- Consultations were made with the four member countries on the draft TOR. The importance of *public participation* in the BDP process was recognised. A press release on the BDP and the TOR were issued in the member countries to share the information with the public.
- On the basis of the approved TOR, a detailed *Project Proposal* for formulating the BDP was completed and incorporated into the *Work Programme 1997* of the MRC.
- A proposal for a study on public participation in the Mekong context, a basic pre-condition for sustainable development, was completed.

It should be noted that the major part of these activities was completed with financial assistance from *Sweden*. *Denmark* provided valuable services of two technical advisers, an environmentalist and an ecologist, for completing the draft TOR. In addition, *UNDP* continued to provide short-term services of a senior technical adviser to this BDP process.

Approximately USD 5,170,000 of external funds is being sought for the formulation of the BDP and the study on public participation. In this connection, it is expected that in 1997, the donors and cooperating agencies of the MRC would continue their favourable consideration and support, both technically and financially, to this important project of the MRC which requires an initial period of at least two years to complete.

### Water Utilization Programme

In 1996, the MRC Secretariat has been discussing with the World Bank the possibility of obtaining support under the "Global Environment Facility" (GEF) to prepare a project which basically will permit better coordination with all ongoing and future activities related to Water Utilization in the Mekong Basin. As a result, a preparation grant, namely "Project Development and Preparation Facility" has been made available under the GEF, to finance the preparation phase of the project. This would permit the carrying out and completion of priority activities to build up the necessary knowledge and databases and provide organizational arrangements and capacity-building to support the water utilization programme, with the final objective of developing rules for water quantity and quality.

### Rules for Water Quality

A Sub-Committee on Rules for Water Quality was approved by the Council Meeting in October 1996.

Its First Meeting was held in Bangkok on 2-3 December 1996. The meeting endorsed the Terms of Reference for the Sub-Committee and a draft Project Proposal for Rules for Water Quality. The main objective of the project is to initiate the setting up of a



legal, technical and institutional framework to manage water quality and to control pollution in the Lower Mekong Basin.

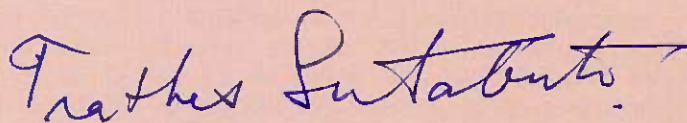
### Rules for Water Quantity

In July 1996 the Joint Committee requested the Secretariat to make necessary modifications on a project proposal to deal specifically with rules for water quantity. The Secretariat's modified proposal, entitled "Preparation of the Mekong River Commission Rules for Water Quantity" has three objectives:

- To prepare draft MRC Rules for Water Quantity;
- To have a sustainable mechanism ensuring effective implementation of the MRC Rules for Water Quantity based on the Hydrometeorological Network to be proposed by this study; and
- To strengthen the institutional framework for implementation of the MRC Rules for Water Quantity.

### Resources of the Secretariat

Other valuable assets are the knowledge and expertise at the Secretariat. I am pleased to note that all the staff headed by Mr Matoba, the Chief Executive Officer, have made serious efforts to accomplish their assignments. I am sure that the restructuring of the Secretariat which is now in process will make the Secretariat even more efficient, with which, the MRC will proceed further.



Dr Prathes Sutabutr  
Chairman of the MRC Joint Committee for 1996-97

## MAJOR DECISIONS OF THE COUNCIL AND JOINT COMMITTEE IN 1996

Below are major decisions made by the MRC Council and Joint Committee at their respective meetings in 1996:

### 30-31 January 1996, Second Meeting of the Council, Phnom Penh:

- Approval of the operational budget for 1996;
- Agreement on the objectives for establishment of the Donors' Consultative Group (DCG) and timing of the Inaugural Meeting;
- Approval of changes in the timing of meetings of the Council and Joint Committee;
- Cambodia and the Lao PDR were requested to consult each other on the location of the MRC Secretariat; and
- Agreement on continued communication with the People's Republic of China and the Union of Myanmar.

### 18-20 March 1996, Third Meeting of the Joint Committee, Ha Noi:

- Approval of request for continued UNDP support to the MRC;
- Approval of promoting further dialogue with the two upper countries;
- Endorsement of draft Annual Report 1995; and
- Endorsement of the cooperative programme with the Murray-Darling Basin Commission (MDBC) in Australia.

### 24-25 July 1996, Fourth Meeting of the Joint Committee, Bangkok:

- Endorsement of draft Work Programme 1997;
- Endorsement of amended Terms of Reference of the DCG;
- Establishment of a Sub-Committee for Rules for Water Quality;
- Approval of Terms of Reference for formulation of the BDP; and
- Approval of UNDP proposal to set up a Mekong Trust Fund.

### 29-30 October 1996, Third Meeting of the Council, Vientiane:

- Approval of the interim operational budget for 1997;
- Approval of the draft Work Programme 1997 with some amendments;
- Approval of "Guidelines for DCG Meeting";
- Approval of the proposed new organizational structure of the MRC Secretariat;
- Acceptance of proposal on the first Joint Meeting of the Ministerial Councils (MDBC-MRC);
- Approval of amendments to Rules of Procedures of the Joint Committee and Council; and
- Decision on the MRC Headquarters on a rotation basis of five years starting from Phnom Penh.



## REPORT OF THE CHIEF EXECUTIVE OFFICER OF THE MRC SECRETARIAT

During 1996, the MRC implemented programmes/projects that are fundamental for the sustainable development of the Mekong River Basin.

### 1996 Programmes/Projects Implementation

Throughout the year, there were 40 programmes/projects (26 fully funded and 14 partially funded) being carried out, the external budget of which totalled USD 86.3 million. Included among those projects and components completed in 1996 are:

- Groundwater investigation programme, Phase I (Sweden),
- Management of acid sulphate soils, Phase I (Sweden),
- Management of wetlands in the Lower Mekong Basin, Phase I (Sweden),
- Water quality monitoring network in the Lower Mekong Basin, Phase II (UNEP/Sweden),
- Integration of environmental components in projects and integrated database for natural resources management, Phase I (Sweden),
- Soil erosion and sedimentation studies, Phase I (Sweden),
- EIA process and procedures for projects in the Mekong River Basin (Canada),
- Mekong integrated transmission system study (Japan),
- Integrated land and water use for sustainable agricultural development in the Lower Mekong Basin (Denmark),
- Sustainable management of resources (Germany),
- Watershed classification in the Lower Mekong Basin, Phase I (Switzerland).

### Donors' Support

The total contribution to the MRC from the donor community in 1996 on a commitment basis was nearly at the same level as in the previous year, amounting to approximately USD 27.3 million from 12 donors covering 19 programmes/projects and activities. Updating of the Hydrographic Atlas, Phase II (Finland), the Programme for Fisheries Management and Development Cooperation (Denmark), and the Environment Programme (Denmark and Sweden) were among them (see page 9 for details).

In addition to the programme/project support, the donor community currently supports thirteen international experts at the Secretariat in Bangkok, among those, ten are on a non-reimbursable loan basis.

It is one of the important tasks of the Secretariat to maintain a smooth and regular communication with the donor community. I am glad to report that apart from the formal gathering, such as the Donors' Consultative Group Meeting, informal contacts with the donor community have been increased during the

year under review. It is my pleasure to report that the Secretariat has been provided a number of valuable views given on such occasions.

### Mekong Work Programme 1997

The Secretariat also devoted itself to prepare a work plan for 1997, based on the development priorities and needs of the member countries. The *Mekong Work Programme 1997*, approved by the Council in October 1996, consists of 101 programmes/projects and activities, including 18 new proposals. Out of 101 programmes/projects, 61 are pending and 14 partially funded, requiring approximately USD 120.1 million to be sought.

In carrying out its development projects, the MRC pays particular attention to cross-sectorial subjects such as basic data collection, human resources development, and environmental and social impacts. Continued emphasis is put on basinwide or regional programmes/projects and the "programme approach" as in the previous year. In addition to the existing Programmes of Hydrology, Environment, Fisheries, Human Resources Development and Hydropower, the MRC is preparing a programme for the agricultural sector, a strategic study for the watershed management and forestry sector, as well as a similar study for the tourism sector.

### Cooperation with other Initiatives

The MRC continued its efforts to avoid the possible duplication of roles and efforts among a number of initiatives taken in the Mekong region through participation in meetings and exchange of information. With the ADB, the MRC has maintained close cooperation since the inception of the ADB-Greater Mekong Subregion Initiative. The MRC was invited to the Sixth Ministerial Conference on Subregional Economic Cooperation organized by ADB in August 1996 in the People's Republic of China. The MRC also participated in the Inaugural Meeting of the Working Committee on Infrastructure Development of the Forum for Comprehensive Development of Indochina, organized jointly by the Governments of Australia and Japan in Australia in September 1996.

### Murray-Darling Basin Commission

A high-level relationship between the two organizations was established in 1995 with the principal objectives of (1) facilitating future exchanges and related cooperation programmes between the two River Commissions, and (2) learning from the MDBC experiences in managing the huge river basin of the Murray and Darling Rivers, many of which are relevant and useful to the MRC.

With financial support from the Australian Agency for International Development (*AusAID*) in July 1996, both organizations agreed on a draft three-year *Joint*



*Cooperation Programme*, with a total project cost of AUD 300,000. Major components of the Programme include:

1. *Joint Meeting of Ministerial Councils;*
2. *Joint Meeting of MDBC and MRC (at the Joint Committee level);*
3. *Committee on Water Sharing (workshop-cum-study visit); and*
4. *Meeting of the Joint Reference Panel.*

The Joint Meeting of Ministerial Councils is planned to be convened every 18 to 24 months. Similarly, the Joint Meeting of the MDBC and MRC is planned to be convened annually. The third component is conceived to be of a technical nature aiming at exchanges and sharing of experiences among professional staff of the two organizations. The Joint Reference Panel has the specific purpose of securing appropriate advice from senior experts, particularly from the MDBC in such important areas as basin development planning, water resources management, community participation, environmental protection, etc.

The first visit of the MRC Council Members to Australia will be carried out in January 1997, to meet with their counterpart Ministers from the Federal Government and the States of New South Wales, Victoria and South Australia.

#### Organizational Structure

The Third Meeting of the Council in October 1996 approved the new structure of the Secretariat and its

implementation plan. The implementation began at the end of 1996 and will be completed in early 1997. It will enable the Secretariat to establish a well functioning international resource base capable of programme and project management and resources mobilization, including capacity-building, to benefit the riparian countries and people in the Mekong River Basin (see organization chart on pages 30-31).

