C. Project Sub-Basin Selection Process: water forum approach

This section is composed of two parts. The first presents recommendations made by the author prior to the convening of the project Water Forum events, while the second tries to briefly capture some key aspects of the actual outcome of those events and the resulting pilot sub-basin selection process.

1. Recommendations for water forum process

As the author understood at the time, the Water Forum approach was planned as the primary vehicle for providing a platform for more public participation in the process of pilot sub-basin selection. These were planned to be large one-day events where many local leaders from each Ping sub-basin were being invited to participate. Thus, given the scale and short duration of this event-oriented process, the author proposed that there were at least five essential component phases of Water Forum-related activity, as diagrammed in Figure 2-63, that require some rather careful consideration:

(a) Preparation of proposed processes and considerations

Preparations for the Water Forum included consideration of some combination of criteria and indicators proposed in the author's inception report, and/or proposed by Panya consultants, as well as collection and processing of relevant data, and hopefully nomination of at least two suggested candidate sub-basins for each of the lower, middle and upper sub-basin groupings in the Ping Basin. Collaboration was suggested in developing an approach for clearly articulating the reason for, and the nature of activities conducted to prepare for the Forum, the informing (not predeterming) role of quantitative criteria and indicators, and the role of the Forum itself. This appeared to be in line with basic processes proposed by Panya staff and concurred to by this author.

#### *(b) Communication of proposed processes and considerations*

After articulating the overall purpose of this project and its pilot sub-basin approach, the next objective of activities at the Forum itself should be to clearly and effectively communicate our perceptions of the pilot sub-basin selection process, and our approach to using systematic criteria and indicators as a decision-making aid. Visual aids that should be able to help facilitate this communication process could include: (a) large poster-size printouts of clearly color coded spatial data layers used to evaluate indicators; and (b) large printouts of data calculation tables, such as those shown in this report, or perhaps more simplified versions that still communicate essential features of the assessment process. Ideally these visual aids should be placed where they can be easily viewed during discussions and referenced by speakers, rather than off in a corner where they can only be seen during coffee breaks. Smaller copies can be included in handout briefing books. Time should also be budgeted to field questions of clarification from forum participants.

(c) Solicitation of feedback, additional information and alternative points of view

The next objective should be to genuinely solicit feedback on our approach to sub-basin selection, the nature and utility (or not) of the criteria and indicators employed, and sources, adequacy, and accuracy of data used in this process. Caution sometimes needs to be taken to prevent such events from degenerating into a soapbox for long diatribes from various disenchanted and/or egocentric folks who love microphones. Indeed, depending on the size of the gathering and nature of the participants, it may be more useful to break into smaller discussion groups than to try to gain feedback through large plenary sessions, although time and logistic considerations may be additional constraints on this approach. If smaller discussion groups are used, each should have some relatively clear objectives that they try to achieve, and facilitators should try to see that participation is as inclusive as possible. The process should also place emphasis on soliciting additional information that could help further strengthen assessments (such as additional information about local network experience, for example).

And, there should also be adequate "space" for alternative points of view – especially if they can offer constructive proposals for how to alter or improve the sub-basin selection approach. For ex-

