



Proceedings

2nd Policy Dialogue on Watershed Management in the Lower Mekong Basin

27 - 28 September 2005
Vientiane, Lao PDR

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Editors:
Iris Richter

Photos: Jim Holmes and WSMP

Design and Layout: Sabai-dee.com and Iris Richter

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Introduction to the 2nd Policy Dialogue



Introduction to the 2nd Policy Dialogue

Herewith you find the documentation of the 2nd "Policy Dialogue on Watershed Management in the Lower Mekong Basin", held on September 27-28 2005. The second Policy Dialogue focused on Institutional Framework for Watershed Management.

The Policy Dialogue was designed on the principle of short background presentations and ample time for discussions within smaller groups. The group discussions during the Policy Dialogue on Watershed Management were designed to get answers to the following questions:

1. How should the institutional landscape in the four MRC countries look like in the future (vision)?
2. Which are the most relevant institutions / organisations currently guiding watershed management on the different levels in the four MRC countries?
3. How could the institutional improvement process (change process) be organized and implemented?

We tried to increase understanding of the actual situation of institutions involved in watersheds and watershed management in the Lower Mekong region as well as identify potential options for further institutional development. The aim of the Dialogue was not to make decisions but to collect and discuss ideas, visions and experiences.

The discussions took place in a stimulating and productive atmosphere and were based on mutual respect and understanding. The event was characterised by open sharing of visions, experiences, thoughts and potentials for future development.

From our point of view, collection and exchange of ideas, views and experiences and broadening of mutual understanding have been achieved. We hope that you profited equally from your participation and enjoyed the two days in Vientiane. Please take this documentation as a reminder of the bygone workshop, and, perhaps, as preparation for a third Policy Dialogue.

Thanks to everyone who assisted in making the "Policy Dialogue on Watershed Management in the Lower Mekong Basin" a success.

Cornelis van Tuyll

Vientiane, October 2005

Programme



Programme

Day 1 - 27 September

08.30 - 09.00 Registration

09.00 - 09.30 Opening Ceremony

Speeches

- Dr Olivier Cogels, MRCS
- H.E. Mr. Sitaheng Rasphone, Vice-Minister of Ministry of Agriculture and Forestry, Member of MRC Joint Committee for Lao PDR and Vice-Chairman of Lao National Mekong Committee
- Dr Wolfgang Zimmermann, InWEnt, Germany

09.30 - 10.00 Keynote Address by Dr Cornelis van Tuyl, WSMP
Setting the Scene

10.00 - 10.30 Coffee Break

10.30 - 11.00 Introduction to the Programme by Christoph Backhaus

10.45 - 11.05 Presentation by Manfred Staab, Basin Development Programme, MRCS
Relation between River Basin Organization and Watershed Management

11.05 - 12.00 Group Discussion (Country Groups)

12.00 - 13.30 Lunch

13.30 - 14.00 Presentation by Ian Makin, Asian Development Bank
Institutional Requirements from the Banks Point of View

14.00 - 14.30 Presentation by Peter-John Meynell, Mekong Wetlands Biodiversity Programme
Institutional Framework for the Management of Wetlands

14.30 - 15.30 Group Discussion (Country Groups)

15.30 - 15.50 Coffee Break

15.50 - 16.45 Group Discussion (Country Groups)

16.45 - 17.00 Observations on the First Day
by Peter Millington and Dr. Vitoon Viriyasakultorn

17.00 - 20.00 Dinner Boat Cruise at the Mekong River

Day 2 - 29 September

- 09.00 - 09.30 **Presentation by Peter Millington**
Watershed Management at the Local Level
The Murray Darling Basin Experience
- 09.30 - 10.30 **Group Discussion (Country Groups)**
- 10.30 - 11.00 **Coffee Break**
- 11.00 - 12.00 **Group Discussion (Country Groups)**
- 12.00 - 13.30 **Lunch**
- 13.30 - 14.30 **Group Discussion (Country Groups)**
- 14.30 - 15.30 **Presentation of Group Work (Plenary)**
- 15.30 - 16.00 **Coffee Break**
- 16.00 - 16.45 **Wrap up and Conclusions (Plenary)**
- 16.45 - 17.00 **Closing**

Speeches



Welcome Address

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Welcome Address

By Dr Olivier Cogels
Chief Executive Officer, MRC

H.E. Sitaheng Rasphone
Dr. Wolfgang Zimmermann
Distinguished participants from the MRC member countries
Representatives from international and bilateral organizations

Ladies and gentlemen,

On behalf of the Mekong River Commission I would like to welcome all of you to this second MRC Policy Dialogue on Watershed Management. I am delighted to see so many participants from the four MRC member countries and from outside.

Your Excellency, Mr. Sitaheng Rasphone, we are very grateful to have you with us this morning. We are aware and thankful that you personally and the Lao Government has such a great interest in our work. We know that your government give watershed management a high priority and the efforts made so far have been very promising. Your personal attendance and involvement in this Dialogue gives us the confidence that by organising this Dialogue we are on the right track. We thank you very much for your support.

Dr. Zimmermann, the Mekong River Commission is very pleased with the support your organization, INWENT, is giving to this Policy Dialogue. For us these events are very important. The exchange of views and experiences between representatives of our member countries is one of the core opportunities for MRC in supporting these countries to achieve a sustainable development in the Mekong region. This is the second Dialogue on Watershed Management. Both times your organization has been substantially involved. I thank you for this important support and I hope that this partnership will continue in the future.

Ladies and gentlemen, MRC's involvement in this region is based on the 1995 agreement. It gives us the clear mandate to support the cooperation between the four member countries in all fields of sustainable development, utilisation, management and conservation of the water and related resources. In this respect watershed management is an important programme. It bridges the strategic policy and planning level of the river basin with the needs of the local level in a watershed context. Watershed Management will have to match the various global, regional and national policies and guidelines with the needs and expectations of the local population. And this again needs to be translated into real and practical activities in the field. We realise that this is an extremely complex and challenging task.

MRC promotes the approach of Integrated Water Resources Management (IWRM). The MRC member countries are committed to implement IWRM principles in managing the water and related resources of the LMB. IWRM is not an end in itself but a means of achieving three key strategic objectives (Global Water Partnership, 2003):

- Efficiency in water resource development and use
- Equity in the allocation of water resources and services
- Environmental protection

To achieve these goals and "good Integrated Water Resource Management", a number of benchmarks have been defined. One of these benchmarks is:

"Institutional and regulatory frameworks with clear pathways of accountability - establishing the ethic and performance of good governance."

Watershed Management is an important instrument and tool within the overall IWRM approach. The just mentioned institutional and regulatory framework is fundamental for achieving sustainable development in a watershed context. I am therefore extremely happy that this Policy Dialogue will focus on these important institutional requirements.

MRC and its Basin Development Programme identified a number of priority programmes and projects. These programmes cover issues of national interest and of trans-boundary importance. Watershed Management is one of these joint programmes. Your Dialogue during the coming two days will be an important basis for our future joint projects in this field.

Ladies and gentlemen, for the coming two days I wish all of you interesting and constructive discussions. We are proud that this event takes place in our own premises.

I hope that your discussions will be guided by our MRC vision:

"An economically prosperous, socially just and environmentally sound Mekong River Basin."

Thank you for your attention.

Welcome Address

By H.E. Mr. Sitaheng Rasphone
Vice-Minister of Ministry of Agriculture and Forestry,
Member of the MRC Joint Committee for Lao PDR,
Vice-Chairman of Lao National Mekong Committee

Dr. Cogels, Chief Executive Officer of MRC,
Distinguished participants from the MRC member countries
Representatives from international and bilateral organisations

Ladies and gentlemen,

On behalf of the government of Lao PDR and especially on behalf of the Lao National Mekong Commission it is my pleasure and privilege to welcome you to this second MRC Policy Dialogue on Watershed Management. I am grateful and honored that this second Policy Dialogue takes place in our capital Vientiane. We will do our best to be a good host to all of you.

