



Mekong River Commission

Environment Programme

PROCEEDINGS

ANNUAL TECHNICAL MEETING

Organised By:

Mekong River Commission Secretariat

Vientiane, Lao PDR
November 15-16, 2004

TABLE OF CONTENTS

	Page
Executive Summary	4
1. Introduction	5
2. Opening Session	5
Welcome statement from representative of the Lao National Mekong Committee Mr Sourasay Phoumavong, Deputy Director General, LNMC	
Opening speech from representative of the Mekong River Commission Secretariat Dr Olivier Cogels, CEO, Mekong River Commission	
3. River Health Strategy	5
4. Water Quality Monitoring Programme in LMB and other related activities	5
Implementation of WQMN in 2004 Presentation of data assessments Discussion and other issues	
5. Ecological Risk Assessment and Ecological Health Monitoring	6
Introduction Ecological Risk Assessment Ecological Health Monitoring Discussion	
6. Wetlands	7
7. Environmental Flows	7
8. Social Impact Monitoring	7
9. Water Quality Diagnostic Study	8
Background to BURGEAP study Chemical and bioassay results Recommendations for WQMN programme	
10. Closing Remarks	8

Dr Chumnarn Pongsri, Director, Environment Division, MRCS

11. Annexes

Annex 1 Workshop Agenda

Annex 2 Speeches at opening and closing sections

Annex 3 List of participants

EXECUTIVE SUMMARY

To report and exchange information from the Water Quality Monitoring Network (WQMN) as well as results from the basin-wide diagnostic study of water quality, environmental risk assessment and Ecosystem Health Monitoring activities, The MRC Environment Programme's Annual Technical Meeting, was held in Vientiane, Lao PDR 15th – 16th November 2004.

The WQMN in the Lower Mekong Basin (LMB) has operated since 1985 with a total of almost 100 stations taking monthly samples of the river's water. It is one of the three major environmental monitoring activities the MRC is engaged in. The network has now been revised to ensure that it covers the important transboundary and basin wide aspects of water quality.

To complement this monitoring, a basinwide diagnostic study on water quality was recently completed. This study will improve our understanding of the water quality status, particularly the presence of toxic compounds in water and sediment. The results are very useful when combined with results from our other water quality monitoring programme. In addition the outputs from this study will guide the work on rules for water quality, which will initially focus on toxic compounds.

Investigation of environmental risk assessment and ecological health monitoring of the LMB are important activities to protect and maintain the health of the river. Both these activities started in 2003 and current progress and status were reported on at the meeting.

Eighty-eight participants attended including participants from four riparian countries, MRC staff and some international organizations. The attendees (annex 3) reflected not only the technical agencies participating in these programmes, but also knowledgeable individuals from different organizations, who had a direct interest in the programme, or who had unique perspectives on the activities included in the water quality and ecological sectors.

1. INTRODUCTION

The agenda of the workshop included topics such as implementation of the Water Quality Monitoring Network (WQMN), Ecological Risk Assessment and Health Monitoring, Wetland Activities, Social Impact Monitoring, and results from the Water Quality Diagnostic Study.

In this report, a short summary of each section is provided. For further information, the Power Point Presentations from all sections are included in the CD.

2. OPENING SESSION

On behalf of LNMC Mr Sourasay Phoumavong, Deputy Director General, welcomed all the participants to the workshop and emphasized the timeliness of initiating Annual Technical Meetings as the 10th Anniversary of the signing of the 1995 Agreement is approaching. The speech is presented in Annex 2. Following the welcoming speech, Dr Olivier Cogels, CEO Mekong River Commission, opened the meeting and specifically referred to how a meeting like this contributed to a better understanding of the environmental status of the Basin, and would provide information which would help MRC and its member countries to fully implement the 1995 Agreement. His speech is presented in Annex 2.

3. RIVER HEALTH STRATEGY

Dr Ian Campbell provided a brief introduction to the Mekong River Health Strategy which is presently under development. The strategy identifies five management components : harvest of fish and aquatic biota, flows, water quality, catchment/in-stream conditions and riparian wetland habitat. It is hoped that an initial draft of the strategy will be ready for circulation through the NMC's early in 2005.