Figure 2-63. Flow of the planned participatory sub-basin selection process
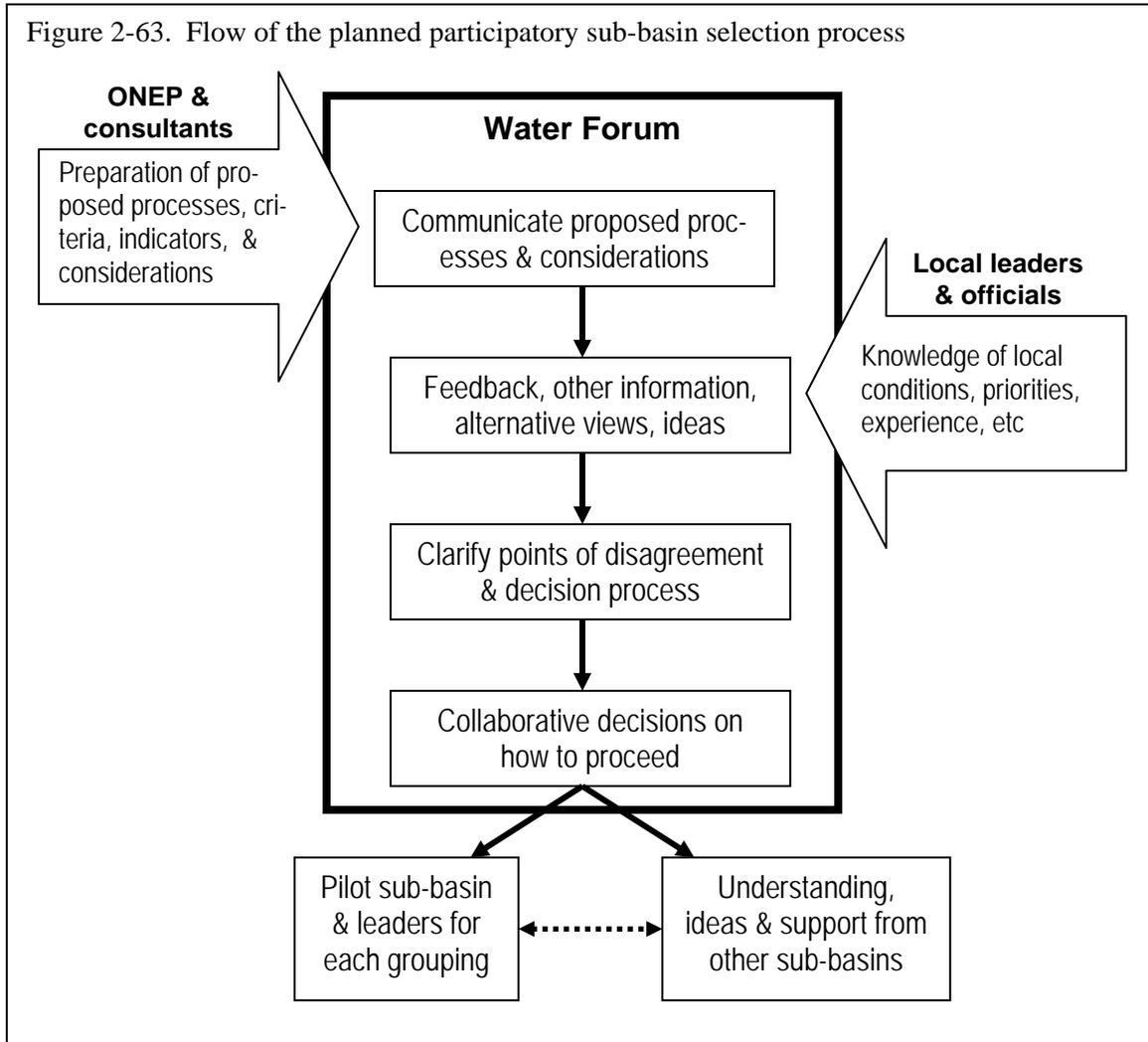
ample, with some gatherings it would not be inconceivable that an effective and innovative leader might propose a far more intuitive approach to sub-basin selection that could rapidly gain broader support from Ping Basin stakeholders than the more analytical approach taken by people such as ourselves. Moreover, there may be a brilliant line of argument about why one of the sub-basins not on our candidate list should be selected.

(d) Clarification and discussion of any points of disagreement

As a result of these discussions and deliberations, there may be particular interpretations or points of disagreement that warrant further clarification and/or at least limited discussion across the broader group of participants. This phase is important for setting the stage for decisions to be made about sub-basin selection and future actions, so it is important to defuse any trends toward either cynicism or major confrontation, even if some factions just have to agree to disagree with each other.

(e) Collaborative decisions on how to proceed

The first and most obvious objective of this phase is to reach a decision on sub-basin selection. If possible, it would clearly be best if there is at least a substantial enough majority consensus that a final decision can be made "on the spot" at the Forum itself. If further considerations must be submitted to people in distant places beyond the Ping Basin before a final decision can be made at some future date, it will substantially detract from the perception (even if not from the reality) of participation in and ownership of the decision-making process, and possibly ping the project itself.