Finally, I would like to take this opportunity to introduce to the readers my colleagues at the Secretariat, some of whom have been here for a long time, and others who have just joined rather recently. All of them including myself, however, are proud of being engaged in this challenging task of ensuring the sustainable development of the Mekong River region. While being in the process of the restructuring, getting a number of ongoing projects moving well and starting new projects have not been easy tasks. I would be more than glad if the readers of this *Annual Report* can feel the earnest devotion of the staff of the Secretariat towards sustainable development of the Mekong River Basin.

*Yasunobu Matoba*  
Yasunobu Matoba  
Chief Executive Officer, Secretariat



*Khone Falls, Southern Lao PDR*



# STRUCTURE OF THE MEKONG RIVER COMMISSION

## COUNCIL

(MINISTERIAL AND CABINET  
LEVEL, MAKING POLICIES AND  
DECISIONS)



H.E. Mr Ing Kieth  
of Cambodia  
Chairman of the  
Council (1995-96)



H.E. Dr Kithong Vongsay  
of the Lao PDR  
Chairman of the Council  
(1996-97)



H.E. Mr Yingpan Manasikarn  
of Thailand



H.E. Mr Nguyen Canh Dinh  
of Viet Nam

## JOINT COMMITTEE

(DEPARTMENT HEAD LEVEL,  
IMPLEMENTING POLICIES AND  
DECISIONS)



H.E. Mr Khy Tainglim  
of Cambodia



H.E. Mr Sitaheng Rasphone  
of the Lao PDR



Dr Prathes Sutabutr  
of Thailand  
Chairman of the Joint  
Committee (1996-97)



H.E. Dr Phan Sy Ky  
of Viet Nam  
Chairman of the Joint  
Committee (1995-96)

## SECRETARIAT

(RENDERING TECHNICAL AND  
ADMINISTRATIVE SERVICES)



Mr Yasunobu Matoba, Chief Executive Officer



## SUPPORT FROM DONORS AT RECORD LEVEL

### New Agreements with Donors

The year 1996 showed another record level of support from the donor community: a commitment amounting to USD 27.3 million from 12 donors. Even if this shows that the donors believe in the capability of the MRC to manage the contributions in an efficient way, there is room for improvement. Neither the Mekong River Commission nor its forerunner, the Mekong

Committee, has ever handled so many programmes and projects before and it must now be proven that the MRC is able to manage the high level of activities and quickly adjust to the new situation and remove bottlenecks. The task is formidable, considering the relocation of the Secretariat with an anticipated loss of a great number of staff.

Among the agreements entered with donors in 1996, the following can be mentioned:

		USD
* MRC Programme for Fisheries Management and Development Cooperation	Denmark	8,000,000
* Environment Programme and Institutional Support (1996-98)	Sweden	5,400,000
* Environment Programme	Denmark	3,260,000
* Assessment and Monitoring of the Mekong Basin Forest Cover	Germany	1,973,680
* Updating of the Hydrographic Atlas	Finland	1,920,374
* Inventory and Management of the Cambodian Wetlands	Denmark	1,831,250
* Core Contribution to MRC (1996-98)	Switzerland	1,496,000
* Improvement of the Hydrometeorological Network	Australia	1,200,000
* Improvement of the Hydrometeorological Network, Project Formulation Fund, Institutional Support and MRC Rules for Water Quantity	Japan	1,125,000

### The Donors' Consultative Group

In 1996, the Donors' Consultative Group (DCG) was constituted and held its Inaugural and First Meetings in April and October, respectively. Twenty-three donor countries and nine international organizations participated in the First Meeting of the DCG. Some representatives of NGOs and the private sector were invited to the First DCG Meeting.

At the meetings with the DCG, the MRC received constructive and useful advice. Among them are the importance of poverty alleviation as the major objective in all activities of the MRC, the necessity to establish good working relations with different stakeholders in the Mekong River Basin, and the importance of emphasising environmental and social issues in all programmes of the MRC. Transparency and dissemination of information are other concerns expressed by many donors. Some donors - also included in the proposed Mekong Trust Fund for Key Officers' Posts and Capacity-Building - have indicated that increased contributions by the MRC member countries (cost-sharing) would facilitate future donor support.

### Informal Meetings with the Donor Community

In addition to the DCG and as a response to the donors, the Secretariat arranged informal briefings in Bangkok to share information and seek advice regarding ongoing or proposed programmes and activities. This kind of get-together has been appreciated as an opportunity to discuss various matters of concern in an open and frank manner. The discussions centred particularly on the Basin Development Plan process, the Mekong Trust Fund, the almost fully funded Environment and Fisheries Programmes, and the Water Utilization Programme, including quantity and quality components.

### The 1996 Donor Field Study Trip

In May 1996, a Field Study Trip was arranged by the Secretariat to visit projects in the Mekong Delta and Cambodia. Representatives of 13 donors were greeted by *H.E. Mr. Ing Kieth*, Deputy Prime Minister of Cambodia and then MRC Council Chairman. The trip included inspection of irrigation projects in Viet Nam, fisheries projects in the Delta and the Great Lake and the ferry project in Cambodia. The severe erosion occurring in the Chakdomuk area where the Mekong, the Bassac and the Tonle Sap meet was observed. Two informal meetings were held with the participants.

### Firm Partnership

The year of 1996 has been a milestone in the MRC's relationship with the donors. Not only has the very generous support been important and encouraging, but also the "partnership" between the MRC and the donor community was strengthened. The DCG and informal meetings have given the MRC opportunities to listen to and discuss with the donors. After the meetings, several actions have been taken, such as seeking funds for a public participation activity to establish a mechanism for the future dialogue with the stakeholders, environmental and social impacts are now stressed at an early stage in all projects, there is additional information sharing, such as informal meetings and more issues of *Mekong News*, etc.

In order to accomplish a well-balanced, sustainable development for our future generations, we have to continue to work together. It goes without saying that the MRC is looking forward to cooperating even closer with the donor community in the future. The newly established "partnership" is here to stay.



## FISHERIES DEVELOPMENT IN THE MEKONG

### Extra Pressure on the Resource

With the increased economic development and growth in both domestic and regional trade, fish are becoming a commodity in high demand. This naturally leads to an increase in the fishing effort, extra pressure on the resource and danger of overfishing. The resources need to be managed in a regional context, based on inter-boundary cooperation among the riparian countries. Otherwise, severe problems may emerge in future.

### Objective of the MRC Fisheries Programme

The main objective of the Programme is the "sustainable use of the economic and nutritional potential of the inland aquatic resources of the Mekong River Basin". The Programme has four components:

- Capture Fisheries Management
- Small-scale Aquaculture Development
- Institutional Strengthening
- Coordination and Information Exchange

A large part of the existing Programme is financed by Denmark.

### Questions to be answered by the MRC Fisheries Programme

Five important questions which the Programme is trying to answer include the following:

#### 1. How important is the fish production?

Official statistics report that only 360,000 tonnes of fish are caught in the Mekong Basin. Yet recent data, partly collected by MRC executed projects, indicate that the production may be as high as 1 million tonnes, with an estimated annual value of USD 700-800 million, at the disposition of some of the poorest people in the world.

More exact information is required and this is being done through research and surveys carried out by the MRC Fisheries Programme and by strengthening the collection of inland fisheries statistics in the four riparian countries. The projects, "Management of the Freshwater Capture Fisheries of Cambodia" and "Strengthening of Inland Fisheries Information Systems" (planned), address these issues.

#### 2. How will future projects on the River affect the fish resources?

More data are required on the behaviour of the fish species, their migration patterns, spawning and nursery habitats, and how they depend on free access to these areas. A number of aquatic resources impact assessments are being undertaken which may indicate the kind and size of possible side effects on the fish resources, and alternative options for such projects which may reduce the negative impacts. Moreover, any envisaged decline in fish production should be quantified before the projects are implemented, both in terms of fish production and value, so that the Governments may know the possible impacts, and can take them into account in their economic feasibility calculations. The project, "Assessment of Mekong Fisheries - Fish Migration and Spawning and Impact of Water Management", is covering these issues.

#### 3. How can the resources be managed?

The development of fisheries management systems requires, apart from reliable data on fish stocks, fishery and fisherman folk, the active involvement of the people themselves, and the cooperation between the fisheries administrations in the four countries. The development of management options with community participation is addressed by the projects, "Management of the Freshwater Capture Fisheries of Cambodia" and "Management of Reservoir Fisheries in the Mekong Basin", and cooperation at the administrative level is planned to be set up when sufficient data are available, through the project, "Joint Management Schemes" (detailed planning is underway).

#### 4. How can the fish production be increased?

Aquaculture on numerous small-scale (one hectare or less) rice farms and improvement of fish production in reservoirs represent two important potentials for increasing fish production. The issues are addressed through the projects, "Rural Extension for Aquaculture Development in the Mekong Delta" and "Management of Reservoir Fisheries in the Mekong Basin". Future projects may be directed towards selecting indigenous Mekong fish species which are suitable for culture instead of introducing exotic species.

#### 5. Can riparian institutions address research and management needs?

The MRC Fisheries Programme has been formulated in close cooperation with the line agencies for fisheries in each of the four riparian countries. At the annual meeting, the MRC Secretariat Fisheries Unit reports on its progress year by year and receives advice on adjustments to the Programme and on new activities to be taken up.

### Institutional Strengthening

This is a very important component under the Fisheries Programme. All projects are implemented through the line agencies for fisheries or institutes of the riparian countries, and the project headquarters are situated in one of these institutions. It is the aim of the Fisheries Programme that national fisheries institutions on a medium-term basis will address national and regional needs for fisheries research, management and extension. On a longer-term basis these needs may be effectively met through basinwide cooperation.

### Future Projects

During 1996 three project proposals have been prepared for presentation to the donor community: "Management of the Inland Capture Fisheries of Cambodia, Phase II", "Strengthening of Inland Fisheries Information Systems in the Lower Mekong Basin" and "Planning and Initiation of a National Aquatic Resources Institute in the Lao PDR".

### Catch and Culture

A quarterly newsletter called *Catch and Culture* is produced by the Fisheries Unit. This keeps the members of the Mekong Fisheries Network informed of events happening in the region and elsewhere.



## Regional Cooperation

It is envisaged that the MRC Programme for Fisheries Management and Development Cooperation may constitute a useful "umbrella" for regional fisheries development. It invites cooperation among all institutions involved in fisheries development in the Mekong Basin. At the Annual Meetings, regional and international organizations supporting fisheries development are invited to participate and present their projects, and seek coordination with other similar activities. The MRC project directorates are continuously coordinating with other related projects

to increase the efficiency and avoid unnecessary overlap.

Working relations are already established with AIT (Asian Institute of Technology), NACA (Network of Aquaculture Centres in Asia-Pacific), FAO (Food and Agriculture Organization), ICLARM (International Center for Living Aquatic Resources Management), PADEK (Partnership for Development in Kampuchea), etc.