By signing the 1995 agreement we committed ourselves as one of the four countries within the Lower Mekong Basin to jointly aim for sustainable development in the Mekong Basin. By doing so we put special emphasis on water and water related resources. We are well aware that Laos provides 35% of the water of the Mekong River. It is our responsibility to ensure the quantity and quality of the water resources in line with the overall sustainable development in the Lower Mekong Basin.

We are focusing on the wise management of our natural resources. Our government gives natural resources management in the context of watershed management a high priority. We started a number of activities in this field and we are proud of our achievements so far. A number of watershed management plans are available. Additional efforts have to be made. Our expectations to the MRC watershed management programme are high and we hope that through this programme we can improve and intensify our respective efforts. A close cooperation between the MRC programme and our national and bilateral programmes is needed. We from our side will do our utmost to support this necessary cooperation.

In view of the Lower Mekong Basin, Lao PDR is an upstream country. As we all know watershed management deals with upstream downstream relationships within and between watersheds

along the main river. There are a number of important issues arising from this upstream downstream relationship that needs special attention.

Recently within the MRC Basin Development Programme a number of high priority programmes and projects have been identified. One of these high priority programmes is an Integrated Watershed Management Programme.

Within this watershed management programme we will have not only to look at economic and environmental issues but also very much at institutional challenges. Some of these challenges are crucial for our role in the future. We have to adapt our institutional landscape to the coming requirements. Improvements and changes are needed to achieve sustainable watershed management. I am especially pleased to learn that this 2nd Policy Dialogue will focus its discussions on institutional issues. Again we expect from the MRC Watershed Management Programme to continue to take up these issues and assist the four riparian countries with respective dialogues.

As I have been informed, the MRC Watershed Management Programme will specifically deal with experiences made in the region. We are happy and prepared to share the experiences we made in Lao PDR with our colleagues from the neighboring countries. The exchange of experiences will help us in improving our efforts and in achieving our objectives more efficient. We look forward to this exchange of experiences.

I am grateful to the donor community for the support they provide by making these kinds of events possible. I specially thank INWENT, the German Organisation for Capacity Building International, for their support.

Dear participants at this 2nd Policy Dialogue on Watershed Management. The development and achievements of the Dialogue will greatly depend on your input and guidance. Please be aware of the high responsibility that rests on your shoulders. I am confident that with your motivation and dedication MRC and the participants can look forward to fruitful and successful two days. I wish you all the best in participating at this important event.

Thank you.

Welcome Address

By Dr Wolfgang Zimmermann
Head of Rural Development, Food and Consumer Production
InWEnt, Capacity Building International, Germany

Your Excellency Vice-Minister Sitaheng Rasphone,
Dr. Cogels,

Distinguished Ladies and Gentlemen,

I would like to welcome everyone here today most cordially in the name of InWEnt and in my own capacity. Our Executive Director General Dr. Ulrich Popp asked me to convey his personal and very best wishes for a successful international conference.

It is an honour to have prepared and now to conduct this Policy Dialogue in close cooperation with the Mekong River Commission and the MRC GTZ Cooperation Programme. I would like to express my sincere thanks to these organisations and you to have made possible this international conference.

InWEnt's English name is like a programme: *Capacity Building International, Germany*. Our shareholders are the German Government, the Federal German States and the Private Sector Constituency. We operate mainly, but not exclusively within German Development Cooperation. Here we offer together with other specialized German Agencies like GTZ services out of a single source.

InWEnt's core focus is on training and dialogue. We aim on achieving competencies to manage change processes in a number of business-fields including rural development and natural resources. We concentrate on three levels

- Individuals: fostering decision making and action taking competence of individuals
- Organisation: increasing the performance of private and public sector organisations
- System: networking and promoting political dialogue.

InWEnt welcomes in its programmes nearly 55,000 participants from all over the world each year.

InWEnt decentralised organisational structure in Germany - we are present and operate in all 16 Federal States - reflects our unique selling point: practise-oriented-training in Germany.

Here we put high emphasis on our international-long-term training (ILT) in Germany (one-year) in German language. This internship exposes young professionals and future executives to experiences in and standards of Europe and helps them gain international experience through work - together with German colleagues - and life abroad.

InWEnt has grown out of the merger of DSE (German Foundation for international Development) and the CDG (Carl Duisberg Society) in 2002. We are proud to have now also a regional office situated in Hanoi.

Last, but not least, I would like to express my strong interest in the results and recommendations of this Policy Dialogue. As mentioned before, it is within our mandate to facilitate international exchange.

Your findings will serve also for InWEnt as a guideline for improving our services and to strengthen the cooperation with the Mekong River Commission and the National Mekong Committees, Line Agencies as well as other key actors involved in sustainable development of the natural, social and economic resources of the Lower Mekong Basin.

I wish us a professional and rewarding learning experience.

Thank you.

Summary of Dialogues



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Introduction to the Dialogue Circles

A. Introduction

Again the second Policy Dialogue focussed on discussions between the participants. We learned from the first Policy Dialogue that the participants very much appreciated working in small groups. So, the second Dialogue followed the same design. However at this dialogue, the discussions took place in country groups and were conducted in local language to facilitate communication. In addition, a non-riparian working group was formed to discuss the possibilities of streamlining further external assistance.

Guiding questions were provided to ensure coherence between the different country groups. The groups were asked to visualise the output in English language to facilitate the exchange of experiences and results.

B. Communication Guidelines

After the introduction presented by Dr Cornelis van Tuyll, the moderator Christoph Backhaus introduced some communication guidelines.

Similar to the former Policy Dialogue the 2nd Dialogue had the following overall objectives:

- to share experiences,
- to generate mutual understanding,
- to generate new ideas and
- to increase understanding and appreciation for the ideas and the experiences of others

The Dialogue did not aim at formulating conclusions, official agreements, decisions or commitments.

In addition, Mr Backhaus emphasised that the Dialogue needed free flow of creative ideas, independent thinking, listening and active participation by all. Therefore the moderator asked the participants

- to speak openly,
- to encourage others to share their views,
- to make contributions as an expert on the subject - rather than a representative of a country or an organization, and
- to give feedback on the process and the atmosphere, whenever something could be improved.

C. Structure of the Dialogues

The Policy Dialogue was structured in six Working Group Sessions, which were divided into two thematic sessions.

Thematic Session 1

Session 1 consisting of the Working Group Session I - IV focussed on the development of a vision for an institutional framework for watershed management.

Working Group Session I and II followed the introduction provided by the moderator. The participants were asked to develop and describe a vision for an institutional framework in their country.

Working Group Session III was dedicated to sharing of interim group results, and the group appointed at least one group member to present the results to 'visitors'. The other members of the group freely moved from group to group to get an overview about the team work within the other country groups as well as to get interesting ideas that could be useful for institutional arrangements in their own country.

Working Group Session IV was used to incorporate ideas and observations from the other groups. In addition, the groups were asked to compare their vision with the existing institutional framework in their country.

Thematic Session 2

Thematic Session 2, comprising of the Working Group Sessions V and VI, concentrated on the steps needed to come closer to the vision of an institutional framework.

During Working Group Session V the participants were asked to discuss this topic.

The following guiding questions were provided:

- What steps are required?
- Who should be involved?
- Who should be responsible?

Summary of Dialogues

Working Group Session VI continued with the elaboration of details to bring the vision into practice by answering the following questions:

- What should be done next?
- By whom?
- How could the 4 countries share / cooperate?
- What could MRC do to assist?

As the discussions took place in local language, the country groups were asked to visualize the discussion, so each group was provided with pin boards.