The second very important objective here should be to try to mobilize widespread support for the pilot sub-basin project, even among people in sub-basins that are not selected. Some of these areas are likely to have substantial relevant experience that could be a valuable resource for pilot areas.

Moreover, all sub-basins should be encouraged to continue or start building networks and other types of activities that can provide a foundation for rapid progress during the subsequent expansion phase of Ping Basin management activities. Indeed, the use of newsletters, web pages or other approaches to communicating progress and issues at pilot sub-basins as the project progresses may be a valuable investment to help build momentum for spin-offs and expansion of project activities.

2. Implementation and outcome of the water forum process

The actual Water Forum events were organized at two major venues. The first was held on 10 March 2005 in Kamphaengphet for lower Ping sub-basins, while the second was held on 14 March 2005 in Chiang Mai for middle and upper sub-basins. In organizing these events, ONEP and Panya Consultants agreed to classification of sub-basins into lower, middle and upper groupings following the logic proposed by the author and presented earlier in this report.[12] Total numbers of different types of participants in these events are indicated in Figure 2-64.

Figure 2-64. Number of participants in Water Forum events for pilot sub-basin selection

Participants	Lower Ping (Number)	Upper Ping (Number)
Representatives of central government agencies	13	15
Representatives of provincial agencies	43	44
Representatives of district agencies	12	14
Representatives of local administration heads & members	83	174
Representatives of farmers/sub-basins	28	36
NGOs, Independent Experts, Media	3	28
Project Steering committee	10	12
Total	192	323

Source: Panya Consultants, Progress Report 1

What is not reflected in the numbers in Figure 2-62, however, is the fairly disproportionate number of participants representing each sub-basin. This was to be expected, of course, because of the differences in accessibility according to the difficulty and time for travel to the meeting venue.

As mentioned earlier in this report, the approach that ONEP, this author, and Panya staff had all taken in preparing for sub-basin selection reflected a very technocratic approach that assumes decision making will be based on the types of quantitative evidence used in formulating criteria and indicators. At the Water Forum events, senior consultants from Panya presented a set of criteria and indicators that was a composite of their own work combined with some simplified elements of the criteria and indicators presented in the previous sections of this report. Presentations included recommendations for some candidate sub-basins, but they tried to make it clear that the floor was open for consideration of any sites. The floor was then opened for questions, discussion and general debate on sub-basin selection, and at the Chiang Mai venue there was a split into separate groups for middle and upper groupings of sub-basins.

In retrospect, the process that followed in all three sub-basin groupings was probably inevitable given the size and formality of the meeting, as well as the types of activities that had previously been conducted at similar levels under emerging efforts to develop river basin management organization in Thailand.

The main outcome was that the meeting soon developed into a competition for sub-basin selection, which was, no doubt at least partly due to perceptions that significant financial resources might be flowing into selected sub-basins. This type of thinking had been further stimulated by perceptions

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[12] Various project-associated technocrats and consultants initially opposed this approach because it differed from previous practices and they believed local people would find it too difficult to understand. After careful review, however, senior Panya and ONEP staff concurred in the logic, and approved the approach. We all found it very interesting that people from the various sub-basins understood the approach very quickly, and had far less difficulty understanding it than had been the case for various officials and technocrats.

of the implications of World Bank involvement in the project, as well as by very recent pronouncements by Thai government leaders that major resources were going to be channeled into river basin restoration and development.

As a result, the technocratic approach soon faded into the background, although speakers arguing for one sub-basin or another would often include references to particular indicator data that supported their argument. Faction-based (*pak puak*) blocks began to form, and it soon became clear that a reasoned compromise outcome would be unlikely. Thus, calls for a direct vote soon emerged. And, since there was no previously agreed upon basis for how representation should be reflected in voting, most all participants were allowed to cast a vote. While the voting process was transparent, it was biased by the disproportionate presence of people from different sub-basins. This was further amplified by the departure of representatives from some more remote sub-basins (such as Mae Chaem, for example) as soon as the direction the process was taking became clear. Thus, the extremely high correlation between the three sub-basins that were selected and their accessibility to the venue should be no surprise.