4. WATER QUALITY MONITORING PROGRAMME IN LMB AND OTHER RELATED ACTIVITIES

Implementation of Water Quality Monitoring Network (WQMN) and Quality Assurance and Quality Control (QA/QC) in 2004

The Water Quality Monitoring Programme has been revised to ensure that it covers the important transboundary and basin wide aspects of water quality. In 2003 the review of monitoring network was completed with a revised network including primary and secondary monitoring stations, and the sampling in this revised network was implemented in 2004.

A review of the parameters and the analytical methods used in the laboratories has just been completed. The report from this review will be used as a recommendation for the review of parameters and methods that is planned for 2005.

Overall, the water quality in the basin is good, with a few sites showing some impact. For further clarification, see the Power Point presentations on Data Assessment by Mr. Pornsak Jewasuvan, Ms Nhim Sophea, Ms Phayvanh Bandavong, and Mr Tran Minh Khoi.

Implementation of Quality Assurance and Quality Control (QA/QC) in the laboratories started at the end of 2003 and is progressing rapidly. In April 2004 a training course on QA/QC was held at MRCS for laboratory staff. This course was followed up by visits to each of the laboratories. Further follow-up of the implementation of QA/QC is planned for next year, along with annual Performance Testing Schemes.

Data assessments

Representatives from the WQ laboratories in Cambodia, Lao PDR, Thailand and Vietnam provided an overview of the current Water Quality Monitoring Network in their respective countries. Presentations were also made on data assessment from selected chemical parameters and time periods.

Training on water quality data assessment held by EP was given to laboratory staff just before the meeting. This training helped them recognise the water quality issues in their countries and ways of making data assessment. To support the data assessment implementation, the Environment Programme (EP) is providing a software for use in data assessment (SYSTAX), which will soon be delivered to laboratories.

Discussion and other issues

A participant from Thailand was concerned about the implementation of QA/QC programme in water quality monitoring programme – specifically, why the ISO 17025 was needed, as this requires a lot of things for implementation which might not be necessary for the water quality laboratories. Instead, some necessary activities ought to be implemented. Moreover, significant additional funding is required if the labs are requested to obtain ISO certification. Mr Hien responded that the plan is not for the laboratories to get an ISO 17025 certification, at least not at this moment, but the ISO standard is useful as a reference as how to implement QA/QC in the laboratories.

5. ENVIRONMENTAL RISK ASSESSMENT (ERA) AND ECOLOGICAL HEALTH MONITORING

Environmental Risk Assessment (ERA)

An introduction to ERA and the ERA Training Programme of the two study regions were presented by Prof. Barry Hart. A report of the information collected for Phnom Penh and Vientiane/Nong Khai were presented by Mr Chrin Sokha and Dr Wijarn Simachaya respectively. A brief overview of Water Quality modelling was delivered by Mr. Duong Hong Son. The Power Point presentations are included in the CD.

The overall assessment is that there are no immediate risks in the two study areas, however the confidence in the assessment is not very high as information on a number of important

aspects were very limited. The approach was appreciated by the people involved in the assessment and will be considered to be used for other issues.

Ecological Health Monitoring

The introduction to ecological health monitoring including an overview of the field investigations and the sampling sites was provided by Dr Bruce Chessman. Presentation on physical and chemical parameters, diatoms, zooplankton and macro-invertebrates were presented by the national specialists. All presentations are included in the CD.

The overall assessment indicates that the basin in general is in good condition, with a few exceptions.

Discussion

Since the bioassessment study is currently carried out by academics, the issue of involving line agencies in the bioassessment programme was raised. Suggestions were also made to consider other factors in assessing the basin's health.

6. WETLANDS

An overview of the Mekong Wetlands Biodiversity Programme (MWBP), a collaboration between IUCN, MRC and UNDP-GEF, was provided by Mr Peter-John Meynell. A presentation was also given regarding biodiversity assessments in the wetlands of the Lower Mekong basin.

The MRC Wetland Mapping Programme aims at updating old wetland maps, developing new mapping methodology for LMB and clarifying the MRC wetland classification system. An overview of the programme including the field survey was presented by Dr Charlotte MacAlister.