Each group was also requested to highlight main outcomes and findings during a short plenary presentation, which was followed by a short discussion about the topic.

While the working group sessions were in progress, the non - riparian participants had parallel discussions about possibilities to streamline external assistance to support the Mekong countries in achieving consistent institutional frameworks.

The following summary should serve as an overview of the content of group discussions. It is based on abstracts prepared by the Watershed Management Project Country Liaison Officers and complemented by the plenary presentation and results displayed on pin boards prepared by the respective country group.

Output of the Dialogues

Thematic Session 1

Thematic Session 1 covered four Working Group Sessions. During those four sessions the participants were asked to develop and discuss their vision for an institutional framework on watershed management in their own country.

Cambodia Group

As a result of their discussion, the Cambodian group suggested setting up River Basin Organizations / Watershed Management Organisations at National Level (Chaired by CNMC) and Sub-National Level (Chaired by a Provincial Governor).

Summarising the Cambodian group discussion, the group suggested the following responsibilities for the different levels as being most suitable for implementing successful watershed management in Cambodia.

1. National Level (chairman to be selected by the Government)
 - Making policy and guidelines
 - Monitoring and evaluation
 - Conducting awareness programmes

2. Sub-National Level (chairman to be the Provincial Governor)
 - Planning and monitoring
 - Developing community councils to lead the planning and implementation at grass roots level
 - Conducting awareness programmes

According to the Cambodian group's vision, cross-sectoral planning and implementation will be also required at sub-national level.

To empower the suggested structure the Cambodian group highlighted certain needs:

At National Level the need

- to set up rules and regulations
- to define clear mandates, roles and responsibilities
- to allocate required funds

At Sub-National Level the need

- to further implement decentralisation policy
- to strengthen participatory approaches in all planning processes

Additionally, capacity building will be required at all levels.

In addition, the *Cambodian National Mekong Committee* should play a major role in coordination between the different sectors at national level. The group emphasised the need for joint development of policies and guidelines by different line ministries as well as the establishment of joint planning procedures.

Lao PDR Group

According to the Lao Group, the Mekong River Commission should be the key regional institution dealing with Integrated Water Resources Management (IWRM), especially watershed management in the riparian countries. In this context, the MRC Basin Development Plan Programme should play an important role in integrating watershed management projects in line with the programme strategy.

At the national level, so far Lao PDR does not have a single institution that has a clear mandate and responsibility on either water resources management or watershed management. There are more than 10 institutions presently dealing with water resources and watershed management. Therefore, it was suggested that the existing institutions concerned merge to become a single Water Resource Institution (maybe Water Resource Authority or Ministry of Water Resources) with a clear defined responsibility and mandate. The general idea of the Lao group was to create one institution with a clear mandate and responsibility for IWRM in Laos.

At the regional levels, it was suggested to form three sub-area committees, which could follow the BDP sub-area divisions: Northern, Central and Southern.

At the provincial levels, it was suggested that watershed working groups for the main rivers (e.g. Watershed Organization for each watershed) be formed. This should be a permanent management body under the supervision of sub-area committees.

Different sectors are involved in watershed management in Lao PDR. These include agriculture, forestry, irrigation and fishery (MAF), rural development, land management, hydropower and energy sector, planning and investment, environment (STEA), mass organisations [such as youth organisation, the Lao Women's Union, the Lao National Front], transport, water supply and navigation, health and education. In addition, International NGOs and the private sector are also involved in watershed management.

With a clear mandate and responsibility the Ministry of Water Resources will act as the executive agency implementing IWRM projects as well as the principle coordinator for all water resources related activities.

At provincial and district level, it was suggested that the new agency be integrated into the existing institutional framework e.g. administration offices, rural development committee, land use and land allocation committees. Those local institutions are still active and working quite well in some provinces, there just needs to be some improvements in capacity. The group strongly advised against the creation of new institutions at province and district levels to avoid confusion among local authorities and to give them more ownership in order to sustain the projects in the long run.

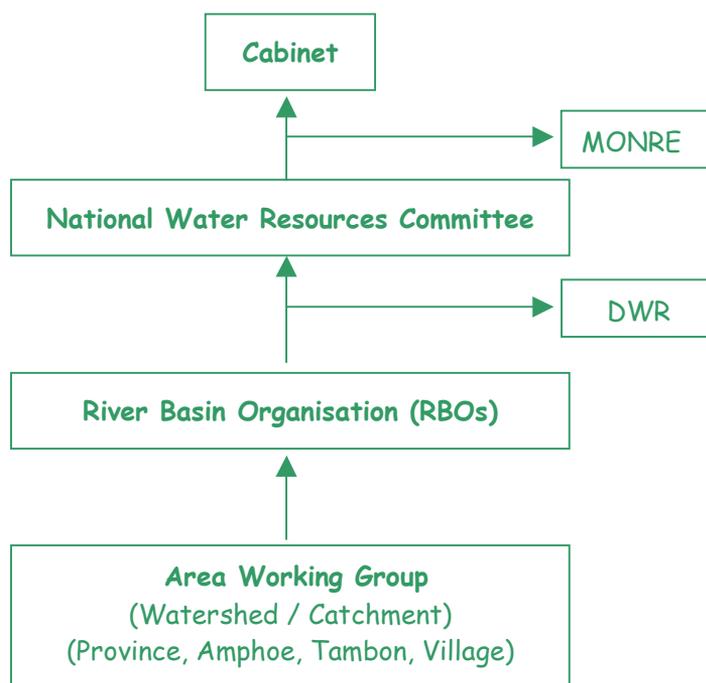
In addition to the government annual budget allocated to IWRM projects by the Ministry of Water Resources, watershed-funding mechanisms for each watershed (one watershed organization) should be established in order to collect funds from the existing revenue sources within that watershed. Other sources of funds could come from international NGOs and the donor community.

Thailand Group

The Thai group also discussed their vision on institutional framework for watershed management. The group concluded that such a vision could not be developed by a small group of 6-10 persons. They suggested that involvement of other sectors would be necessary to create a vision. Therefore, they decided to use the existing vision of the National Water Resources Committee (NWRC), which states: "In the year 2008 all villages should have access to sufficient water resources".

The National Water Resources Committee (NWRC) is set up based on a cabinet resolution. It is chaired by the Deputy Prime Minister and has clear mandates to oversee all water related resources management. The Committee combines the various stakeholders; government agencies, private sectors, non-government individuals (NGIs), NGOs and local communities.

At the regional level, there are 29 River Basin Organizations (RBOs) in 25 sub-river basins. The provincial governor is the chairman. RBOs report directly to NWRC. The Department of Water Resources is working as secretariat and coordinating agency to RBOs and TNMC. Under the RBOs structure four working groups have been established: (1) Planning working group, (2) Information management working group, (3) Public relation working group and (4) MRC - TNMC related working group (e.g. WSMP and BDP).