That being said, consultant staff from Panya did make an effort to disaggregate numbers of voting participants and compare that with the outcome of the voting process. And it was quite interesting that the total number of votes cast for the "winning" sub-basins was far higher than the number of participants from that sub-basin who were voting. So there is evidence that at least a significant number of participants did vote for a sub-basin other than their own. We can only speculate, however, about their reasons for doing so.

It is also very interesting to look at the outcome of sub-basin selection in comparison with the outcome of application of technocratic quantitative criteria and indicators as developed by this author and by Panya Consultants. The outcome of the basically political process that captured decision-making at the Water Forum events resulted in:

> *Upper Sub-Basin*: Ping Part 1
> *Middle Sub-Basin*: Mae Kuang (including Mae Tha)
> *Lower Sub-Basin*: Ping Part 5 (Lower Ping)

These results are virtually identical with leading candidate sites proposed by Panya. Moreover, leading sub-basin scores derived from this author's calculations – as detailed in this report – gave the same results for upper and lower sub-basin groups, while the selected middle sub-basin had the second highest score in that group (see Figure 2-61).

While it is difficult to know what conclusions to draw from this outcome, it is apparent at least that there is no bottom-line discrepancy between selection of sub-basins at the Water Forum events and selection that would have followed from use of the more technocratic quantitative approaches.

At the same time, however, it is important to note the nature of processes that currently occur at the level of river basin hierarchy at which the Water Forum events were held. There is currently still a quite apparent lack of common identity and purpose, as well as comfort with and ability to engaged in clearly reasoned, evidence-based negotiation processes.

Summary of Suggestions and Recommendations in Part II:

1. Priority or 'pilot' sub-basins should be selected in full consultation with local leaders in all sub-basins, with a clear understanding that ALL sub-basins will receive support for their efforts to build participatory management organizations after the pilot phase.

2. Technical criteria used to support 'pilot' sub-basin selection should be pragmatic, able to use data from readily available secondary sources, easy to implement quickly, & simple enough to be communicated to a wide range of river basin stakeholders. They also need to be clearly linked with major issues, logically sound, & reasonably quantitative.

3. Categorization of lower, middle & upper groups of sub-basins in the Ping Basin should be based on their bias toward lowland or upland conditions, using relative proportions of their area in lowland, midland & highland altitude zones, as in Indicator 1.1.

4. The range of relevant stakeholder & institutional interests then needs to be assessed according to sub-basins & sub-basin groups. Key sets of stakeholders for the Ping Basin should include: (a) central government agencies; (b) local administrations; (c) forestry agencies & policies; (d) agriculture of various types; (e) private business; (f) urban centers; (g) local government; and (h) civil society & academia. A diagrammatic framework for stakeholder relationships is proposed in Figure 2-23, & discussions of stakeholders are in section II.B.2.

5. Data to help this analysis become more quantitative should be derived from village-based data sources such as กชช.2ค linked with GIS, so that they can be aggregated at sub-basin & sub-basin category levels.

6. A minimum set of quantitative criteria for selection of a pilot sub-basin within each group of sub-basins needs to include at least three major categories. The proposed logic for developing specific sub-criteria & quantitative indicators is summarized in Figure 2-24.

   • <u>Severity of natural resource issues</u>: Selected sub-basins should include conditions making it likely that issues will arise related to forest & land degradation, natural hazards, & water use. Sub-criteria & indicator details are in section II.B.4.

     Available data needed to quantitatively assess these indicators should be improved in several key areas: (a) designation of areas as deteriorated forest; (b) soil erosion; (c) landslide risk; (d) flash flood risk; and (e) areas under sprinkler or small-scale pump irrigation. Sources of data on groundwater & stream flow need to be more transparent.