7. ENVIRONMENTAL FLOWS

The Environment Programme (EP) and the Water Utilisation Programme (WUP) are collaborating on an environmental flows assessment. This incorporates phases II and III of the WUP Integrated Basin Flow Management (IBFM) and also constitutes a major contribution by MRC to the MWBP. The work in 2005 will include an expert team desk study as well as the commencement of field based research studies. Work will proceed using the local expert and mentor approach already used successfully in the bioassessment and ecological risk assessment activities.

8. SOCIAL IMPACT MONITORING

The development of a social impact monitoring system has its origin in the aim of EP to monitor the environmental status of the LMB. This activity is a part of the overall

environmental monitoring system, which also includes water quality and ecological health monitoring. The first two activities do not reflect impact of change in the biophysical environment on social and economic conditions. Consequently, the purpose of the development of social impact monitoring is to make it possible to follow trends in how changes in the basin's environment impacts on social and economic conditions of the people in the basin. The system is being developed so that it can provide regular information of the status of the basin through a series of indicators and other measures reflecting aspects of livelihood changes linked to environmental changes. The presentation of the development of the social impact monitoring system is included in the CD.

9. WATER QUALITY DIAGNOSTIC STUDY

The Basinwide Water Quality Diagnostic Study was successfully completed this year. The results from this study has helped us to better understand the physico-chemical status of water and sediment in the Mekong Basin. It has also been important in assisting to identify what parameters should be monitored and for selecting benchmark locations for the Monitoring Programme.

Dr André Durbec and Mr Christophe Pateron provided the results from the final report, including a summary of the project and the main issues. Results from the first and second field campaigns, carried out in April 2003 and March 2004, were presented along with recommendations for the future work of MRC Water Quality Monitoring Programme.

The results showed that the Lower Mekong River and its major tributaries do not exhibit any level or type of contamination that merits immediate concern, and that no major transboundary pollution problems have been identified, but some "hotspots" need further attention. Results suggest that the WQMN activity should develop a strategy for future monitoring of toxic substances.

Discussion

Cambodian participants raised their concern over toxics in light of recent reported deaths of giant catfish and freshwater dolphins. Mr Edwin Ongley noted that large fish and mammals in large rivers do not normally die from toxic contamination even though they may have a large toxic burden in their tissue. They tend to die of other causes related to habitat, injury, food supply, etc. If the cause was anoxia or ammonia, one would have found evidence of a major fish kill. Cambodian representatives were also concerned over the level of industrial contaminants at Prek Kdam site. MRC responded that it was too early to give any particular significance to these results at this time due to this survey, but that additional work might be undertaken if donor support can be found.

10. CLOSING REMARKS

Dr Chumnarn Pongsri, Director, Environment Division, representative for MRCS, closed the meeting by thanking the participants for their interest and participation in the Annual Technical Meeting 2004.
(Annex 2)

ANNEX 1

AGENDA OF REGIONAL WORKSHOP

AGENDA

MONDAY, NOV. 14

08:30 - 09:00	Registration	
09:00 - 09:25	Welcome and Opening	Sourasay Phoumavong/ Olivier Cogels
09:25 - 09:40	River health strategy	Ian Campbell
Component A: Water Quality Monitoring		
09:40 - 09:50	Implementation of WQMN in 2004	Pham Gia Hien
09:50 - 10:00	Implementation of QA/QC activity	Vivi Mansson
10:00 - 10:10	Data assessment in Thailand	Pornsak Jevasuwan
10:10 - 10:20	Data assessment in Cambodia	Nhim Sophea
10:20 - 10:30	Data assessment in Lao	Phayvanh Bandavong
10:30 - 10:40	Data assessment in Viet Nam	Tran Minh Khoi
10:40 - 11:00	Coffee/Tea break	
11:00 - 11:15	Discussion & other issues	Pham Gia Hien/ Edwin Ongley
Ecological Risk Assessment		
11:15 - 11:25	Introduction	Barry Hart
11:25 - 11:40	Vientiane/Nong Khai ERA	Wijarn Simachaya
11:40 - 11:55	Phnom Penh ERA	Chrin Sokha
11:55 - 12:10	Modeling task	Duong Hong Son
12:10 - 12:30	Discussion and wrap-up	Barry Hart
12:30 - 13:30	Lunch	
Ecological Health Assessment		
13:30 - 13:45	Expert Presentation	Bruce Chessman
13:45 - 14:00	Physical and chemical parameters	Supatra ParnrongDavison
14:00 - 14:15	Diatoms	Yuwadee Peerapornpisal
14:15 - 14:30	Macro-invertebrates (littoral and rocks)	Bounnam Pathomthoong
14:30 - 14:45	Macro-invertebrates (main channel and delta)	Pham Anh Duc
14:45 - 15:00	Zooplankton	Nguyen Thi Mai Linh
15:00 - 15:20	Coffee/Tea break	
15:20 - 15:50	Discussion and wrap up	Ian Campbell
Wetlands		
15:50 - 16:00	Overview of	Peter-John Meynell