Summary of Dialogues

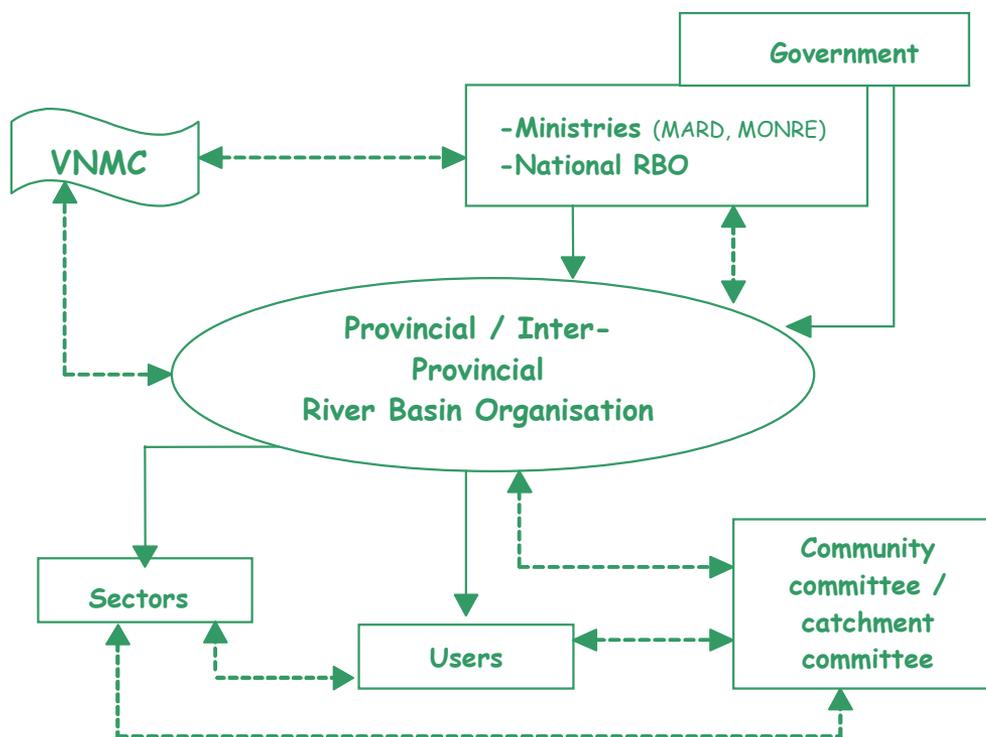
In addition, watershed organisations (at province level) and catchment organisations (at district and community level) are in place in Thailand.

The Thai group agreed that the actual structure is suitable for the conditions in Thailand as it involves all stakeholders at the different hierarchical levels. However, RBOs need to be strengthened and more flexible.

Viet Nam Group

The Viet Nam group emphasised at the beginning of the group discussion that Watershed Management (WSM) is multi-sectoral management, which requires cooperation and coordination of various stakeholders, sectors and levels. Therefore, for the best WSM there should be one organisation that is responsible for all aspects of WSM.

The "ideal" institutional framework for good WSM has been visualised in the diagram below. The one organisation responsible for all aspects of WSM is a "River Basin Organization (RBO) at provincial / inter-provincial level". The provincial authorities (those provinces located in the river basin) have representatives in the RBO; chairmanship can be rotated periodically. The sector line agencies also participate in the RBO and provide technical support as required. Thus, all sectors can participate in the decision-making process and this ensures that interests of all sectors are taken into account in the joint decisions.



Summary of Dialogues

Three River Basin Planning Organizations (RBPOs) have been established in Viet Nam for the three major rivers (Red river, Dong Nai river and Cuu Long river). Four other RBPOs will soon be established. However, the mandate, functions and responsibilities of these RBPOs are not yet clear, they focus mainly on planning work but without strong coordination between the provinces, which are located in the river basin. Therefore, the establishment of a provincial/interprovincial RBO as visualised above is a new approach. Those organisations will have full authorisation and ability to coordinate the provinces within a river basin concerning integrated river basin management.

The sector line agencies within the basin make strategic plans and submit them to the RBO to get approval. Then the RBO will make an overall plan for the river basin, and submit this to the government for approval.

The RBO is responsible for overall coordination among the sectors in the river basin. Line agencies are responsible for their sector activities, but have to follow the common framework under the RBO.

The provincial/inter-provincial RBO is responsible for WSM in the whole river basin. Under that, there are local management boards that are responsible for catchment/sub-catchment management.

The involvement of "community committees / catchment committees" should be in the planning, implementation and monitoring activities of the RBO. Community committees are the representatives for local people; they are in fact the bridge linking authorities and local people. With the linking role of these community committees, voices of local people are taken into account in decision-making processes. The community committees are set up from district level downward.

The group suggests establishing an "RBO at national level" at ministerial level. There is no such organization at the moment. This organisation will be responsible for overall policies for WSM and for RBOs at provincial levels. All related ministries (Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment, Ministry of Planning and Investment, Ministry of Finance, Ministry of Construction, etc.) have representatives in the national RBO and participate in policy-making processes. Further on, this organisation should be called National Council of River Basins (NRBC).

The Viet Nam National Mekong Committee (VNMC) is the Government body which provides supports for the Government in the implementation of the Mekong Agreement. It also has the coordinating role of line agencies at national level to deal with Mekong issues.

According to the vision of the Vietnamese group, River Basin Organisations should be established for every river basin. For big rivers such as Cuu Long River or Red River, the RBOs should be at national level. For smaller rivers (there are a lot of small rivers in Vietnam), RBOs should be at provincial level.

Thematic Session 2

Thematic Session 2 concentrated on the steps needed to come closer to the vision of an institutional framework.

The Cambodian, Lao and Vietnamese groups completed their discussions and summarised the steps required. The results of those groups can be summarised as follows:

Cambodia Group

How to come closer to the vision of the institutional framework?

The Group suggested the following steps:

1. Setup Watershed Management Organisations (CNMC)
 - Select line agencies
 - Select lead agency
2. Define roles, functions and responsibilities of Watershed Management Organisations (WSMO)
 - Draft roles, functions and responsibilities
 - Consultations and workshops on the draft roles, function and responsibilities of WSMO
3. Develop strategy work plan for watershed management
4. Select pilot site for watershed management
5. Implement strategy and action plan
6. MIS (sharing)
7. Replicate the tested watershed management approaches in other areas
8. MRC should coordinate and provide technical assistance and funds.

In addition, the Cambodian group discussed possibilities of funding the implementation of the suggested steps as well as recognising that the implementation required awareness raising at all levels.

The group identified three different sources of funding: the Government of Cambodia, donors involved in development partnerships as well as the private sector. In the context of funding, the national as well as local level through the Commune Development Councils should be accountable.

In order to raise the awareness for watershed management, the Cambodian group suggested the following measures:

- Conduct a study on watershed problems
- Use the following methods to reach the different actors:
 - Education programmes in schools
 - Training
 - Consultations
 - Mass media
 - Workshop
- Prepare education messages

Lao PDR Group

Next steps

Since Lao PDR does not have a Ministry of Water Resources yet, the first step is to propose to establish that institution.

The Prime Minister's Office will send the request to the Government of Lao PDR to inform it of the need to establish a new ministry. Then the Government will assign a special ad hoc committee to consider the possibility to establish a new Ministry (Ministry of Water Resources). If the committee agrees that there is a need for the establishment, it will formulate the legal documents for Government approval.

How could the four countries share and cooperate?

It is suggested that by implementing the joint bilateral and multilateral transboundary projects on watershed management, the 4 countries will share and cooperate better.

What could MRC do to assist?

The Lao group suggested giving countries ownership and support by providing financial and technical facilities to the national working groups.

Viet Nam Group

Immediate next steps

Develop a detailed plan to:

- Conduct assessment and classification of watersheds in the country
- Consultation with NMCs on issues related to RBO
- Carry out field activities in the pilot watershed
- Identify priorities of WSM in each specific watershed area
- Improve the regional network for WSM. (At present, there is Regional Working Group on WSM, which has been established for over a year. However, it is not yet active, its mandate, functions and responsibilities are not clear either. The project should clarify these matters and support the regional network for WSM in all 4 riparian countries)
- Promote training and capacity building activities
- Conduct economic evaluation on watersheds and wetlands (relationships in term of economic benefits...)

How could the four riparian countries share / cooperate?

- At first, four countries should agree on the importance of RBO as well as WSM concepts
- Then RBOs are established in the 4 countries (Thailand is more advanced compared to other three countries, as Thailand has already RBOs)
- The four countries can share information and experiences. Visits can be exchanged among RBOs in the four countries

How could MRC assist?