   • <u>Severity of socio-economic issues</u>: Selected sub-basins should include areas where poverty & health problems are relatively high, where land use is restricted & conflict is likely, & areas where upland minorities and/or urban populations play significant roles. Sub-criteria & indicator details are in section II.B.5.

     Available data needed to quantitatively assess these indicators should be improved in several key areas: (a) village-level income data by type of source; (b) Community Development Department indices are needed for the entire river basin in a spatial format; (c) up-to-date protected area boundaries that include newly declared areas; (d) better classification of agriculture areas, especially in mountain zones; (e) access to more recent data on ethnicity; (f) more clear & consistent urban population data; (f) better data on water quality & existing & planned wastewater treatment facilities; (g) better data on pesticide residues, & illness linked with water quality, air quality & toxic wastes; and (h) additional health data should be made available on a village-level basis.

   • <u>Local organizational capacity and administrative complexity</u>. Selected sub-basins should have reasonable levels of local organizational capacities & relevant skills, but avoid areas where excessive administrative complexity may prevent adequate testing of model approaches within the project timeframe. Sub-criteria & indicator details are in section II.B.6.

Available data needed to quantitatively assess these indicators should be improved in several key areas: (a) data on the existence, status & effectiveness of local networks and/or other *prachakhom* organizations related to natural resource management within sub-basins; (b) data on the nature & coverage of emerging alliances & federations of relevant types of networks; (c) data on presence & nature of support for local organizations & networks provided by NGOs and/or government agencies; (d) Community Development Department indices are needed for the entire river basin in a spatial format; (e) improved consistency of data on local knowledge specialists; (f) improved information on difficulty of coordination among administrative units at different levels.

7. Relative weights applied to reflect the importance of different criteria & indicators in the context of a particular analysis need to be assigned in a transparent manner. This will help them to be clearly understood, and allow them to be adjusted to reflect different experience, expert opinion, or consensus.

8. A proposed rationale for assigning relative weights is explained in section II.B.7.(c)., along with results of indicator calculations using these weights. Assignments of sub-basin rankings based on these calculations are displayed in Figure 2-61.

9. Given the importance of village-level data in assessing sub-basin characteristics & patterns of diversity, a few suggestions are made for ways to improved กชช.2ค data:

   • Data entry & screening checks need to be improved to prevent some of the obvious errors & inconsistencies that are present in a minority of database records.

   • Data on local knowledge specialists can be improved by adjusting the questionnaire to more clearly explain definitions & criteria for identifying local specialists.

   • Data on education could be greatly improved by re-writing questions in a manner that can be clearly understood by local leaders providing the information, and by having cross-checks on demographic data to assure consistency.

10. In conducting pilot sub-basin selection using a 'Water Forum' approach, five essential component phases of activity are proposed (as summarized in Figure 2-62):

   • A preparation phase should include careful consideration of technical criteria & indicators (such as those in this report or others), and clear articulation of (a) the reason for & nature of activities conducted to prepare for the forum; (b) the informing (not predetermining) role of quantitative criteria & indicators; and (c) the role of the Forum itself.

   • The Forum should begin with clear articulation of the above information, followed by clear explanation of proposed quantitative criteria & indicators and their potential use as a decision-making aid, including appropriate visual aids to facilitate understanding of the data & calculations.

   • The next phase should center on soliciting feedback, additional information, and alternative points of view from stakeholders represented in the Water Forum, using smaller discussion groups if necessary.

   • Effort should then be shifted to clarification of major views, interpretations or disagreements, in order to set the stage for a constructive decision-making process.

   • The final phase should center on reaching a decision on sub-basin selection, and on mobilizing widespread support for the pilot project among representatives from all sub-basins in the river basin, including encouragement for further efforts throughout the river basin to continue building networks or other activities that can provide a foundation for rapid progress during subsequent expansion.

11. Future river basin-level activities, or those involving multiple sub-basins, such as a 'Water Forum' should prepare for the likely lack of common identity & purpose that can be achieved at that level, as well as associated difficulty in engaging in clearly reasoned, evidence-based processes. It seems unlikely that this situation will be able to improve until such processes can first be achieved at sub-basin levels.