	MRC-IUCN-UNDP-GEF Wetland activity	
16:00 – 16:15	Biodiversity Assessments in the Wetlands of the Lower Mekong Basin	“
16:15 – 16:30	Wetlands mapping programme	Charlotte MacAlister/ Meng Monyrak

Environmental flows

16:30 – 16:50	Update on environmental flows activity	Ian Campbell
16:50 - 17:05	Social Impact Monitoring	Hans Guttman
17:15 -	Cocktail reception	

TUESDAY, NOV. 16

WQ Diagnostic study (BURGEAP)

08:30 – 08:50	Background to BURGEAP study	André Durbec/ Christophe Pateron
08:50 – 09:30	Background studies	
09:30 – 09:40	Chemical results	“
09:40 - 09:55	Bioassay results	“
09:55 – 10:10	Diatom results	“
10:10 – 10:35	Synthesis of results and discussion	“
10:35 – 10:55	Coffee/Tea break	“
10:55 – 11:15	Recommendations for WQMN programme	“
	Modelling of water quality for the WUP	“
11:15 – 11:50	General discussion	“
11:50 - 12:00	Closing remark	Chumnarn Pongsri
12:00 – 13:00	Lunch	

ANNEX 2

SPEECHES AT OPENING AND CLOSING SECTIONS

***MRC Environment Programme – Annual Technical Meeting
15-16 November 2004, Vientiane, Lao PDR***

**Welcome Speech
by
Mr Sourasay Phoumavong**

Excellencies
Distinguished Participants
Ladies and Gentlemen

On behalf of the Lao National Mekong Committee I warmly welcome you to Vientiane for the MRC Environment Programme's Annual Technical meeting. It is my great pleasure to welcome you to this meeting as this is the first meeting of what is to become an annual event and it is very fitting that this occurred in the year when the MRC Secretariat successfully relocated from Phnom Penh to the bank of the Mekong River here in Vientiane.

Environmental monitoring is a crucial component of sustainable development, and particularly so for the Mekong River basin as its inhabitants are highly dependent on the basins natural resources. Over the coming decades we will see rapid development in the region providing much needed economic and social development. It is therefore comforting to know that the member countries are committed to promoting balanced sustainable development to provide benefits for the current generations whilst preserving the resources and development options for our future generations. The work of the MRC Environment Programme is directly contributing to the achievement of this common goal.

It is with great interest I note that much of the work undertaken has been done using international teams. This approach supports the spirit of the 1995 Agreement as it promotes cooperation and understanding. The teams worked well together and this is now a good basis for further development of national capacities in these areas. We hope to see more of this approach in future work.

Excellencies
Distinguished Participants
Ladies and Gentlemen

It is almost 10 years since the Mekong Agreement was signed and it is time to begin to take stock of the achievements. It is with great satisfaction that I note that MRC is progressing well in implementing the key articles of the Agreement. The BDP is completing its first phase and the WUP will soon have achieved all its milestones. With respect to the Environment Programme, a comprehensive monitoring programme will be in place shortly, and important environmental tools are in preparation, specifically transboundary EIA and environmental risk assessment and environmental flows assessment. We look forward to the implementation and application of these tools in the coming years and will thus ensure the implementation of Articles 3 and 7 in the Agreement.

This workshop will summarise and synthesise the work done by national experts on water quality and river ecology. Your constructive discussion and output are highly

appreciated. Once again I wish you all a very warm welcome to Vientiane and wish you a very productive and fruitful Workshop.