In the group's opinion, the WSM project should be promoted to become a core programme of MRC. To do this, the outline of a proposal should be submitted to the Joint Committee for approval.

Under this WSM project, support should be granted to the development of River Basin Organisations (RBO) as well as to capacity building for the RBOs. In addition, MRC could facilitate information sharing (by its conferences, workshops, forums, web site, database...) and assist in coordination with other donors in order to support the RBOs in both institutional and financial aspects.

In addition, the Thai group emphasised the overlapping mandate of the Watershed Management Project and the Basin Development Plan within the Mekong River Commission. The group suggested the creation of core programme responsible for Watershed Management.

Non - Riparian Group Discussion

In addition to the country groups, the non - riparian participants were asked to find an answer to the following question:

- How could external assistance be streamlined to assist the Mekong countries in achieving consistent institutional frameworks?

After a long discussion, the non - riparian group concluded that different donors were acting independently which often creates often confusion in the countries as well as on the donor side. The group highlighted the need for strong donor coordination in all four countries and between the different countries.

Presentations



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Issues in Water Resources Management

Summary of Presentation
By Ian Makin

Overview

The presentation will address three aspects of water resources management, relevant to discussions on watersheds in the Lower Mekong basin (LMB), namely:

1. Why the institutions developed for water resources management in the LMB will be particular to the location; and changing over time.
2. Why information management and data collection are essential components of watershed management
3. Why good communication is essential for effective and sustainable water resources management

Limits to leapfrogging

There has been a tendency in recent years to assume that because a model of resource management has worked well in one basin, it can be transposed, easily, to other basins. However Shah et al (2001) have argued that there are limits to this assumption that a poorly managed resource can be transformed to well-managed resource by applying an institutional model from elsewhere. Furthermore, research has shown that the models of resource management that emerge can be distinctly different over quite small distances due to differences in local economic, social or natural context. The first part of the presentation will explore some of the differences in contextual setting that may determine what form of resource management organisation may emerge.

Information and Data

Data collection and processing often appears as the "Cinderella" of water resources management. Collecting basic hydrological and, to a lesser extent, meteorological data is time consuming and complex; and yet is generally assigned to the lowest paid and most poorly trained staff in the sector. Data collection is not a glamorous task; yet the entire water resources management system is based on this essential building block, with major investment decisions often being made on scanty and unreliable data. The presentation will draw a distinction between data and information and highlight the continued need for effective data collection; reliable data processing and storage; and the crucial necessity to allocate sufficient resources to transform field data to useful information.

Communications

Water resources and watershed decisions are made by enormous numbers of individuals and organisations every single day. While many of these decisions are insignificant in the context of the bigger picture of the basin, the cumulative impact may often be significant. This is particularly true when a decision is about a discharge of waste or polluted material, which, although not intentionally harmful, can impact on others downstream. Increasing the awareness of river basin communities about the impact of their actions will be increasingly critical. On the other hand, improving the flow of reliable and trustworthy information from the resource managers to the communities is also essential. Nothing breeds distrust and individual actions more than suspicion about decisions made elsewhere and by others.

Watershed Management at Local Level. The Murray Darling Basin Experience

Linking basin wide policies and actions to the local watershed scale

Presentation
By Peter Millington

Introduction

Although most of Australia's water consumers live in large cities, irrigated agriculture uses 70 to 80 per cent of all water diverted nationally. The bulk of that water - 75 per cent - is used in the Murray-Darling Basin, making irrigation in that region the key sector for rural water reform.

The need for an integrated approach to water resources management - and one that involves the community in planning and management decisions - has a long history in Australia and in fact goes right back to 1900 when the individual states, that were previously administered as separate colonies from England, decided to form together as the 'Commonwealth of Australia'.

Although there would now be one country instead of six separate states, each State wished to maintain the 'sovereign right' to develop its own natural resources (and also many other services such as transport, education and health). Whilst this did not at first, appear to create a problem, it soon became apparent that, for the four most densely populated states - New South Wales (NSW), Victoria, South Australia (SA) and Queensland (Qld) - there was the contentious issue of how to share rivers that were common boundaries between the States, and how to resolve the various disputes between landholders and communities on either side of the rivers that were already becoming frequent in 1900.

Border Commissions were established to 'referee' these disputes and the sort out how development of the river systems could best proceed to meet the needs of all users and uses. The earliest and largest of these bodies was the 'River Murray Commission' (later, in 1986, the become the Murray Darling Basin Commission - see Section 2 of this paper). This Commission was given a strong legal agreement to solve these water use and sharing problems, but found that the arguments between the river communities from the three states involved - NSW, Victoria and SA - were often very localised, involving small towns or rural farming communities along perhaps a 10 km. stretch of the river. As well, industry groups covering the rice, grazing and horticulture industries also were formed to protect the rights and interests of users and this also generated strong across-border disputes.

These groups had quickly established themselves as active 'lobby' groups so the Commission soon realised that it had to develop a way of dealing with these that was different from the traditional 'command and control' approach (the 'do as I say and don't ask questions' approach) that the government agencies had previously used.

This paper plots the way that firstly, the River Murray Commission, and then later, its successor, the Murray Darling Basin Commission and its member States, have developed a participative river basin management model that is based on a very strong 'bottom up' approach involving hundreds of community/local level groups and organisations whose efforts feed into a basin wide participative model of natural resource planning and management.

The Murray Darling Basin

i) Basin Description

The Murray-Darling Basin covers more than a million square kilometers - virtually all of inland southeastern Australia, and approximately one-seventh of the whole continent. It is the nation's most important agricultural region and holds many of Australia's most significant natural features.

The basin covers parts of four States and the Australian Capital Territory and has about twenty major rivers flow through the Basin. They all flow into either the Murray River or the Darling River, the two principal streams in the basin, which themselves join in the lower part of the basin and flow into the South Australian Sea. The river system is among the longest in the world, draining a region 1,450 kilometres long and 1,000 kilometres wide.

Nearly two million people live in the Basin (small by Mekong Basin standards but significant out of a total population of Australia of 20 million). Parks and reserves have been established throughout the Basin to conserve areas of natural habitat and landscapes. Some 140 parks cover an area of more than one and a half million hectares. The Basin's wetlands include internationally significant refuges and breeding areas for wildlife, and the rivers are home to some of Australia's best-known and largest freshwater fish. As most of the land outside the parks, reserves and heritage areas is privately owned, it became clear from the very start of the cooperative basin arrangements in the early 1900's that some form of close contact and involvement with the rural community would be essential for the rivers and their catchments to be managed sustainably.

ii) The First Agreement

Under the River Murray Water Agreement, signed in January 1917, the River Murray Commission was formed. This new body consisted of Commissioners from New South Wales, South Australia, Victoria and the Commonwealth. Its major priority was to build, operate and maintain storage reservoirs, weirs and locks to ensure the sharing and economical use and development of the water resources of the River Murray and to provide a reliable supply of water. That is, it essentially dealt with water quantity issues along the main stem of the system - the River Murray itself - and its powers did not extend in any way to the various tributary streams that flowed through the member States. These remained 'State controlled' in much the same way that the four lower Mekong countries 'own and manage' their tributary streams of the Mekong.

The benefits of regulating the River in this way were, at that time, considered far more significant in terms of security for existing settlements along the river, confidence for further development, and increased prosperity, than any of the possible negative social or environmental impacts or costs.

Much of the irrigation industry in the southern part of the Basin was established during the first half of the twentieth century by governments anxious to attract population into the empty hinterland and it was not until 1980 that concessions encouraging tree clearing (to enable more cropping and irrigation) were withdrawn. Governments were responding to the popular demand for land. High priority was given to the resettlement of soldiers returning from the first and second world wars and to the campaign to expand Australia's population for defence reasons. These social and political factors largely determined the way that the Murray Darling Basin was developed and as a result of this wholesale land clearing, led to the soil and vegetation degradation that is at the heart of most of the basin's present resource problems.