III. Management Organizations for Ping River Sub-basins

After the pilot sub-basin selection process was completed, the author's next assignment was to work on development of organizational models for sub-basin management organizations that could be tested within pilot sub-basins. Thus, while the Panya Consultants group began gathering more detailed information in pilot sub-basin areas, the author engaged in work on organizational models the findings of which are reported in this part of the report.

A. International Experience with River Basin Management Organizations

As an introduction, this first section surveys various international trends toward integrated river basin management, reviews some of the most recent comparative international literature on river basin organizations, and summarizes some of the major implications for RBO development. This sets the stage for following sections that examine contextual factors and trends at the sub-basin level in Ping River basin, discuss implications for structural considerations for sub-basin organizations, and propose an indicative array of RSBO organizational models for selection and adaptation through participatory processes. The final section discusses the process through which RSBOs can be established and developed in pilot sub-basins.

1. Movement toward integrated river basin management

Various elements of water management at river basin levels have existed in parts of the world since ancient times. Infrastructure and social organization associated with these efforts have waxed and waned through the centuries. Indeed, some of the existing organizations that we now recognize as river basin organizations were established during the early 20th century, although many of these are now undergoing various types of reform and re-engineering as they seek to adjust to changing conditions.

One important aspect of these changing conditions is a new wave of global interest in updating and broadening concepts associated with integrated watershed and river basin management, which is now also spawning a new generation of river basin organizations around the world. Many of the major ideas and concepts being employed in these efforts are reflected in events that have led to international agreements and institutional policy reforms, as well as in the emergence of various types of regional and global civil society organizations offering support functions facilitated through the internet.

(a) Intergovernmental agreements and institutional policy reform

The current large surge in interest in integrated watershed management at the river basin level began in 1992 with the twin events of the Dublin Conference on Water and the Environment and the United Nations Rio de Janeiro Conference on Environment and Development. The four key guiding principles formulated in Dublin and accepted in Rio are displayed in Figure 3-1.

These principles reflected the judgment that a more comprehensive approach to water management is necessary for sustainable development. This awareness, together with the need for participatory institutional mechanisms to involve all sectors of society in decision-making processes, called for new coordinating mechanisms, and a substantial range of institutions throughout the world began responding. Among the first were the European Union and the international development banks.

Figure 3-1.

Dublin Statement Principles

GUIDING PRINCIPLES

Concerted action is needed to reverse the present trends of over consumption, pollution, and rising threats from drought and floods. The Conference Report sets out recommendations for action at local, national and international levels, based on four guiding principles.

Principle No. 1 - Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment

Since water sustains life, effective management of water resources demands a holistic approach, linking social and economic development with protection of natural ecosystems. Effective management links land and water uses across the whole of a catchment area or groundwater aquifer.

Principle No. 2 - Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels

The participatory approach involves raising awareness of the importance of water among policy-makers and the general public. It means that decisions are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects.

Principle No. 3 - Women play a central part in the provision, management and safeguarding of water

This pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources. Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them.

Principle No. 4 - Water has an economic value in all its competing uses and should be recognized as an economic good

Within this principle, it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.

Source: Global Water Partnership: www.gwpforum.org

EU Water Framework Directive[13]

In the wake of the Dublin and Rio de Janeiro conferences, pressure for a fundamental rethink of water policy in the European Community came to a head in mid-1995: The European Commission, which had already been considering the need for a more global approach to water policy, accepted requests from the European Parliament's environment committee and from the Council of environment ministers. The Communication was formally addressed to the Council and the European Parliament, but also invited comment from all interested parties, such as local and regional authorities, water users and non-governmental organizations (NGOs). Various organizations and individuals responded in writing, with most comments welcoming the broad outline given by the Commission. A two day Water Conference was then hosted in May 1996, which was attended by some 250 delegates, including representatives of Member States, regional and local authorities, enforcement agencies, water providers, industry, and agriculture, as well as consumers and environmentalists.