*Fish traps at Pak Mun Reservoir, Thailand.*



*Fish jumping in a pen in the Great Lake, Tonle Sap, Cambodia.*



*Aquaculture experiments near Luang Prabang, the Lao PDR.*



*Fish market in the Mekong Delta, Viet Nam.*



## ENVIRONMENT PROGRAMME

The Environment Programme of the MRC is designed for developing and implementing a coherent programme which addresses the core environmental problems and issues in the Lower Mekong Basin related to water and related resources. The Environment Programme is supported by Sweden (USD 3.6 million) and Denmark (USD 5.1 million). Support from Switzerland is now in the final stage of negotiation and is expected to be signed very soon. Support has also been received from UNEP, Nairobi, for the Preparation of a Diagnostic Study for the Mekong Basin and UNEP/Environment Assessment Programme for Asia and the Pacific, Bangkok, for the implementation of the Environmental Assessment Programme.

Both the population growth and pressure from development activities in the Mekong region will increase the level of impact on the environment and natural resources. Striving for sustainable development, it is necessary to develop information, knowledge, methods and tools which ensure the proper management of development activities and the environment simultaneously. The Environment Programme will assist the MRC and riparian countries in enhancing the integration of environmental protection and conservation into their development activities in a coordinated and internally cohesive manner. In order to ensure efficiency and avoid duplication of efforts, it will be implemented in close coordination and cooperation with regional and international institutions in the sector, such as ADB, UNDP, UNEP and the World Bank.

Some of the ongoing components under the Environment Programme are highlighted below:

### *Diagnostic Study for the Mekong River Basin*

Funded by UNEP, the study has been carried out since January 1995 to provide an updated diagnosis of the state of the environment in the Mekong Basin and to identify environmental issues of general relevance for the entire Basin. The final report on the framework and actions proposed by the study will be presented in March 1997 to the MRC Joint Committee for consideration and approval. It is envisaged that the results of the study will contribute to the foundation of sustainable development planning in the Mekong Basin.

### *Inventory and Management of Wetlands in the Lower Mekong Basin*

Funded by Sweden and Denmark (for Inventory and Management of the Cambodian Wetlands). The studies aim at formulating ecologically sound management plans for the wetlands. Riparian wetlands teams have been developed and received training through several courses and other activities relevant to wetlands management. Wetlands within the Mekong River corridor of the Lao PDR, Thailand and Viet Nam were mapped and digitized using the Geographic Information System.

### *Management of the Acid Sulphate Soil*

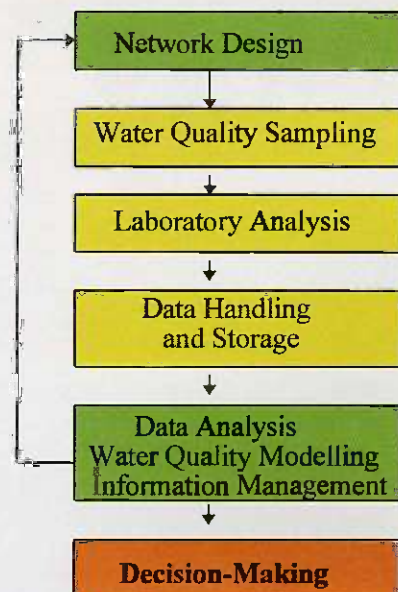
This project funded by Sweden was carried out in the Mekong Delta in Viet Nam in order to formulate sound reclamation and management strategies. Experiments on soil and water chemistry were conducted both in the field and the laboratory. Models were developed using data from an experimental farm. Training was also provided in-country as well as overseas.

### *EIA Process and Procedures for the Mekong River Commission*

This project was funded by Canada to prepare a draft Environmental Impact Assessment (EIA) process and set of procedures for the MRC which, when adopted, may assure its member countries that major projects which may cause potential impacts on two or more countries will receive careful review. The project identified the EIA training needs and determined the type and size of projects that would require EIAs. An outline for a suitable EIA structure, process and procedures for dealing with development projects in the Lower Mekong Basin was prepared and discussed with representatives from the riparian countries during the EIA Workshop held in April 1996.

### *Water Quality Monitoring Network Project*

Funded by Sweden since 1985. Monitoring is the long-term, standardized measurement and observation of the aquatic environment in order to define its status and trends. The principal reason for monitoring water quality in the Lower Mekong Basin has been the need to verify whether the observed water quality is suitable for intended uses. However, monitoring has also evolved into determination of trends in the quality of the Mekong River and how it is affected by the release of contaminants from human activities. To fulfil these functions, efforts are being made to establish a management tool for the Mekong water quality conditions through an information system as follows:





Today the network comprises 103 stations, covering 16 in the main river, 35 in the tributaries, 46 in the Mekong Delta and six in the Mekong Corridor Wetlands. The samples are collected monthly and analyzed for basic physical and chemical parameters. Pesticides monitoring in water and fish has been set up since 1991. The sampling of fish for pesticide analysis has been conducted twice a year (once in the dry season and in the rainy season). Five typical species of fish and one water sample have been collected at each station. The results obtained so far indicate that pesticide concentrations are well below the acceptable levels in aquatic organisms.

A water quality database is maintained in each of the four riparian countries, using the same system and coordinated with the MRC Secretariat for assessment and dissemination. The water quality database is maintained and data are provided on request from external users. The data will be used as valuable inputs to many of the MRC activities in the future, such as the Rules for Water Quality and the Basin Development Plan process. In 1996, the institutions

operating the Water Quality Monitoring Network in the riparian countries received various types of support aimed at strengthening their capabilities. These included training of staff in database management and statistics, analytical chemistry and limnology, and provision of computers and advanced analytical equipment.

Water throughout the Mekong River Basin is generally of good quality, but there are localized exceptions. Basinwide, oxygen levels are good, but there are relatively high levels of suspended sediments and siltation. Localized perturbations are principally caused by natural processes (soil erosion and siltation, salt leaching, saltwater intrusion, acid leaching) and human activities including agro-chemical uses, and industrial and domestic waste discharges (solid, liquid, and hazardous). Human activities and their associated pollution levels would be increasing and cause significant future impacts on the water quality if not managed properly.

### Summary of Water Quality Conditions

Factors	Severity	Spatial Scale	Occurrence/Remarks
Eutrophication	moderate-severe	local	Development areas High N levels: Chiang Saen, Ban Kok, Yasothon, Ubon, My Tho; High P levels: Vientiane, Ban Kok, Luang Prabang, My Tho
Organic pollution	severe-moderate	local	Development areas
Organochlorines	moderate	regional	Limited data
Salinity	very severe	local	Korat Plateau (evaporite rock salt) Saltwater intrusion in Delta
Toxic metals	moderate	local	Limited data but severe in mining areas of Western Cambodia
Sediment yields	moderate-severe	regional	Higher upstream and in the wet season
Microbial pollution	moderate	local	Development areas
Acidification	severe	local	Delta

Source: Mekong River Basin Diagnostic Study



Sampling of suspended sediment, Khammouane Province, the Lao PDR.



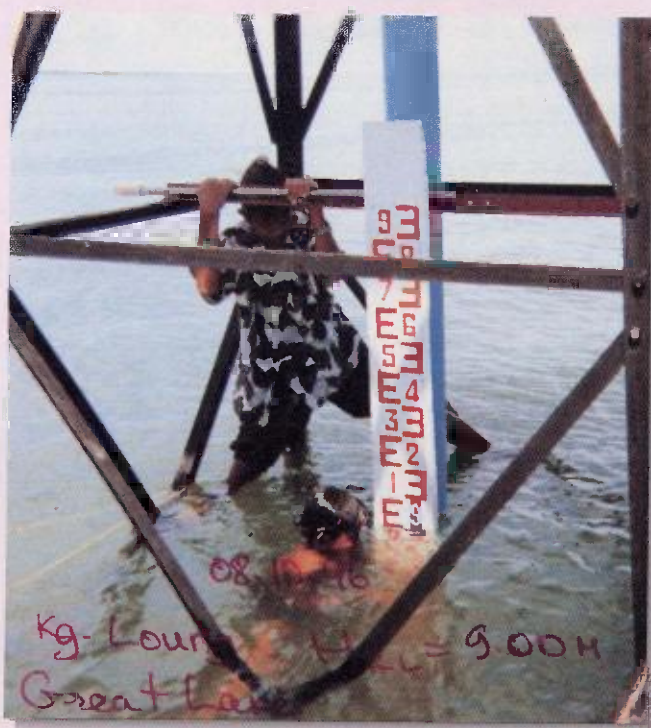
## HYDROLOGY PROGRAMME

The primary goal of the Hydrology Programme of the Mekong River Commission is to provide hydrometeorology data and conduct studies for the planning and development of the Lower Mekong River water and related resources. The tasks undertaken during the past three decades by the then Mekong Committee included the development, operation and maintenance of an optimum observation network for data collection; data processing and publishing of the *Hydrologic Yearbook*; carrying out river monitoring activities (river simulation for flood and low flow forecasting) and providing training and technical assistance.

In line with the Mekong River Commission's goal for sustainable development, the Hydrology Programme offers cross-sectorial support as it deals with other sectors of the MRC Secretariat. With a view to providing support to the MRC's immediate main tasks, notably the preparation of the *Basin Development Plan (BDP)* and the establishment of *Water Utilization Rules*, it is necessary to improve the hydrometeorological network in terms of its data collection, data transmission facilities, database management, computational capability and human resources development in the sector.

The ongoing *Improvement of the Hydrometeorological Network* project is designed to reach the above mentioned aims. It is currently being carried out with financial assistance from the Governments of Japan and Australia. The rehabilitation of the network and the establishment of additional observation stations and provision of training are the major activities of the

project. Furthermore, the Government of New Zealand and UNDP continued to provide support towards the printing of the 1993 *Hydrologic Yearbook* and mainstream joint discharge measurements, respectively.



*Kompong Loung Great Lake Hydrological Station, Cambodia.*



*Discharge measurement at Pak Khanhoung, Nam Ngum, the Lao PDR.*

River monitoring, one of the main functions carried out annually, consists of flood forecasting operations, low flow forecasting and salinity forecasting.

The Secretariat's flood forecasting system in cooperation with the national agencies, provides warning to the public and authorities concerned. During the wet season, daily reports of rainfall and river levels from a network of observation stations in the countries are sent to the Secretariat by radio. Much of this information is used in computer models to make forecasts for future flood conditions; and these forecasts with warning messages are immediately dispatched to the riparian countries for further action.



## COMPREHENSIVE WATERSHED MANAGEMENT AND FORESTRY PROGRAMME

Currently the Watershed Management and Forestry Sector is carrying out four projects that are closely coordinated and complement each other.