For six decades the River Murray Commission's tasks remained principally to control and manage water quantity and monitor the use of the State's legally defined annual shares of the water resources supplied by the works along the river. During that time the Commission was responsible for building Hume and Dartmouth Dams and 17 major locks and weirs. During this time it related to the community through annual meetings with industry groups (rice, horticulture etc.,) or via community meetings held as required throughout the basin.

These approaches could not, in retrospect, be considered truly 'participative management' in that the community did not have an effective 'say' in how problems were addressed. They were more meetings about information exchange and were somewhat 'one-way' in that the Commission told the community about an issue and did not really seek opinions in reply.

But during those first 50 years, the community did not push for a stronger role so it was, in effect, an acceptable form of 'community involvement' for the times.

iii) Need To Broaden the Role of the River Murray Commission

In the late 1970's, it became apparent that both the water quality and the land resources of the basin were becoming degraded. Major problems included:

- Increasing competition for water and conflict over water use,
- Severely degraded water quality, particularly with regard to salinity;
- Increasing sewage effluent discharged to the rivers;
- Reduced flows in all rivers, as well as seasonal shifts in flow regimes;
- Declining fish numbers;
- River erosion and high turbidity;
- Increased outbreaks of toxic blue-green algae blooms in the rivers,

It became obvious that successful management of the Basin's river systems was directly related to land-use throughout the whole catchment area, and that the River Murray Commission would need to expand its role in the area of natural resource policy and strategy development to the whole catchment/basin. The Murray Darling Basin Commission came into being in 1986 with enhanced coordination powers in environmental policy and strategy, reflecting increasing community concerns about salinity, the need for a whole-catchment approach to river management, and the recognition that natural resources management issues in the Basin required coordinated actions by all the State Governments involved, without taking away each States constitutional right to manage its own resources. (This is much the same as the four lower Mekong countries agreeing that there is a need for a basin wide 'coordinator of water resource planning and management issues' (the MRC) whilst at the same time protecting their sovereign rights to manage their own resources.

The Commission's charter is to ***'promote and coordinate effective planning and management for the equitable, efficient and sustainable use of the water, land and other environmental resources of the Murray Darling Basin'*** and it is obligated to do this within a strong framework of community participation. In fact, one of the highest institutional components of the Commission is a 'Community Advisory Committee' that reports directly to the Ministerial Council, the highest part of the structure. It represents regional and special interest groups from throughout the Basin, and its establishment was one of the most important decisions made in regard to strengthening community participation and empowerment.

iv) An Integrated and Community Driven Approach.

From the start of the re-constituted MDBC in 1986, the approach focused on promoting the principles of integrated river basin management. In this Australian context 'river basin management', 'valley or catchment management' and 'water shed management' have basically the same meaning - it is more to do with the geographic scale involved that determines what terminology is used.

In general terms, within the Australian context,

'**river basin**' means the large area basin such as the whole of the Murray Darling basin, '**valley or catchment**' means the main 15 or so sub-basins within the overall MDB, '**watershed**' means the smaller tributary areas that feed into the 'valley or catchment' areas, and can vary in size from quite small (a number of small villages and perhaps 20 farms) upwards to cover perhaps 200 square kilometres.

The MDBC and the six member states and territories agreed that a very extensive array of community participation organisations/structures would need to be established to provide both the 'bottom-up' and 'top-down' form of planning and management that was to apply. If the MDBC's role was to develop, promote and coordinate basin wide natural resource policies and strategies, and to audit how well the States and the various community groups developed and implemented action plans to comply with these policies, then very strong links needed to exist to ensure effective 'two way' communication.

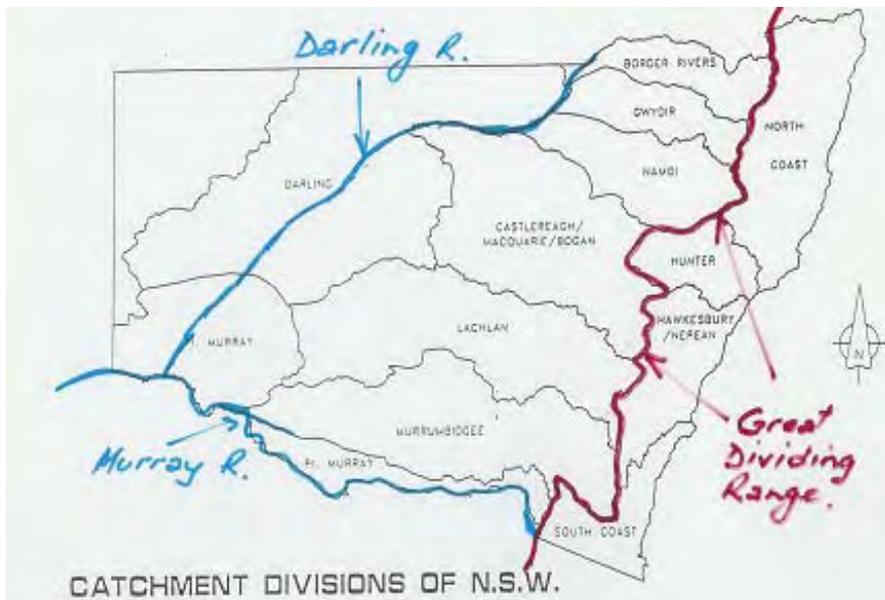
To achieve this, community/stakeholder groups, or '**valley/catchment management committees**' were established in the 15 major sub-basins within the overall MDB and these were empowered by legislation from the six state and territory governments. The Chairs of these 15 committees, plus some other special interest groups, became the 'Community Advisory Committee, mentioned earlier, that advise directly to the high level Ministerial Council.

These community led valley committees became the central or focal point for advising upwards as to the appropriateness of new policies and strategies, and downward to the next level of community groups (**watershed management committees**) that actually developed 'on-the-ground' action plans for resource use, rehabilitation and management.

How these arrangements work in practice will now be discussed for the state of New South Wales.

Watershed Management in the State of New South Wales

Figure 2 shows the main drainage or catchment areas (or 'valleys') of the State. The MD Basin component is that area to the west of the 'Great Dividing Range' and includes 8 separate valleys/catchments.



The community led participative arrangements for watershed management are as follows,

- Each of the 8 'valleys or catchments' are quite large - about 600 kilometers in length - and have a community led 'catchment management committee' comprised of about 12 rural community representatives plus particular special interest groups. The Chair is a well respected and prominent community member. The committee is given a strong mandate from government and has an 'operating agreement' that defines how it will operate and what it will do. Each committee reports directly to the responsible state minister and in that way, bypasses the control that the agencies would like to exert over them. They are supported by the government technical agencies (in an advisory role, not a 'voting' role) and they can also engage consultants to undertake studies. Its principal role is to develop a strategic natural resource management plan for the whole of its valley that complies with the basin wide policies and strategies that have been endorsed by the MDBC, and particular 'end-of-valley' resource 'health' targets that may have been set, and then to provide guidance to the array of lower level committees and groups so that the many action plans developed

for the smaller watershed areas comply with the valley-wide strategies and targets. The valley committees also undertake regular audits or checks on whether the action plans are being implemented and whether they are achieving the particular outcomes sought.