The outcome of the consultation process was a widespread consensus that, while considerable progress had been made in tackling individual issues, the current water policy was fragmented, in terms both of objectives and of means. All parties agreed on the need for a single piece of framework legislation to resolve these problems. In response to this, the Commission presented a Proposal for a Water Framework Directive with the following key aims:

- water management based on river basins
- expanding the scope of water protection to all waters, surface waters and groundwater

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[13] See www.europa.eu.int/comm/environment/water/water-framework/index_en.html

- getting citizens involved more closely
- achieving "good status" for all waters by a set deadline
- "combined approach" of emission limit values and quality standards
- getting the prices right
- streamlining legislation

The directive specifies a single system of water management: River basin management. This was seen as a better model than administrative or political boundaries. Initiatives in Maas, Schelde and Rhine river basins served as positive examples of this approach. Management is to include:

- The river basin management plan. For each river basin, some of which traverse national frontiers - a "river basin management plan" will be established and updated every six years, and will provide the context for co-ordination requirements. The plan is a detailed account of how the objectives set for the river basin (ecological status, quantitative status, chemical status and protected area objectives) are to be reached within the timescale required. The plan will include all the results of analysis: the river basin's characteristics, a review of the impact of human activity on the status of waters in the basin, estimation of the effect of existing legislation and the remaining "gap" to meeting these objectives; and a set of measures designed to fill the gap. An economic analysis of water use within the river basin must also be carried out, in order to enable a rational discussion on the cost-effectiveness of various possible measures. It is essential that all interested parties are fully involved in this discussion, and indeed in the preparation of the river basin management plan as a whole.

- Public participation. In getting EU waters clean, the role of citizens and citizens' groups is viewed as crucial. There are two main reasons for an extension of public participation.

  The first is that decisions on the most appropriate measures to achieve objectives in the river basin management plan will involve balancing the interests of various groups. Economic analysis is intended to provide a rational basis for this, but it is essential that the process is open to the scrutiny of those who will be affected.

  The second reason concerns enforceability. The greater the transparency in establishing objectives, imposing measures, and reporting standards, the greater the care Member States will take to implement the legislation in good faith, and the greater the power of the citizens to influence the direction of environmental protection, whether through consultation or through complaints procedures and the courts. Care of Europe's waters will require more involvement of citizens, interested parties, non-governmental organizations (NGOs), so the directive requires full disclosure of information and consultation when river basin management plans are established. Furthermore, a biannual conference provides for a regular exchange of views and experiences in implementation, and a network for exchange of information and experience between water professionals throughout the Community.

World Bank policy reform

The World Bank responded within the first year following the Dublin and Rio conferences by publishing a new policy paper on water resources management [World Bank 1993]. It proposed a new approach to managing water resources that is to 'build on the lessons of experience'. At its core is the adoption of a comprehensive policy framework and the treatment of water as an economic good, combined with decentralized management and delivery structures, greater reliance on pricing, and fuller participation by stakeholders.

The policy places emphasis on developing "a comprehensive framework of analyzing policies and options, to help guide decisions about managing water resources in countries where significant problems exist, or are emerging, concerning the scarcity of water, the efficiency of service, the allocation of water, or environmental damage…*The framework would facilitate the consideration of relationships between the ecosystem and socioeconomic activities in river basins. The analysis should take account of social, environmental, and economic objectives; evaluate the status of water resources within each basin; and assess the level and composition of projected demand. Special attention will be given to the view of all stakeholders*". (emphasis added)

"The results of analyses at a river basin level would become part of the national strategy for water resource management. The analytical framework would provide the underpinnings for formulating public policies on regulations, incentives, public investment plans, and environmental protection and on the inter-linkages among them. It would establish the parameters, ground rules, and price signals for decentralized implementation by government agencies and the private sector. Decentralizing the delivery of water services and adopting pricing that induces efficient use of water are key elements of sound water resource management. But, for decentralized management to be effective, a supportive legal framework and adequate regulatory capacity are required, as well as a system of water charges to endow water entities with operational and financial autonomy for efficient and sustainable delivery of services". [World Bank 1993, p. 11]

The policy goes on to mandate inclusion in country policy dialogues and country assistance strategy formulations development of: (i) a national comprehensive analytical framework; (ii) institutional and regulatory systems; (iii) incentives; (iv) poverty alleviation; (v) decentralization; (vi) participation; (viii) health and environmental protection, including rural and agricultural pollution, urban and industrial pollution; groundwater protection and needs of water-dependent ecosystems; (ix) cooperative management of international resources [World Bank 1993, p. 67-76].