The *Watershed Classification Project* funded by Switzerland was designed to make an assessment of the Lower Mekong Basin with regard to constant geophysical aspects and their inherent degradation risks for soils and hydrological factors. Based on an array of variables such as slope and land form, it classifies the watershed of the Lower Mekong Basin according to the suitability of the major land uses for sound watershed management. The project involves advanced GIS technology, including the generation of a digital terrain model. Major activities in 1996 included the processing of digital data, training and the preparation of manuals on how to use the watershed classification maps as a tool for decision-making in natural resources management. The watershed classification maps and manuals will be available in 1997.

In contrast, the *Forest Cover Assessment and Monitoring Project* supported by Germany addresses the vegetation cover (with particular consideration for forests). In recent years this cover has been dramatically altered through human impact, exposing many upland areas to serious soil and water degradation processes. To date there is no reliable information available on the extent and dynamics of these changes. In order to address this shortcoming, the project is carrying out an assessment of the prevailing condition of the existing vegetation cover. In a second step it will establish a basinwide system for monitoring its dynamics. The overlay of the information generated by this project with those of the Watershed Classification Project will reveal critical areas that require interventions in order to sustain or rehabilitate the integrity of the watersheds. The project concentrated in the past year on interpretation of satellite images, digitizing and consolidating the resulting forest cover maps. These maps will be printed in 1997.

The third project in this programme, the *Sustainable Management of Resources in the Lower Mekong Basin*, addresses the problem areas referred to above on the ground. It aims at identifying and promoting appropriate participatory approaches to land use planning and watershed management in critical upland areas. Promising concepts will be tested in pilot areas. It will also establish an information system for sharing regional experiences in this field. The project became fully operational in 1996 with the fielding of two Technical Advisers, a major design workshop and the establishment of the first pilot area in Dac Lac Province in the Central Highlands of Viet Nam. It is also funded by Germany.

The project on *Forestry-Based Development in the Long Xuyen Quadrangle* supported by Australia was launched against the background of concerns about the impact of large-scale monoculture forestry plantations on acid sulphate soils. However, during its five-year implementation period the project addressed a wide variety of other issues relevant to forestry development in the Delta such as fire prevention, farm forestry, forestry economics, extension and training. The huge amount of information collected, processed and analyzed has been entrusted to the local authorities and agencies concerned for appropriate applications. The conclusions point to serious limitations of environmentally sound large-scale Eucalyptus plantations, but reveal a surprisingly high potential for agro-forestry with indigenous tree species, especially *Melaleuca*.



*Model nursery at capacity of around 300,000 seedlings per year at Chi Lang of the Long Xuyen Forestry Project, Viet Nam.*

### Future Outlook

A Swiss-funded review of the watershed management and forestry sector will be undertaken from July 1997 in order to coordinate and programme future activities. It will employ a strategic approach on how to promote this sector for sustainable development.

Cornerstones of this strategy will be: focus on basinwide and catchment-oriented activities, the programme approach, collection and processing of basic information for watershed analysis, modelling of environmentally relevant processes in watersheds, training, promotion of participatory and cross-sector approaches and networking.



## AGRICULTURE AND IRRIGATION SECTOR

The Mekong River Basin covers predominantly rural areas of the four riparian countries, where the average per capita income level is generally ranked as one of the poorest in the world. With industrialization causing incomes to rise in urban centres, especially in Thailand and Viet Nam, and to a lesser but significant extent in the Lao PDR and Cambodia, rural areas in the basin are falling behind in terms of income growth and the gap between urban and rural incomes is widening. There is also a strong desire among farmers to diversify and expand the area of dry season crops to raise farm incomes.

### Study on Integrated Land and Water Use for Sustainable Agricultural Development

A final report was concluded in July 1996 with a proposal for a programme for integrated land and water use supported by an Agriculture and Irrigation Sector Review for each of the riparian countries. The report was financed by Denmark and serves as the first step to establish the MRC Agriculture and Irrigation Programme (AIP).

The MRC intends to establish the AIP which will incorporate a practical and integrated approach for agricultural development in the Lower Mekong Basin. It will serve as a strategic tool for the MRC and the riparian countries in order to improve the quality of decision-making and managerial performance in planning and formulation of future projects in the *Mekong Work Programme*.

An Expert Consultation for the establishment of the AIP is planned to take place in 1997. The Expert Consultation aims to consolidate a broad consensus of cooperation among stakeholders, which will be consistent with the policies and strategies of the riparian countries.

### Sustainable Irrigated Agriculture Project

The Sustainable Irrigated Agriculture Project (SIRAP) encompasses the follow-up activities of the Mekong Irrigation Programme (MIP), which was designed for small-scale irrigation development with the participatory approach in the Lao PDR and Thailand. During MIP the project supported rehabilitation and modernization of irrigation schemes. SIRAP puts emphasis on institutional and socioeconomic support of irrigated agriculture. The project has been supported by the Netherlands Government since October 1992 to improve 65 small irrigation schemes in the Lao PDR and Thailand. Through a training programme of water management and agriculture extension, knowledge of government staff at central, provincial and district levels and water users organizations has increased. A consolidation phase was recommended by the Danida review mission in 1996 to develop a sustainable irrigated agriculture development model based on the SIRAP approach to be incorporated in the agriculture development

policies of the Laotian and Thai Governments. The consolidation will be implemented over 18 months from January 1997 to June 1998 under Dutch financing.

### Feasibility Study of Ya-Soup Multipurpose Project

The Ya-Soup Project, as the first Mekong multipurpose project in the Central Highlands of Viet Nam, was studied at the feasibility level from August 1995 to December 1996 with financial support from the Government of the Republic of Korea. The study recommended implementation of the project in order to realise the anticipated benefits of the project: improving the quality of life of the residents through the development of water resources and agriculture; provision of agricultural extension services, forest protection, electricity and domestic water supply; and improving rural and social infrastructure including transport, education facilities, public facilities and small-scale industries, medical facilities and markets.

### Regional Training Course on Irrigation

The MRC will hold a regional training course on modern irrigation technology and extension at Khon Kaen University, Thailand from 16 January to 5 February 1997. This training course invited thirty-three participants, including eight senior professionals from each riparian country and two experts each from the Governments of the State of Israel and the Republic of Korea, respectively.

### Agriculture and Irrigation Newsletter

The newsletter, *Agriculture and Irrigation for the Mekong (AIM)*, will create a forum for the exchange and sharing of ideas, research experience and information at all levels. With financial support from MASHAV, the Israeli Center for International Cooperation, AIM will be issued three times a year, and the first issue will be published in February 1997.



*Improving canal system at Nakung-Thunlua Pumping Scheme, the Lao PDR.*

*(continued on page 17)*



## HYDROPOWER PROGRAMME/PROJECTS

The Hydropower Programme is designed to provide continuity for hydropower activities in a programme-oriented fashion and in close coordination with the Asian Development Bank's energy programme for the Greater Mekong Subregion (GSM) through its Electric Power Forum. The programme includes several components, such as data collection, planning studies, project studies, environmental assessment, technical assistance, training and an energy fora. The development objective is *to develop the substantial and valuable hydropower resources in the Mekong mainstream and its tributaries in a sustainable manner for the benefit of the riparian countries and the people living in the basin.* The immediate objectives are *to implement a package of components within a well-defined programme in a continuous manner to provide the Mekong River Commission with sufficient information to make appropriate decisions with respect to the hydropower development of the Lower Mekong Basin, the project sequence to be implemented and the assessment and monitoring of possible environmental impacts in both positive and negative terms; to support the riparian countries in the coordination of sub-basin planning activities, and to provide them with technical assistance as required; and to strengthen the capability of the riparian countries in hydropower planning, environmental impact assessment and in dealing with private sector participation.*

In 1996 the following activities were carried out under the Hydropower Programme:

1. The *Sekong-Sesan and Nam Theun Basin Hydropower Development Planning Study*, funded by France and ADB, is one of the activities of the GSM. The MRC Secretariat serves as the coordinating agency of the study which will be started in January 1997 for completion within two

years. It is one example of successful cooperation between MRC and ADB.

2. The *Revision of Integrated Transmission System Study*, funded by the Government of Japan, was completed with a recommendation to study the feasibility of two selected interconnections.
3. The first *Mekong Hydropower Forum*, which is planned to be held annually, supported by the Governments of Switzerland and the United Kingdom, was held in Ha Noi, Viet Nam in July 1996. The Forum enhanced understanding of opportunities and constraints in mobilising private participation in hydropower development.
4. During 1993-96, the MRC Secretariat conducted the *Pilot Micro-hydropower Projects with Standardized Equipment Project* with financial support from the Government of Japan. Two pilot/demonstration stations were constructed, one in Viet Nam (1994) and another in the Lao PDR (mid-1996).
5. The *Study on Micro-hydropower for Rural Electrification*, funded by the Government of Japan, has been conducted by the Secretariat since 1994. It assessed the needs and possibilities for rural electrification by developing micro-hydropower projects and formulated a policy on how the rural electrification could be accomplished in Cambodia, the Lao PDR and Viet Nam. At present, studies for Cambodia and the Lao PDR are in progress.

The Governments of Australia and Japan support the *Improvement of the Hydrometeorological Network* (for details, see the Hydrology Programme, page 14). Its outputs will also provide essential information/data for the Hydropower Programme.

## AGRICULTURE AND IRRIGATION SECTOR (Cont'd)

### Natural Resources-Based Development Strategy for the Tonle Sap Area

The project focuses on the management of water and related resources and covers the Great Lake, the Tonle Sap River and the zone surrounding the Lake. The area has high potential for capture fisheries, agriculture, tourism and navigation and also serves a natural Mekong flood regulating function benefitting areas downstream of Phnom Penh. Therefore, consideration of its specific ecology and constraints is required in order to avoid endangering the natural function and productivity of the Great Lake-Tonle Sap region. The project aims to: (1) strengthen the technical and managerial capacity for the coordination of development planning and management, and (2) formulate a strategy for the development and management of water and related resources in the Great Lake-Tonle Sap region. The project

commenced in February 1996 with financial support from UNDP of approx. USD 1 million.

Activities undertaken may be summarized as follows:

- Training, jointly organized by the Cambodia National Mekong Committee and the MRC Secretariat, aiming at enhancing professional expertise and English proficiency of the counterpart staff. The technical training focused on natural resources development planning, especially strategic planning, water resources master planning, and agriculture and irrigation review and assessment;
- Collection and preliminary assessment of available data/information, initiation of establishing a computerized Tonle Sap database and GIS for planning purposes; and
- The project's Inception Report is expected to be completed in February 1997.