- Lower level committees or groups that seek to plan and implement projects to contribute to the overall 'valley wide targets'. They can take many different forms but are all basically a form of a 'watershed management committee'. They include,
- 'watershed committees' for the 5 or so secondary tributary streams that flow into the valley's main river, that develop resource use and protection plans for the particular watershed,
- 'Landcare groups' that might include 2 or 3 small villages and 20 farms (covering an area of say 200 square kilometres) that develop plans for soil erosion and salinity control, re-vegetation, changes in farming practices, waste water management etc.,
- 'Rivercare groups' that 'adopt' a reach of the river and restore and maintain river bed and banks and vegetative cover,
- 'Land and Water Management Groups' that comprise an irrigation area or scheme and that seek to introduce improvements in land and water use, and farming efficiencies,
- 'Town/city Water Management Improvement Plans' where a town administrations develop wide ranging plans to better manage stormwater runoff, waste water effluent, and water use efficiencies,

This 'network' of committees and community groups provide a very strong inter-connected framework that links the high level policy and strategy issues at the basin or State level, downward, through the 8 valley/catchment committees, to the bottom level and small community action groups (often called 'Communities of Common Concern').

All of the committees at all levels are given a legal backing so that they can expend money that governments may offer to develop integrated watershed management plans, carry out projects, and to be able to engage contractors and consultants to do work. Each year there is a 'catchment/watershed summit' meeting at which the chairs, or representatives of all the 8 valley committees, plus a selection of the lower level watershed committees, come together to exchange successes and problems and, where appropriate, to receive government awards for high quality performance and outcomes in natural resource rehabilitation, conservation and sustainable use.

Linking the Basin wide Issues to the Local Level Watershed Groups Committees

Two major issues became clearly apparent in 1986 when the new participative arrangements for basin/watershed management were being developed,

1. The knowledge held by the various agencies of how the various parameters of the natural resource base of the basin were responding to the heavy development pressures was patchy and not in a form suitable for the new array of basin committee arrangements to readily use,
2. The valley/catchment committees themselves, the lower level watershed management committees, and the communities that they represented, were not well informed or aware of the emerging issues and problems facing the basin, so that it would be very difficult for them to sensibly participate in planning and management decisions.

Regarding 1, the MDBC quickly decided to undertake a wide ranging 'Environmental Resources Study' to identify just what was the state or condition of the basin's resources and where were the areas where more research and study was necessary. This study looked at many factors throughout the basin,

- Agricultural use of land resources
- Vegetation
- Groundwater
- Native flora and fauna
- Aquatic and riverine environment
- Water quality
- Water allocation
- Water use efficiency
- Riverine ecology
- Cultural heritage
- Tourism and recreation

The MDBC and the key State agencies (the same as MRC and the four member countries) then took the results of the study to the 8 valley /catchment committees and this began the process of creating an informed community with a detailed understanding of the particular resource issues in their valley or catchment. Each committee then worked at developing a strategic natural resources plan that addressed the particular problems of that valley.

So undertaking research and further studies to improve the overall knowledge of the problems in each of the sub-basins or valleys became an urgent requirement for the river basin agencies.

Regarding 2, early attempts to explain what were the present and emerging natural resource problems in the basin failed because the communities did not have any real awareness or understanding of these issues, nor did they see how the Government could help them implement works and achieve identified improvements "on the ground". With the large amount of private

ownership of land in the Murray Darling basin (which is opposite to that found in most of the south east Asian region), it was clear that it would be the farmers themselves that would have to do much of the work concerning resource rehabilitation, improved farming practices and more efficient water use, yet this could not be expected if they remained unclear and uninformed about what the problems actually were. So a very large effort has been made since 1980 by government agencies to explain to the community more about the basin's resources but in a way that the rural population would be able to understand. This was not easy for the government technocrats as for the first time, they had to 'simplify' messages so the non-technical farming and rural town communities could understand and respond to these complex issues.

A range of awareness raising approaches were followed and their success over the last 20 years or so has been the basic reason for the very successful participative, community-led form of catchment/watershed management that now applies right across the MD basin. Awareness raising was targeted at three groups of users/stakeholders,

- The general community - schools, towns, cities and villages,
- Consumptive resource users and wastewater dischargers/polluters - farmers, irrigators, town and city councils, industries etc.;
- High level stakeholders - leaders of the farmer groups or industry, politicians, academics and research institutes, city and town mayors, key media interests.

In regard to watershed management committees and how to make these groups more aware of issues, the approaches adopted for the first two categories are relevant. In summary,

- A basin-wide and watershed awareness programs which provides information on the characteristics of the basin, the valleys and the smaller local watersheds,
- A national, basin-wide and local 'Water Week' or 'Clean Resources Week'. Many countries host this type of event and sometimes to coincide with the United Nations 'Water Day' or 'Environment Day'. Water week activities could include a national water seminar; a series of daily media stories; television interviews; field inspections for community leaders and the media, releases of new technologies and initiatives particularly relating to demand management; school poster or short story competitions; art competitions; high profile presentations to raise the awareness of a particular issue
- A longer term national awareness campaign that runs for a year or more. In Malaysia, there is a 'Love Our Rivers' campaign that targets both the general community and schools through high profile media campaigns, Australia had a 'Clean, Healthy and Productive Rivers by Year 2000' campaign that started in 1994. This campaign was designed to showcase Australian rivers and the environment in general for the 2000 Olympics.
- A village level waste treatment and disposal program for solid and liquid wastes.
- Collaborative effort between the resource agencies and the village communities to develop a series of Community Action Plans covering a range of village-related activities, and watershed management issues. Such plans might be called 'Village Environmental Action Plans'. These plans aim to protect and restore village water

supply catchments, reduce adverse water-related health impacts, promote sustainable management of fuel, fodder supplies and solid wastes.

- The 'Streamwatch' program within schools. This program allows schools within a catchment to adopt a section of a river, or possibly both the catchment and the river (in the school vicinity). Specific river and catchment health parameters are monitored and analyzed, and the results publicized in the local media. The monitoring might be based simply on visual observations of the river to more elaborate water quality monitoring using sampling and testing equipment. In some cases senior students are trained in water quality monitoring so that the results can be incorporated into the local agency's water quality assessment program. The program has been so successful in Australia such that virtually all schools now have private sponsorship to cover the costs of the program.
- The concept of 'model river towns' has been introduced in Australia and Malaysia. In Australia, a series of 'best practice' principles have been developed to address water supply efficiency and demand management, wastewater discharge, stormwater runoff management, solid waste disposal, river bank vegetation, stream bed and bank protection and so on, and the towns along the river system are rated for innovation and compliance with performance criteria. The results are widely publicized and those towns/villages that receive a high rating are allowed to display reward signs.
- Awareness raising among farmers, irrigators and waste dischargers should include practical field measures and programs for improved resource management in addition to the conventional reporting and information exchange.
- Farmer and town groups form 'Landcare' or 'Rivercare' groups to collectively address particular problems within a relatively small area - of the order of about 20 farmers and a few small villages. With technical help from the agencies, 'Landcare' groups would prepare natural resource rehabilitation and resource use efficiency plans based on the particular problems in their areas. A number of these plans - say 5 to 10 - can be compiled to create a larger 'watershed management plan'.
- 'Rivercare' is a similar program but is focused more on the river rather than the whole catchment or groundwater units as with the Landcare initiative. In this case, a group of water users adopt a length of the river system and with technical help from the agencies, undertake river bank restoration to improve the bank and vegetation conditions. This program closely resembles the Village Environmental Action Plans mentioned earlier. At an annual conference, results were compared and awards presented by the Premier of the state which attracted significant media attention.