Thank you.

***MRC Environment Programme – Annual Technical Meeting
15-16 November 2004, Vientiane, Lao PDR***

**Opening Speech
by
Dr Olivier Cogels
CEO, Mekong River Commission**

Excellencies
Distinguished Participants
Ladies and Gentlemen

On behalf of the Mekong River Commission as well as on my own behalf, I would like to express my warmest welcome and sincerest greetings to all of you attending the MRC Environment Programme's Annual Technical Meeting today.

As you know, the water quality of the Mekong River is an issue of concern to all countries who share the Mekong River's water. The Water Quality Monitoring Network in the Lower Mekong Basin has operated since 1985 with a total of almost 100 stations taking monthly samples of the river's water. It is one of the three major environmental monitoring activities the MRC is engaged in. The network has now been revised to ensure that it covers the important transboundary and basinwide aspects of water quality. This monitoring is crucial to ensuring the development activities in the basin do not result in unacceptable deterioration of the river's water quality, jeopardising other uses of the water. This meeting will be reporting on the results of analysis of the regular monitoring data.

To complement this monitoring a basinwide Diagnostic Study on water quality was recently completed. This study will improve our understanding of water quality status particularly the presence of toxic compounds in water and sediment. These results are very useful when combined with results from our other water quality monitoring programmes. In addition the outputs from this study will guide the work on rules for water quality which will initially focus on toxic compounds. The results of the final report will be presented to this meeting.

In order to get a more complete picture of the environmental health of the river the Environment Programme has initiated assessment of the Mekong's ecological health using bio-assessment techniques. The particular techniques used and the results from a basinwide assessment will be reported on in this meeting. The assessments, combined with the water quality data, will provide an overview of the basin's ecological health, which will be presented in a MRC Basin Report Card in 2005.

Environmental Risk Assessment determines if adverse ecological effects occur or are occurring as a result of human activities. Data, information, assumptions and uncertainties are evaluated and used to help understand and guide environmental management. Environmental Risk Assessment is a valuable tool to identify future risks and necessary environmental monitoring programs in the Lower Mekong Basin.

In the end we need to know how changes in the environment affect people. To this end a social impact monitoring system is being developed and will complement the chemical and ecological monitoring of the Mekong River's waters. These monitoring programmes will

improve our understanding of the quality of the natural environment in the Lower Mekong Basin and ensure that we have a comprehensive overview of the environmental condition of the basin.

Distinguished Participants

The MRC programme is implemented simultaneously to assist the member countries to successfully implement the 1995 Mekong Agreement, and to achieve the vision of “an economically prosperous, socially just, environmentally sound Mekong river basin”.

This meeting will contribute to a better understanding of the environmental health of the river, and will provide information which will help MRC and its member countries to fully implement the 1995 Agreement. Our challenge is to facilitate balanced and sustainable development in this region, and we require the knowledge and data from all MRC programmes to fulfil our role and to meet that challenge.

Your constructive input and contribution to discussions at this important meeting are highly appreciated. With these words I declare the meeting open and wish you all a very interesting and fruitful meeting.

Thank you.

*MRC Environment Programme – Annual Technical Meeting
15-16 November 2004, Vientiane, Lao PDR*

**Closing speech
by
Chumnarn Pongsri, MRCS**

Excellencies
Distinguished Participants
Ladies and Gentlemen

We have now spent one and a half day listening to a lot of presentations interspersed with discussions. I am sure you all agree with me that this meeting has been very useful in providing us with a good understanding of the issues pertaining to Water Quality and Ecological Health monitoring, providing us with an update of the water quality status of the basin, and the giving us a better understanding of ecological risk assessment.

In 2000 the MRC was reorganised in order to better address the aims and objectives outlined in the MRC Strategic Plan 1998-2003. The Water Quality Monitoring Network, which was set up almost 20 years ago, has now been revised and updated including changes in monitoring stations, parameters, capacity building and laboratory upgrading. The network is now better equipped to address the issues under MRC's mandate, primarily of a transboundary and basin-wide nature. These changes will not only improve the effectiveness of the monitoring but also help, in the longer term, changing the network into one wholly owned and ultimately sustained, financially and logistically, by the member countries.