## RIVER WORKS AND TRANSPORT

The major activity of the River Works and Transport Sector was to improve navigation in accordance with the strategy which was endorsed by the four Mekong member countries in 1995. The strategy recommends the MRC to:

- develop a legal framework for international navigation and appropriate common maritime legislation;
- promote common standards for navigation aids;
- establish common training standards and a common core syllabus for navigation training;
- secure institutional and management coordination in such areas as maintenance of river works, safety and rescue operations, and environmental protection; and
- coordinate project proposals to avoid duplication of activities.

Furthermore, the MRC expects to initiate as soon as possible important navigation improvement projects on the Mekong mainstream in light of recent economic developments in the region. Important obstacles to Mekong navigation (administrative and physical) have to be identified and addressed.

Transport bottlenecks due to national procedures for customs clearance, transit of goods and cargo, etc., have to be solved to promote international and free navigation on the Mekong mainstream according to the *Agreement on Cooperation for the Sustainable Development of the Mekong River Basin*.

However, a well planned approach in these matters is essential in order to avoid irreversible damage to the Mekong navigation channel in terms of environmental and economic viewpoints.

Today, hydrographic maps of the 1,469 km stretch between the Golden Triangle and Khone Falls are being produced with financial assistance from Finland. These will allow navigation experts and waterway engineers to systematically develop and mark the most suitable navigation channel in the Mekong mainstream and cause minimum environmental disturbance. Cautious and well designed channel improvements should be in accordance with the economic needs of the quickly developing region.

Bank protection construction under the Australian Aid has extensively contributed to the flood protection around the strategic Wattay International Airport and the densely populated Tha Watmuangwa, the Lao PDR.

However, training and transfer of know-how are still a major component in the construction of these low-cost bank protections.

Great importance has been attached to the feasibility study for the improvement of the entrance channel to the Bassac River using Belgian funds. It is expected that the study will result in the design of a feasible, economical and sustainable dredged channel to the Bassac entrance.

In 1996, the MRC has also focused on ferry crossings, particularly in Cambodia which is divided by rivers such as the Mekong, Sekong, Bassac and Tonle Sap. Denmark has substantially supported the ferry infrastructure in Cambodia through a USD 18.6 million project.

Finally, with the aim of developing an extensive subregional network, the East-West Transport Corridor Study among the Lao PDR, Thailand and Viet Nam was coordinated by the MRC and completed in April 1996. It was funded by the Government of France through ADB. The study selected the central corridor comprising the proposed Mukdahan-Savannakhet bridge, Road No. 9 of the Lao PDR and Da Nang port of Viet Nam to be developed first. According to the plan, the implementation phase of this project would commence in early 1997 and with the MRC as the Project Coordinating Agency.



Bank protection construction at Tha Watmuangwa, the Lao PDR.



## REMOTE SENSING, MAPPING AND GEOGRAPHIC INFORMATION SYSTEM

Since the 1980s, the MRC Secretariat has developed several statistical databases. The most important ones comprise the *hydrometeorological database*, containing data on the water level, discharge, sediment, rainfall, evaporation and wind movement; and the *water quality database*, with data covering several chemical elements and sediments. These databases are being updated regularly.

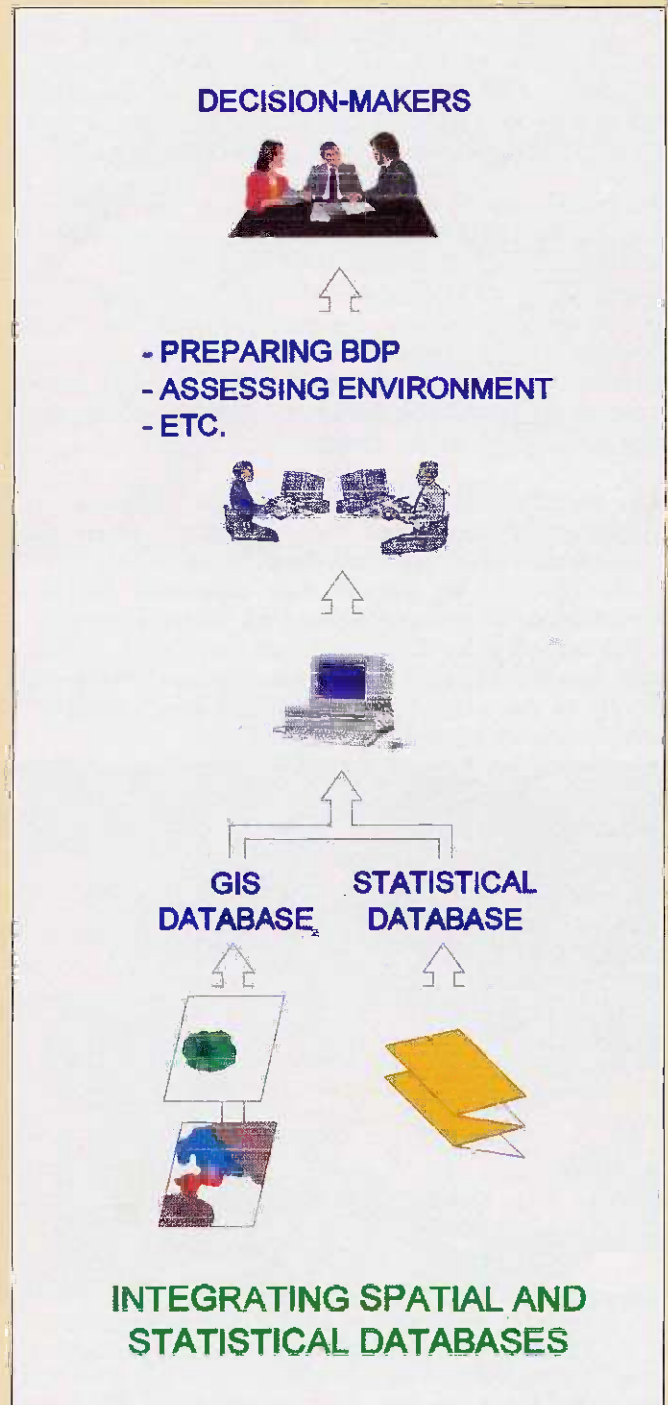
A computer-based remote sensing and Geographic Information System (GIS) was initiated in 1991 with the Mekong GIS project. The data gathering has focused on small scale, up to 1:250,000, covering the Lower Mekong Basin parts of the riparian countries. Satellite imageries and aerial photographs were used to develop updated thematic maps on the physical environment. Various applications in GIS analysis at the MRC Secretariat included, among others, the assessment of the forest cover and agricultural land use changes, watershed classification and soil erosion risk assessment. A Digital Terrain Model (DTM) is being established and other databases are currently under development, e.g., groundwater, wetlands and forestry databases.

Since mid-1996, as part of the Subregional Environmental Monitoring and Information System (or SEMIS) project supported by ADB, the MRC Secretariat has been preparing the linkage of the water related resource databases with the Mekong GIS through geo-referencing of the hydrologic and water quality monitoring stations. The interface is being designed to enable the use of both the GIS and water related statistical databases for monitoring and planning of water and related resources at the basin and sub-basin levels, i.e., producing digital cartography of the sub-basins' characteristics, assessing the relationship between the sub-basins' characteristics and the hydrology and water quality. This could serve as a basis for investigating the effects of the changes of the sub-basins' physical environment and activities on the water resources and its quality.

The Mekong GIS and related database development activities could also provide substantial support to the MRC Secretariat in its efforts to prepare the *Basin Development Plan* (BDP) by creating useful and interpretable information from the vast amount of data collected by various programmes and projects. Considering the BDP as a coordinating umbrella, the integration of the projects into a programme would facilitate the use of a common pool of GIS resources to support a wide range of activities. The establishment of an information system based on monitoring and evaluation processes would be an important contribution to the ongoing BDP planning process.

Taking into consideration the information needs for basinwide planning, the Mekong GIS would move from data collection to application-oriented support to

various Mekong projects. The planners would be involved more and more in the development of the GIS. The remote sensing and GIS programme of the MRC, as well as other database building programmes, take into account the actual level of technological development in the individual countries which varies significantly. There is a need to establish common standards for design and encoding at the basinwide level for future data collection. Implementing better standards and design for these data can be done for individual data layers as they are requested, according to particular needs to ensure that the improvements are done with a particular purpose.





## HUMAN RESOURCES DEVELOPMENT

For the Mekong region, human resources development (HRD) has been one of the top priorities in the development effort in the past years and 1996 was no exception.

For the whole year, 48 HRD activities were organized by the MRCS. Approximately, 1,600 riparians attended different HRD activities which included both project specific training and also broad-based technical training. Participation of riparian officials in regional meetings and long-term academic training at the Master's degree level at the Asian Institute of Technology was also made possible by Sweden.

With the growing recognition of the HRD significance and the vast and different HRD needs among the riparian countries, the MRCS has adopted a strategic approach. This builds up the capacity of the HRD core groups of riparian officials and the focal points and the effort materialized to a certain extent in 1996.

The initial activity in this respect was the Strategic Planning for HRD funded by Sweden. The workshop, held from 26 to 29 March 1996 was attended by 40 riparian officials responsible for HRD activities from the National Mekong Committees and the line agencies of the riparian countries. The meeting endorsed the necessity to strengthen the HRD focal points as they would be the key to further facilitate the HRD programme of the countries.

The specific issue of private participation in hydropower development was highlighted when the Hydropower Forum was held from 16 to 18 July 1996 in Ha Noi. The Forum was supported by the Governments of Switzerland and the United Kingdom. It was attended by 52 participants including several high ranking officials from the riparian countries, officers of the energy authorities, and observers from both governmental and private enterprises.



*Training Programme on Human Resources Development Planning and Management Workshop, Bangkok, 26-29 March 1996.*



*Workshop for farmers on Alternative Agriculture Production Activities at Nakhon Phanom, Thailand.*

Groundwork was also laid for the Japanese-funded project on *Training on Legal Aspects of International Cooperation for Water Resources Development* both at the regional and national levels. The project will ensure that the legal teams and riparian officials are fully aware of the implications of international water laws on the Mekong development activities which will, in effect, enhance the cooperation of the four countries. A basinwide seminar and a series of national workshops are scheduled during 1997.

In another HRD effort which will lead to the establishment of core groups in facilitating the incorporation of gender concerns in Mekong development activities, the project on *Study on the Role of Women in Water Resources Development in the Lower Mekong Basin* funded by the New Zealand Government took off well in mid-1996. Four national teams in the four riparian countries were set up to conduct the study.

Preparatory meetings where basic gender training was provided and discussions on the detailed scope, methodologies and field data sampling and collection were held with all the national teams in November 1996. Greater awareness of the significant roles women play in water resources development planning can also be expected among the riparian officials of the line agencies and at the National Mekong Committees as a series of national workshops and a basinwide workshop will be held in 1997.