What Have We Learnt in Australia

The main lessons we have learnt in Australia is that to achieve successful watershed management at the 'local level' a number of issues must be considered.,

- The institutional or organisational structure for the local community/farmer group that is to 'manage' the watershed issues, must be appropriate for the particular watershed - there is no 'magic solution' that fits all cases; each case must fit the circumstances,
- The technical agencies must be able to help the watershed group with good quality information that is presented in easily understandable form,
- In some cases the government agencies might be best to chair or 'drive' the groups/committees but in most cases, the community leaders want to do this job, and provided the person is a good chairperson, this is the best solution - it helps 'force' the local community to 'own' their own problems,
- There must be a clear written mandate for all watershed related committees that gives them power and authority, and clearly spells out their role, functions and responsibilities,
- Don't allow the government agencies to totally control the process; there must be a partnership between the village/farming/rural communities, and the government agencies, for participative watershed management to work effectively but in some cases this is difficult for the agencies to 'come to grips with' after basically decades of telling the water users and farmers what do. 'Partnerships' are difficult things to develop as 'trust' must underpin them - and in many countries this has still to develop between community groups and agencies - but successful partnerships achieve much more in water shed management as it creates a real 'ownership' of the problems by the local community.
- There must be a process whereby one watershed group can interact with neighbouring groups or committees; there is much to learn from the experiences of others, including the problems of one or more groups that might impact on another,
- The awareness of the community on the problems and solutions for the watershed issues problems natural must be lifted through specific and targeted 'community awareness programs'. This process started in 1980 in Australia and it took a decade before the broader community began to understand the full range and complexity of the watershed problems that they faced, and before they could make sound contributions to watershed management. The sooner that awareness programs are commenced for all levels from schools/villages upward, the sooner that effective, participative watershed management will occur,
- But there is no need to wait until the knowledge and awareness of the community has been raised to start a formal community led process of watershed management. Start the community groups early but do not set targets or expectations too high for the first 5 years or so.



List of Participants



List of Participants

Cambodia

Chea Sam Ang

Deputy Director of Forestry Administration
Ministry of Agriculture, Forestry and Fisheries

Chay Sakun

Deputy Director, Department of Planning -
Statistic and International Cooperation
Ministry of Agriculture, Forestry and Fisheries

Theng Tara

Director, Department of Water Resources
Management & Conservation
Ministry of Water Resources and Meteorology

Chay Samith

Director, Department of Nature Conservation and
Protection
Ministry of Environment

Teang Sokhom

Deputy Chief of Watershed and Land Office
Ministry of Agriculture, Forestry and Fisheries

Sok Khom

Programme Officer
Cambodia National Mekong Committee

Sok Vong

National Programme Coordinator, Cambodia
Mekong Wetlands Biodiversity Programme
(MWBWP) - IUCN

Min Bunnara

Country Liaison Officer
MRC GTZ Cooperation Programme

Lao PDR

H.E. Mr. Sitaheng Rasphone

Vice-Minister of Agriculture and Forestry, Vice
Chairman of Lao National Mekong Committee,
Member of the MRC Joint Committee for Lao PDR
Ministry of Agriculture and Forestry /Prime
Minister's Office

Bounkoug Souvannaphanh

Acting Director General of Department of
Planning
Ministry of Agriculture and Forestry

Sourasay Phoumavong

Deputy Director
Lao National Mekong Committee, Prime Minister's
Office

Somnouk Chanthaseth

Deputy Head of Technical Division, Irrigation
Department
Ministry of Agriculture and Forestry

Oloth Sengtahouanghung

Head of Soil Survey and Land Classification
Centre, National Agriculture, Forestry Research
Institute, Ministry of Agriculture and Forestry

Dethkhamhanh Inthisone

Technical Staff
Prime Minister's Office

Florian Rock

Team Leader
GTZ - Land Management Project

Peter John Meynell

Team Leader
Mekong Wetlands Biodiversity Programme
(MWBWP) - IUCN

Sengkham Inthiratvongsy

Country Liaison Officer
MRC GTZ Cooperation Programme

Mekong River Commission Secretariat (MRCS)

Olivier Cogels
Chief Executive Officer

Navuth Te
Division Director, Technical Support Division

Tu Dao Trong
Division Director, Operations Division

Manfred Staab
Senior River Basin Planner, Basin Development Plan

Choomjet Karnjanakesorn
Team Leader, Water Utilisation Programme

John Metzger
Management Advisor, Water Utilisation Programme

Worawan Sukraroeck
Programme Officer, Environmental Programme

Muanpong Juntopas
Socio - Economist, Basin Development Plan

Okudaira Hiroshi
Programme Officer, Agriculture, Irrigation and Forestry Programme

Minh Cao Tuan
Programme Officer, Agriculture, Irrigation and Forestry Programme

Bac Le Thanh
Junior Riparian Professional

Oudomsack Pilavong
Junior Riparian Professional

Vitoon Viriyasakultorn
Programme Coordinator, Agriculture, Irrigation and Forestry Programme

Cornelis van Tuyll
Programme Coordinator
MRC GTZ Cooperation Programme

Christoph Feldkoetter
Technical Adviser
MRC GTZ Cooperation Programme

Thailand

San Khemprasi
Chief Engineer
Department of Water Resources, Ministry of Natural Resources and Environment

Nipon Tangtham
Advisor to Thai National Working Group (TNWG)

Pakawan Chufamane
Director of Mekong Affairs branch
Department of Water Resources, Ministry of Natural Resources and Environment

Peerapong Sriprasert
Director of Coordination/Administration on Watershed Management
Office of Water Resources Region 3, Udon Thani

Prasit Warnset
Member of Sub-river Basin 5T, Division Director of River Basin Management / Coordination
Office of Water Resources Region 3, Khon Kaen

Sarutcha Suriyakul na Ayutthya
Chairman of Sub-river Basin Area 2T
Payao Provincial Natural Resources and Environment Conservation Office, Office of Permanent Secretary (MONRE)

Somchai Tasinga
Office of Natural Resources and Environmental Policy and Planning, Thailand
Mekong Wetlands Biodiversity Programme (MWBP) - IUCN

Jira Jintanugool
Chair of National Wetland Technical working group, Thailand
Mekong Wetlands Biodiversity Programme (MWBP) - IUCN

Thawatchai Rattanasorn
National Programme Coordinator, Thailand
Mekong Wetlands Biodiversity Programme (MWBP) - IUCN

List of Participants

Samruay Laejabok

Country Liaison Officer + Office Manager
MRC GTZ Cooperation Programme

Viet Nam

Nguyen Thi Thu Linh

Programme Officer
Viet Nam National Mekong Committee

Nguyen Ba Ngai

Head of Science Management and International
Cooperation Division
Viet Nam Forestry University

Nguyen Hong Toan

Secretary-General
Viet Nam National Mekong Committee

Duong Thanh Tuong

Vice Chairman
Dak Lak People's Committee

Vu Minh Duc

Deputy Director, Water Resource Sub-Department
Dept. of Agriculture and Rural Development of
Dak Lak

Hoang Minh Son

Legislation Officer
Viet Nam Environment Protection Agency (VEPA)

Pham Dang Hung

Program officer
Department of Forestry

Pham Thi Thuy Co

Country Liaison Officer + Office Manager
MRC GTZ Cooperation Programme

InWEnt

Wolfgang Zimmermann

Head of Rural Development, Food and Consumer
Production

Lueder Cammann

Senior Project Manager

Other Guests

Peter Millington

Facilitator
Former Deputy President and Commissioner,
Murray Darling Basin Commission, and Former
Director General, NSW (Australia) Department of
Water Resources

Christoph Backhaus

Moderator

Ian Makin

Asian Development Bank

Chris Wensley

Asian Development Bank

Supported by



Mekong River Commission (MRC)
Agriculture, Irrigation and Forestry Programme (AIFP)

InWEnt
Capacity Building International, Germany

Deutsche Gesellschaft für Technische Zusammenarbeit
(GTZ) GmbH
Watershed Management Project (WSMP)

Agriculture, Irrigation and Forestry Programme
Watershed Management Project (WSMP)

c/o Mekong River Commission Secretariat
P.O. Box 3802
Vientiane
Lao PDR

Phone: (856) 21 263263 ext. 4076
Fax: (856) 21 263263 ext. 4077
Email: wsm@mrckmekong.org