The Basin Wide Diagnostic Study on water quality was successfully completed this year. The results from this study have helped us to understand the physico-chemical status of water and sediment in the Mekong Basin. The results from this survey have been important in assisting to identify what parameters should be monitored and for selecting benchmark locations for the monitoring Programme.

Environmental risk assessment is another area that has the potential to be of great use in environmental management in the region. The meeting was presented with an overview of the objectives and an update of the current work.

Distinguished Participants

The Environment Programme is one of the core Programmes of MRC, it is in this context that improved environmental protection is important in fulfilling Article 3 and improved environmental planning and management to fulfil Article 7 and contribute to the main objective of sustainable development. The water quality and ecological health monitoring and the environmental risk assessment are contributing significantly to the achievement of these aims.

I am sure you agree with my assessment of the usefulness of this meeting. For any scientific and technical work to progress successfully it needs to be explained and discussed among interested and concerned parties. The process should be as open as possible and through your comments, questions and recommendations the future work will be improved. I also believe

that we have all benefited from having been updated on the work in the different areas covered by this meeting.

On behalf of the MRC Secretariat, it is my pleasure to thank you all for your interest and participation and to close this meeting, and wish you all a safe trip home.

Thank you for your attention.

ANNEX 3
LIST OF PARTICIPANTS

Name	Position/Institution
Lao PDR	
Mr Singha Ounniyom	EP Coordinator, LNMC
Ms Sisouphanh Louangrath	Director, Environmental Quality Monitoring Center, STEA
Ms Phayvanh Bandavong	Water Quality Analysis Laboratory, Dept of Irrigation, MFA
Mr Phisoutsack Keochanhpheng	Technical Staff, Dept. of Irrigation, MAF
Mr Kongngeun Chounlamountry	WUP Coordinator, LNMC
Mr Bounnam Pathoumthong	Lecturer, Natural Sciences Faculty, National University of Laos
Mr Chanda Vongsombath	Lecturer, Natural Sciences Faculty, National University of Laos
Mr Setouvanh Phanthavongsa	Technical Staff, Water Resources Coordination Committee, STEA
Mr Souphasay Komany	STEA
Mr Khampadith Khammounheuang	Director, Environmental Training Centre, STEA
Mr Lieng Khamsyvilay	LARReC, MAF
Mr Thevalack Phonekeo	Technical Staff, Cabinet Office, STEA
Mr Bounphet Phommachanh	Deputy Director, WAD, MCTPC
Mr Palikone Thalongsengchanh	Deputy Director, Technical Division, DHM, MAF
Cambodia	
Mr Heng Phearith	National EP Coordinator, CNMC
Mr Chrin Sokha	Deputy-Director, Department of Environmental Pollution Control, MoE
Ms Nhim Sophea	Vice-Chief WQ Laboratory, MOWRAM
Ms Po Salina	Technical staff, WQ laboratory, MOWRAM
Mr Houng Sounthan	WUP Coordinator, CNMC
Mr Sok Khom	CNMC
Mr Mao Hak	Director of Hydrology and River Works Dept, MOWRAM
Mr Rath Sethik	Department of Biodiversity, URPP
Dr Tho Sochantha	Malaria Center, Ministry of Health
Mr Kry Kirirath	Department of Natural Resources and Environmental Data, MoE
Mr Sam Nouv	Deputy Director of Fisheries department, MAFF
Mr Yim Chamnan	EIA Dept, MoE
Mr Nom Sophearith	Department of Fisheries, MAFF
Thailand	
Ms. Pakawan Chufamanee	National EP Coordinator, TNMC
Mr. Pornsak Jevasuwan	Director Water Analysis and Research Division, Dept of Water Resources
Dr Wijarn Simachaya	Director, Bureau of Water Quality Management, PCD
Ms. Sopha Nopsiri	Technical staff, WQ Laboratory, Dept of Water Resources
Mr Nirat Phouphanphinyo	WUP Coordinator, TNMC
Mr Chao Nokyou	Pollution Control Department
Ms.Sukanya Wisan	OEPP
Mr.Apichart Termvidchakorn	Department of Fisheries
Ms Araya Numtapotidech	Ministry of Natural Resources and Environment
Ms Yu wadee Peerapornpisal	Microbiology Section, Dept of Biology, Chiang Mai University
Dr Supatra Parnrong Davison	Dept of Aquatic Science, Prince of Songkhla University
Dr Narumon Sangpradub	Khon Kaen University
Mr Thanade Dawasuwan	Chief Engineer in Water Resources Management
Dr Chaiyuth Sukhsri	Head of water resources engineering department, faculty of engineering, Chulalongkorn University
Mr Tatporn Kunpradid	Microbiology Section, Dept of Biology, Chang mai University
Ms Supranee Runghirunviroj	Senior hydrologist, Dept. of water resource
Ms Ruamporn Ngamborirak	Alternate EP coordinator