Many of the activities launched in 1996 provide a firm basis for further capacity strengthening efforts in the years ahead. Some core teams and focal points will be the centre of HRD efforts in 1997 and once firmly established, sustainable Mekong development through close cooperation among the riparian countries will not be too far away.



# 1996 ADMINISTRATIVE AND FINANCIAL REVIEW

## I. Administration

### Personnel

In 1996, the Secretariat work force comprised of eighty-three (83) staff members, including forty-one (41) professional and forty-two (42) general service staff members. They were from fifteen (15) countries, of which twenty-six (26) were fully funded by ten donors. Seventy-two (72) per cent of the staff are riparian. In addition to regular staff, there were eleven (11) full-time riparians-on-stipend or project fellows from all four member countries

### MRC Meetings/Sessions

The Secretariat arranged four MRC meetings during 1996. The Second Meeting of the MRC Council was held in Phnom Penh during 30-31 January 1996. This ministerial level meeting was attended by delegations from all member countries as well as UNDP. In the same year, the Third Meeting was held in Vientiane, Lao PDR during 29-30 October 1996. The latter was observed by the representatives from the People's Republic of China and the Union of Myanmar. In addition to the Council Meetings, the Meetings of the Joint Committee (JC) were also held on two occasions. The Third Meeting of the Joint Committee was held in Ha Noi, Viet Nam during 18-20 March 1996. Followed by the Fourth Meeting of the Joint Committee held in Bangkok, Thailand during 24-25 July 1996. Both JC Meetings were attended by all member countries' delegations and UNDP.

In addition to the above, two major meetings related to the Donors' Consultative Group (DCG) were held and 70 representatives from 32 donors and cooperating agencies participated in Bangkok and 73 representatives from 33 donors and cooperating agencies in Vientiane.

## II. Institutional Matters

### Secretariat Restructuring

Efforts have been made to streamline the administration of the Secretariat in order to respond to the development programme under the mandate of the new Mekong Agreement. With financial assistance in the amount of USD 450,000 from the Government of Switzerland, a consulting firm was contracted to study the current practices and explore the possibility of improving and enhancing the Secretariat's administrative efforts for programme/project implementation as well as day-to-day administration of the Secretariat. The reorganization was implemented and will be completed in February 1997. An evaluation of the reorganization is scheduled to take place in June 1997.

The new organization chart is provided on pages 30-31.

### Relocation of the Headquarters

As approved by the MRC Council Meeting at Vientiane, Lao PDR in October 1996, the Secretariat Headquarters will be moving to Phnom Penh within two years. The Secretariat has been coordinating with

the Cambodian authority concerned and expects a smooth relocation of its staff within the time frame as scheduled. It is worth noting that the Cambodian Government has shown its strong support by renovating the building which has been assigned as the Secretariat Headquarters.

## III. Financial Information

### Programme Contributions Received and Expenditures

The Commission received actual cash contributions from donors during 1996 totalling **USD 12,285,000**. These funds were allocated to support the Commission's development programme during the year. The Commission continues to operate on a fully-funded basis where all project commitments are covered by firm undertakings by the governments of cooperating countries and international organizations. The total disbursement for programme expenditures incurred during 1996 was **USD 9,057,000**: an increase of sixteen (16) per cent over 1995.

Fiscal Year	Programme Cash Received Total (USD)	Programme Expenditures Total (USD)
1992	10,875,000	9,947,000
1993	9,839,000	9,922,000
1994	8,891,000	7,863,000
1995	8,084,000	7,788,000
1996	12,285,000	9,057,000
Total	49,974,000	44,577,000

Besides programme support, Belgium, Denmark, Israel, Japan, the Republic of Korea, Sweden Switzerland and UNDP contributed toward institutional support as well.

The schedule of donors' contributions received and funds disbursed during 1996 is shown on pages 28-29, respectively.

### Secretariat Cash Received and Disbursed for Operating Expenditures

The Secretariat's total revenue for 1996 amounted to **USD 2,919,000** consisted of member countries' annual contributions, other governments' contributions, treasury management, Secretariat support costs and others. The Council-approved annual contribution from each of the four member countries for USD 175,000 during the year making a total contribution of **USD 700,000**. Other governments' contributions for institutional support amounted to **USD 149,990**. Revenue derived from treasury management was **USD 902,354** while the revenue from Secretariat support costs was **USD 886,920**. Other miscellaneous revenue was recorded at **USD 279,831**.

The total administrative expense for fiscal year 1996 was USD 2,331,000. Of this amount, **USD 2,244,000**



was disbursed during the same year. Disbursements for other 1996 obligations and commitments in the amount of USD 87,000 will be made during 1997.

The MRC Secretariat continues to implement cost cutting measures to maximize its efficiency. The prudent management of the Secretariat's financial resources resulted in the favourable financial outcome

of the operations and thus, increased the Administrative Reserve Fund (ARF) balance. This ARF can continue to provide a solid financial basis for the future operations of the MRC. The summary of operating expense budget for the five-year period from 1992 to 1996 is shown below:

### Comparison of Administrative Expenditures, 1992-96

Fiscal Year	Approved Budget	Income Received Total (USD)	Expenses Disbursed Total (USD)	Income - Expenses Total (USD)
1992	n/a	1,908,000	2,179,000	(271,000)
1993	n/a	1,635,000	1,977,000	(342,000)
1994	n/a	1,258,000	1,419,000	(161,000)
1995	2,185,700	2,509,000	2,218,000*	291,000
1996	2,277,000	2,919,000**	2,244,000	675,000
Total		10,229,000	10,037,000	192,000

\* Including obligations and commitments disbursed in 1996 for USD 463,000.

\*\* Including members' contributions for fiscal year 1996 for USD 350,000 received in 1997.





# The Mekong River Basin

Area: 795,000 km<sup>2</sup> (21)  
 Length of mainstream: 4,800 km (12)  
 Average discharge: 15,000 m<sup>3</sup>/s (8)

- Upper Mekong Basin
- Lower Mekong Basin
- n% Flow contribution
- (n) Rank in the world



MRC Secretariat



## STATUS OF ONGOING ACTIVITIES 1996-1997

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

ACTIVITIES AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1992	1993	1994	1995	1996	1997	1998	
<b>1. Policy and Planning</b>								
East-West Transport Corridor (ADB/France) \$1,000,000					■			Project completed in April 1996.
Role of women in water resources dev. in the LMB (New Zealand) \$300,000						■		National teams commenced their study in November 1996. National meetings to deliberate on the country paper to be held during mid-1997 prior to the basinwide meeting, scheduled in September 1997.
Preparation of the Mekong River basin development plan (Sweden) \$250,000					■	■		TOR completed. Study on public participation to be carried out. Funds are being sought for formulating the BDP, to cover a period of two years, initially.
Preparation of the MRC Rules for water quantity (Japan) \$200,000					■			Project proposal was revised by the Secretariat and approved by the Council.
<b>2. Environment and Monitoring</b>								
Improvement of the hydrometeorological network (incl. Cambodia) (Japan) \$1,278,000 (Australia) \$1,039,000	■	■	■	■	■	■	■	Rehabilitation and improvement of the basinwide hydro-meteorological network, including the provision of logistics and training on hydrometry and data processing.
Improvement of the Documentation Centre (UNDP) \$34,000 (France) \$114,000			■	■	■	■		Improvements to the Centre are ongoing.
Geographic Information System (ADB) \$100,000 (ADB, Switz., UNEP/GRI) \$1,287,000	■	■	■	■	■	■	■	Producing basinwide thematic layers and linking GIS with water resources statistical databases.
Aerial photography for resources mapping (Cambodia) (Belgium) \$619,000 (EU) \$438,000 (Finland) \$432,000 (UNDP) \$250,000	■	■	■	■	■	■		About 95% of Cambodia has been covered.
Management of acid sulphate soils (Viet Nam) (Sweden) \$490,000	■	■	■	■	■	■	■	Phase I completed in 1996. Phase II project will merge with the environmental management of the Plain of Reeds.
Groundwater investigation programme (Sweden) Phase I \$525,000 (Sweden) Phase II \$300,000	■	■	■	■	■	■	■	Phase I completed. Phase II started in mid-1996: provision of hydrological assessment research-oriented investigations
■ Expected extension								



ACTIVITIES AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1992	1993	1994	1995	1996	1997	1998	
Management of wetlands in the Lower Mekong basin (Sweden) \$635,000 (Sweden, Denmark) \$1,200,000								Phase I completed in 1996. Evaluation of Phase I under way to prepare for Phase II.
Inventory and management of Cambodian wetlands (Denmark) \$1,800,000								A CTA, stationed in Phnom Penh, is expected to start work in April 1997. Phase I covers a period of 18 months.
Diagnostic study (UNEP) \$391,000								Draft Final Report to be submitted to the Joint Committee for approval in March 1997.
Environment assessment programme in the Greater Mekong sub-region (UNEP) \$340,000								State of the environment assessment/reporting and capacity-building activities are ongoing.
Water quality monitoring network in the Lower Mekong Basin, Phase III (UNEP) \$177,000 (Sweden) \$2,600,000 (Sweden) \$1,200,000								Phase II was completed in June 1996. Extension of existing water quality database. Phase III will merge with proposals on "Water quality and pollution control" and "Legal framework for water pollution control".
Integration of environmental components in projects and integrated database for natural resources management (Sweden) \$1,575,000								Phase I completed in 1996. The integrated database will be merged with "Geographic Information System".
Soil erosion and sedimentation studies, Phase II (Sweden) \$675,000 (Sweden) \$450,000								Phase I completed in 1996. For Phase II, the studies will concentrate on the adjustment for elaboration of protection strategies and watershed management.
EIA process and procedures for projects in the Mekong River Basin (Canada) \$52,000								The project was completed. A regional workshop was held in May 1996.
Environmental planning and impact assessment (Denmark) \$600,000								To establish MRCS processes and procedures.
Institutional strengthening and capacity-building at MRCS and NMCs and Implementation of Environment Programme (Denmark) \$2,400,000								To enhance the capacity within MRCS and NMCs and focus on the environment. To strengthen the role and responsibility of the NMCs.
<b>3. Resources Development</b>								
Pilot microhydropower projects (Japan) \$618,000								Project in Viet Nam completed, the one for Laos will be in operation soon and formulation for the Cambodian project is being planned.
Rural electrification (Japan) \$120,000								Preliminary study for Cambodia will be completed in April 1997 and priority projects for Laos are identified.
Natural resources-based development strategy for the Tonle Sap area (Cambodia) (UNDP) \$988,000								Project staff trained and a draft inception report prepared for discussion at a workshop to be held in early 1997. CTA international consultants recruited in late 1996 are stationed in Phnom Penh and started the study.
Sekong-Sesan and Nam Theun basin hydropower development study (ADB) ** \$2,500,000 ***This project is financed by France (2 million) and ADB (0.5 million) - MRC is coordinating agency (US\$133,000)								MRC is coordinating agency. Project will start in January 1997. The first coordination meeting will be conducted in March and the inception report will be available in April.