Vietnam	
Ms Nguyen Thi Ky Nam	National EP Coordinator, VNMC
Mr Tranh Minh Koi	Sub-Institute for Resource Planning, HCMC
Mr Pham Kim Phuong	Environmental Analysis Center, HCMC
Ms Dao Thu Ha	Sub-Institute for Resource Planning, HCMC
Ms Hoang Thi Cu	Ministry of Foreign Affairs, Ha Noi
Mr Lam Hung Son	Ministry of Agriculture and Rural Development, Ha Noi
Mr Le Phat Quoi	Dept of Science and Technology, Long An province
Ms Ma Thi Lan Huong	Southern Region for Hydro-meteorological Center, HCMC
Mr Truong Manh Tien	Ministry of Natural Resources and Environment, Ha Noi
Mr Pham Anh Duc	Ministry of Natural Resources and Environment, HCMC
Ms Nguyen Thi Mai Linh	Institute of Tropical Biology, HCMC
Dr Duong Hong Son	Ministry of Natural Resources and Environment, Ha Noi
Mr Luu Phu Hao	Deputy Secretary General, VNMC
Mr Van Huu Hue	Water Resources Project, MARD, Vinh Long Province
Mr Nguyen Minh Khoi	Dept of Agriculture and Rural Development, MARD, Tra Vinh Province
MRCS	
Dr Chumnarn Pongsri	Director, Environment Division
Dr Ian Campbell	Senior Environmental Specialist, ENV
Mr Hans Guttman	EP Coordinator, ENV
Mr Pham Gia Hien	Programme Officer, ENV
Mr Meng Monrak	Programme Officer, ENV
Ms Sein Mya	Environmental Specialist, ENV
Dr Charlotte MacAlister	Aquatic Ecosystems Specialist, ENV
Ms Vivi Mansson	JPO, ENV
Mr Somsanith Nhoibouakong	Head of WUP WG 2
Ms Navida Saysouriya	Secretary of Director, ENV
Ms Phones anook Mahavong	Administrative Assistant, ENV
Ms Phally Sok	Secretary, ENV
Mr Manfred Mansoor Staab	BDP
Ms Chayanis Manusthiparom	Hydrologist, TSD
Mr Yoichi Iwami	Senior Advisor on River Management, BDP/PLD
Mr Dao Trong Tu	OPD
Other organizations	
Prof Ajit P. Annachhatre	School of Environment, Resources & Development, Bangkok, Thailand
Ms Yuwaree In-na	Senior Programme Officer, UNEP RRC.AP, Bangkok, Thailand
Mr Roger Mollot	Fresh Water Coordinator, WWF, Vientiane, Lao PDR
Mr Peter-John Meynell	UNDP Team leader, MWBP, Vientiane, Lao PDR
Ms Latsamay Sylavong	Senior Programme Officer, IUCN, Vientiane, Lao PDR
Mr Matti Kummu	Modeller, WUP-FIN
Mr Jorma Koponen	WUP-FIN
International consultants	
Mr Edwin Ongley	
Mr Barry Hart	International Consultant on ERA
Mr Bruce Chessman	International Consultant on Ecological Health Monitoring
Mr Christophe Pateron	International Consultant on Water Quality Diagnostic Study, BURGEAP
Mr André Durbec	International Consultant on Water Quality Diagnostic Study, BURGEAP
Mr Nguyen Thanh Tin	Riparian Water Quality Expert