ACTIVITIES AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1992	1993	1994	1995	1996	1997	1998	
Action plan for Sre Pok basin, Phase III, Viet Nam (Denmark) \$1,710,000 (Denmark) \$123,400					██████████			Draft Action Plan prepared and will be finalised in early 1997. Improvement of Buon Ma Thuot water supply system completed in mid-1996.
Mekong integrated transmission system study (Japan) \$687,000				██████████				Concluding workshop organized in Sept. 1996 and Final Report completed. Project proposal for feasibility study of two priority interconnections prepared and included in the 1997 Work Programme.
Sustainable Irrigated Agriculture (Netherlands) \$7,676,000		██████████	██████████	██████████	██████████	██████████		This project will be completed in September 1998, including the consolidation phase.
Integrated land and water use for sustainable agricultural development in the Lower Mekong Basin (Denmark) (from Consultancy Fund) \$183,000				██████████				The project was completed in mid-1996. The final report was accepted by the riparian countries and submitted to the donor.
Ya-Soup, Phase II (Viet Nam) (Rep. of Korea) \$800,000			██████████	██████████	██████████			This project will be completed in June 1997.
Newsletter on Agriculture and Irrigation for the Lower Mekong Basin (Israel) \$10,000						██████████		The first issue of the Newsletter will be published in February 1997.
Forestry, Long Xuyen quadrangle (Viet Nam) (Australia) \$1,235,000	██████████	██████████	██████████	██████████	██████████			Project will be completed in January 1997. Follow-up activities and final evaluation under preparation.
Forest cover assessment (Germany), approx. \$3,600,000		██████████	██████████	██████████	██████████	██████████		Satellite image interpretation, digitizing and database design completed. Trend analysis design drafted. GIS training provided.
Sustainable management of resources (Germany), approx. \$1,900,000			██████████	██████████	██████████	██████████		Project management and structure established. Pilot area selected and activities initiated. Plan of operations prepared.
Watershed classification in the Lower Mekong Basin (Switzerland) Phase I \$869,000	██████████	██████████	██████████	██████████	██████████			Riparian staff trained in watershed classification methodology application and GIS. Digital terrain model generated. Phase II will be launched in May 1997.
Reservoir fisheries (Denmark) \$3,491,000				██████████	██████████	██████████		Components for Viet Nam and Laos started in August 1995. Serious efforts are made to reach project objectives. Component for Thailand started in Oct. 1996.
Freshwater capture fisheries, Phase I (Cambodia) (Denmark) \$2,269,000			██████████	██████████	██████████	██████████		This project started in April 1994 and will end in April 1997. The Danida review mission of February 1996 stated that excellent progress has been made with the establishment of the database. The third Project Steering Committee will meet in Feb. 1997 and ask for an extension of the project until the end of December 1997.
Support to fisheries management and development cooperation (Denmark) \$956,000						██████████		The project will start in January 1997.
Aquaculture development in the Mekong Delta (Denmark) \$1,893,000						██████████		This project is expected to start in mid-1997.
Assessment of Mekong fisheries - fish migrations and spawning and impact of water management (Denmark) \$5,213,000						██████████		This project is expected to start in mid-1997 (duration 1997-2001)
Ferry facilities (Cambodia) (Denmark) \$18,600,000				██████████	██████████	██████████		The first ferry will be ready in Feb. 1997. Civil engineering works are progressing well. Financial review in progress.

□ □ □ Expected extension



ACTIVITIES AND EXTERNAL FUNDING	TIME FRAME							PROGRESS
	1992	1993	1994	1995	1996	1997	1998	
Updating of the Hydrographic Atlas (Finland) \$4,700,000 (Finland) - Extension \$1,920,000	[Red bar from 1992 to 1997]							Start-up in Cambodia with national counterpart. Contract in Viet Nam signed and is under execution.
Study for improvement of the access channel to the Bassac River (Belgium) \$1,772,000	[Red bar from 1995 to 1997]							First wet season campaign survey completed. Project had suffered delays, but is now right on track.
Mekong bank protection programme (Australia) \$731,500	[Red bar from 1992 to 1997]							Two components: Wattay started in February and completed in August 1995; That Watmuangwa started in February and completed in October 1996. Remaining funds will be used for soil study and preparation activities for Wat Sop site.
<b>4. Human Resources Development</b>								
Environmental training fund (Sweden) Phase I \$320,000 (Sweden) Phase II \$600,000	[Blue bar from 1992 to 1997]							First phase completed in 1996. Second phase will concentrate on needs assessment, education on the implications of laws, regulations on environmental and natural resources management options.
Water resources training programme (Australia) \$820,000 (New Zealand) \$28,000	[Blue bar from 1992 to 1997]							Training in Australia completed, production of reference materials in process. Training in New Zealand completed.
Human resources development for riparians (Sweden) \$375,000 (Switzerland) \$100,000	[Blue bar from 1992 to 1996]							Short-term training in Water Resources Development provided to riparian officials.
Human resources development for riparians (Switzerland) \$280,000	[Blue bar from 1996 to 1997]							Strengthening the HRD focal points in the riparian countries. Project is in its first phase.
Training on legal aspects of international cooperation for water resources development (Japan) \$199,000	[Blue bar from 1996 to 1997] [White box from 1997 to 1998]							Project is ongoing. Basinwide and four national workshops tentatively scheduled for mid-1997.
<b>5. Programme Support</b>								
Support for Mekong programme (UNDP) \$2,815,000	[Green bar from 1993 to 1997] [White box from 1997 to 2001]							Activities under new framework and Arrangements for new phase of support for period 1997-2001.
Australian Consultancy Fund (Australia) \$495,000	[Green bar from 1992 to 1997]							Funds used for various studies and training.
Swedish Consultancy Fund (Sweden) \$1,191,000	[Green bar from 1995 to 1997]							Funds used for various studies and training.
UK Consultancy Fund (UK) \$75,000	[Green bar from 1994 to 1995]							Funds used for studies.
Danish Consultancy Fund. (Denmark) \$441,000	[Green bar from 1994 to 1995]							Funds used for studies.
French contributions (France) \$774,000	[Green bar from 1992 to 1997]							Funds used for studies and training.
Japanese contribution (Japan) \$130,000	[Green bar from 1996 to 1997] [White box from 1997 to 1998]							Funds allocated to studies.
<b>6. Others</b>								
Core contribution to the MRC (Switzerland) \$1,496,000	[Pink bar from 1996 to 1997]							Funds allocated for staff establishment, restructuring of the Secretariat, human resources development and Secretariat's running costs.
[White box icon] Expected extension								



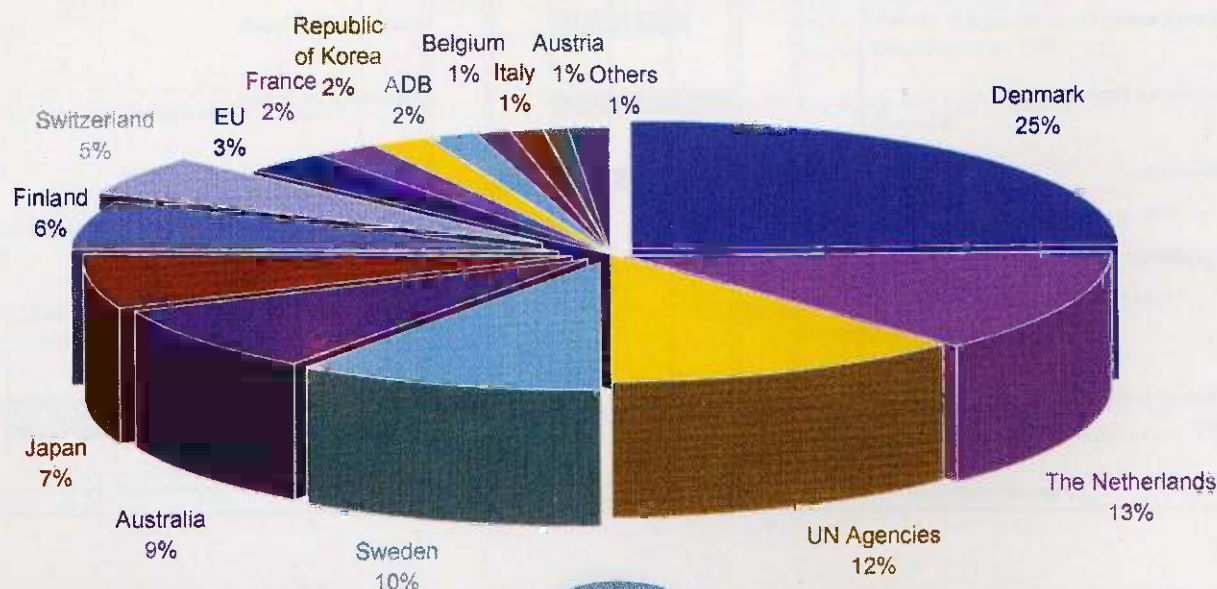
# DONORS' CONTRIBUTIONS RECEIVED: 1992 - 96 \*

Annex III

(AMOUNTS IN U.S. DOLLARS)

DONORS	1992	1993	1994	1995	1996	TOTAL
Australia	1,342,167	596,676	435,982	784,025	1,213,468	4,372,318
Canada	0	0	0	52,632	0	52,632
European Union						
Austria	0	200,000	219,000	0	0	419,000
Belgium	407,617	0	0	235,830	0	643,447
Denmark	455,356	1,102,519	1,247,796	2,834,470	6,897,396	12,537,537
Finland	1,139,083	689,509	627,233	0	616,915	3,072,740
France	458,710	303,555	181,836	137,238	0	1,081,340
Germany	0	30,439	27,164	42,373	37,219	137,194
Italy	500,000	0	0	0	0	500,000
Netherlands	738,194	2,173,378	1,576,911	1,128,700	900,000	6,517,183
Sweden	1,948,443	1,124,493	1,419,440	657,506	0	5,149,883
United Kingdom	0	0	37,300	0	38,441	75,741
Commission of EU	899,819	348,781	164,000	0	0	1,412,600
Sub-total: EU	6,547,221	5,972,675	5,500,681	5,036,118	8,489,971	31,546,665
Israel	0	0	0	0	5,000	5,000
Japan	236,000	382,000	857,000	807,000	1,125,000	3,407,000
Republic of Korea	0	275,000	175,000	200,000	344,990	994,990
New Zealand	0	42,728	47,850	38,868	158,777	288,223
Switzerland	1,145,000	532,850	90,000	629,990	90,774	2,488,614
UN Agencies:						
UNDP	1,385,238	931,611	1,271,971	175,900	532,244	4,296,964
OPS	0	31,313	28,500	0	0	59,813
UNDP/World Bank	0	331,965	0	0	0	331,965
UNEP	0	177,000	80,000	219,980	91,750	568,730
UNEP/AIT	0	129,360	98,000	98,000	197,324	522,684
UN/FAO	0	0	113,562	0	0	113,562
UNHCR	13,564	0	0	0	0	13,564
Sub-total: UN Agencies	1,398,802	1,601,249	1,592,033	493,880	821,318	5,907,282
Others:						
Asian Development Bank	160,000	403,672	167,252	21,385	36,000	788,309
Miscellany	45,591	32,000	25,500	20,040	0	123,131
Sub-total: Others	205,591	435,672	192,752	41,425	36,000	911,440
<b>Total</b>	<b>10,874,781</b>	<b>9,838,851</b>	<b>8,891,298</b>	<b>8,083,937</b>	<b>12,285,297</b>	<b>49,974,164</b>

**DONORS' CONTRIBUTIONS RECEIVED : 1992-96**  
( TOTAL : USD 49,974,164 )



\* In some cases, the donors' contributions received do not include special arrangements, e.g. salaries for seconded experts, equipment purchase, training activities, etc.

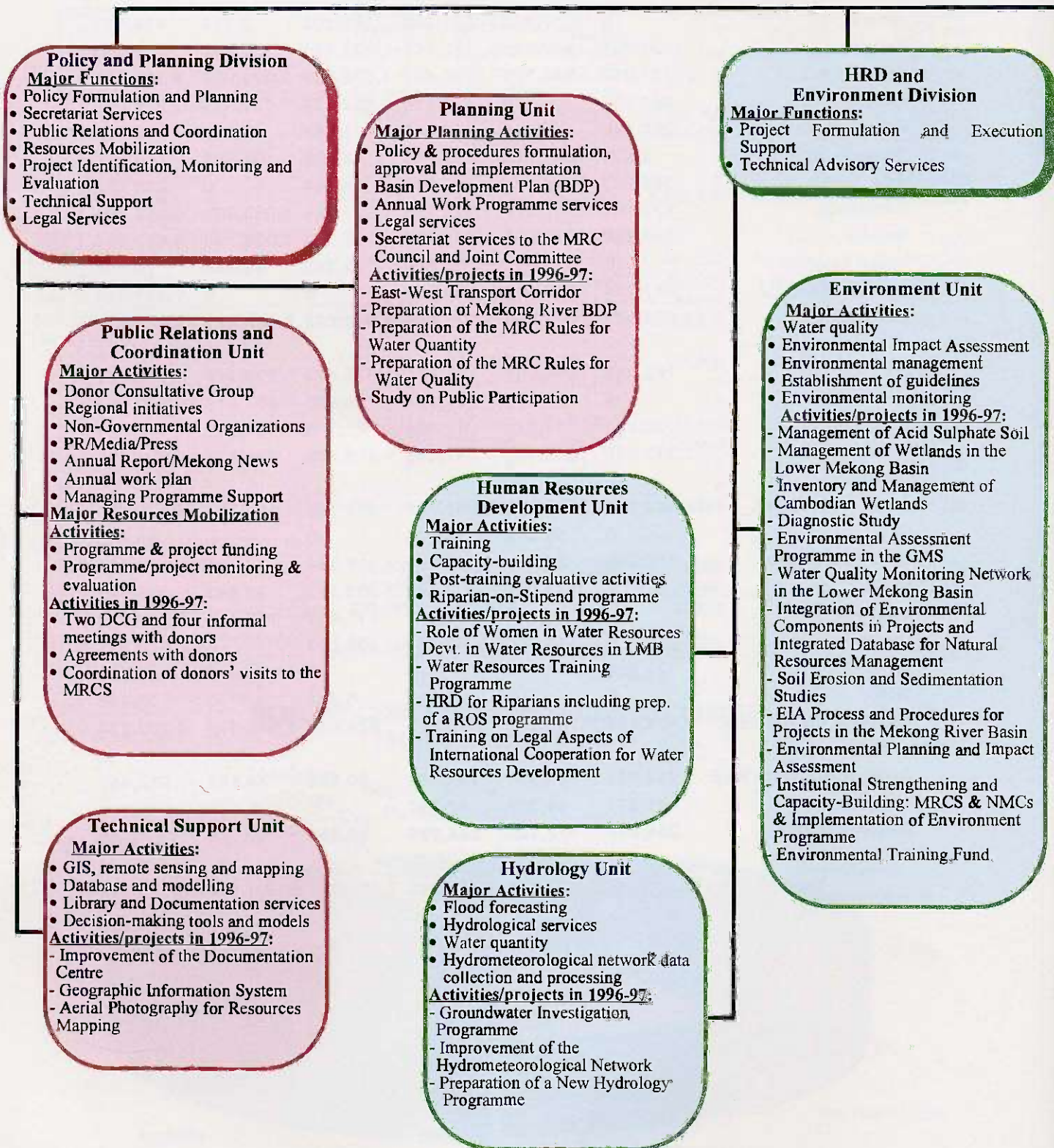


(AMOUNTS IN U.S. DOLLARS)

DONORS	1992	1993	1994	1995	1996	TOTAL
Australia	1,501,433	939,554	429,532	872,993	480,985	4,224,498
Canada	20,637	2,591	0	11,399	41,233	75,860
European Union						
Austria	0	17,823	221,295	181,302	5,217	425,637
Belgium	34,027	422,391	12,161	175,156	89,549	733,283
Denmark	237,018	344,870	790,409	1,682,632	3,079,005	6,133,934
Finland	964,904	728,526	439,436	452,777	230,925	2,816,568
France	201,755	171,979	189,419	1,544	8,493	573,190
Germany	2,525	52,592	27,164	42,604	36,987	161,874
Italy	353,583	246,716	93,984	4,269	0	698,552
Netherlands	672,154	1,993,278	1,725,158	1,557,458	1,019,703	6,967,751
Sweden	1,849,854	1,730,854	1,328,388	752,568	1,026,195	6,687,859
United Kingdom	0	891	8,845	32,352	36,248	78,336
Commission of EU	657,234	598,847	43,159	0	0	1,299,240
Sub-total: EU	4,973,055	6,308,768	4,879,416	4,882,663	5,532,321	26,576,223
Japan	182,018	296,285	137,801	575,473	774,945	1,966,522
Republic of Korea	0	51,624	351,183	58,837	401,819	863,463
New Zealand	26,255	17,273	72,925	41,706	51,917	210,077
Switzerland	1,343,686	645,531	247,692	368,475	629,477	3,234,861
UN Agencies:						
UNDP	1,444,314	772,460	1,237,781	552,109	868,261	4,874,925
OPS	0	55,368	4,445	0	0	59,813
UNDP/World Bank	189,366	189,409	89,651	11,054	0	479,481
UNEP	0	143,154	7,159	209,370	76,692	436,375
UNEP/AIT	0	16,688	86,241	111,577	103,923	318,429
UN/FAO	0	11,046	66,982	35,533	0	113,562
UNHCR	21,304	0	0	0	0	21,304
WHO	0	0	27,412	6,434	0	33,846
Sub-total: UN Agencies	1,654,984	1,188,126	1,519,671	926,078	1,048,876	6,337,734
Others:						
Asian Development Bank	202,969	437,334	182,647	50,556	74,134	947,640
Miscellany	41,677	34,789	42,352	0	21,431	140,250
Sub-total: Others	244,646	472,123	224,999	50,556	95,565	1,087,890
<b>Total</b>	<b>9,946,716</b>	<b>9,921,874</b>	<b>7,863,220</b>	<b>7,788,181</b>	<b>9,057,138</b>	<b>44,577,128</b>



# ORGANIZATION CHART OF THE MEKO





# MEKONG RIVER COMMISSION SECRETARIAT

**CHIEF EXECUTIVE OFFICER**

Mr Yasunobu Matoba

**ASSISTANT CEO**

Mr Mohar Singh Monga  
(1996-97)

**Agriculture Division**  
Major Functions:  
Project Formulation and Execution

**Agriculture & Irrigation Unit**

**Major Activities:**

- Agriculture
- Irrigation
- Rural water supply
- Socioeconomic studies

**Activities/projects in 1996-97:**

- Sustainable Irrigated Agriculture
- Ya-Soup, Phase II
- Integrated Land and Water Use for Sustainable Agricultural Devt. in LMB
- Preparation of an Agriculture and Irrigation Programme
- Newsletter on Agriculture & Irrigation

**Forestry Unit**

**Major Activities:**

- Forestry
- Watershed management
- Agroforestry

**Activities/projects in 1996-97:**

- Forestry, Long Xuyen Quadrangle
- Forest Cover Assessment
- Sustainable Management of Resources
- Watershed Classification in the Lower Mekong Basin
- Review of Watershed Management and Forestry Sector

**Fisheries Unit**

**Major Activities:**

- Fisheries
- Aquatic resources
- Aquaculture

**Activities/projects in 1996-97:**

- Reservoir Fisheries
- Freshwater Capture Fisheries
- Support to Fisheries Management and Development Cooperation
- Aquaculture Development in the Mekong Delta
- Assessment of Mekong Fisheries- Fish Migrations and Spawning and Impact of Water Management
- Fisheries Newsletter

**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 1996-97:**

- MK Bank Protection Programme
- Updating of Hydrographic Atlas
- Ferry Facilities (Cambodia)
- Study for Improvement of Access Channel to the Bassac River

**Water Resources Unit**

**Major Activities:**

- Hydropower generation studies
- Power transmission studies
- Water resources management
- Flood control

**Activities/projects in 1996-97:**

- Pilot Microhydropower Project
- Rural Electrification
- Natural Resources-based Development Strategy for Tonle Sap Area
- Action Plan for Sre Pok Basin
- Mekong Integrated Transmission System Study
- Sekong-Sesan and Nam Theun Basin Hydropower

**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 & internal audit
- Financial accounting databases

**Personnel Unit**

**Major Activities:**

- Recruitment
- Staff training
- Transfer
- Performance review
- Secretarial pool
- Support to Riparian-on-Stipend programme

**Administration Unit**

**Major Activities:**

- Administration & logistic support
- Computer support, trouble shooting/maintenance
- Contracting of procurement and consultants
- Travel and visa
- Correspondence and records
- Maintenance/facilities management



MRC Documentation Centre



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