After nearly a decade of experience with this policy, the World Bank's Operations Evaluation Division conducted an independent evaluation of progress [Pitman 2002]. Findings from the study were a major feature in processes that led to a further articulation of World Bank policy in the form of a new water resources sector strategy document [World Bank 2004]. Among the 'messages' contained in this document is one that states, *The main management challenge is not a vision of integrated water resources management but a "pragmatic but principled" approach that respects principles of efficiency, equity and sustainability while recognizing that water resources management is intensely political and that reform requires the articulation of prioritized, sequenced, practical and patient interventions.* Another notes that the policy provides broad principles and not inflexible prescriptions, and that *What is appropriate in a particular country (or region) at a particular time will involve adaptation of these general principles to the specific economic, political, social, cultural and historical circumstances.*

Asian Development Bank policy reform

The regional development banks followed fairly similar approaches. Beginning in 1996, the Asian Development Bank (ADB) began convening regional water policy consultation workshops, which in 1997 and 1998 were held in collaboration with the Global Water Partnerships (see below). The ADB found that these consultations "demonstrated a sense of urgency among stakeholders to avoid a crisis of scarcity, pollution, and environmental degradation by adopting a more holistic and integrated approach to future investments in water and its management." They also revealed, "that institutional reforms are key to effectively addressing the technical, economic, social and environmental issues concerning water" [ADB 2001, p. 9-10]. ADB also acknowledged "broad global agreement on the approaches to improved water resources management", as indicated in the policy of the World Bank, the EU framework for water management, and the 1998 adoption by OECD of the integrated water resource management model in its analysis of the performance and challenges of water management in its member countries.

Accordingly, in 2001 the ADB published a new water policy document [ADB 2001]. Under the banner of "water for all", the policy's principal elements include:

(i) <u>Promote a national focus on water sector reform</u>. Developing member countries will be supported to adopt effective national water policies, water laws, and sector coordination arrangements; improve institutional capacities and information management; and develop a national action agenda for the water sector. Throughout, the needs of the poor will be specifically factored into legal, institutional, and administrative frameworks.

(ii) <u>Foster the integrated management of water resources</u>. Integrated management will be based on conducting comprehensive water resource assessments, and concentrating interlinked water investments in river basins.

(iii) <u>Improve and expand the delivery of water services</u>. Focusing on water supply and sanitation (both rural and urban), irrigation and drainage, and other subsectors, support will be provided for autonomous and accountable service providers, private sector participation, and public-private partnerships, emphasizing equity in access to water for the poor and underserved.

(iv) <u>Foster the conservation of water and increase system efficiencies</u>. Packages that combine water use and resource management charges to recover costs, improved regulation and increased public awareness, as well as provisions to ensure that the poor are not excluded, will be supported.

(v) <u>Promote regional cooperation and increase the mutually beneficial use of shared water resources within and between countries</u>. The primary focus will be on the exchange of information and experiences in water sector reform. Support will be provided to enhance awareness of the benefits of shared water resources, create sound hydrologic and socio-environmental databases relevant to the management of transboundary water resources, and implement joint projects between riparian countries.

(vi) <u>Facilitate the exchange of water sector information and experience</u>. Socially inclusive development principles will support and promote stakeholder consultation and participation at all levels, increase access to basic water services by poor consumers, and enhance water investments in the DMCs through public-private-community-NGO partnerships.

(vii) <u>Improve governance</u>. This will be accomplished by promoting decentralization, building capacity, and strengthening monitoring, evaluation, research, and learning at all levels, particularly in public sector institutions.

The policy also notes the approved ADB strategy for poverty reduction, and specifically provides for the involvement of the poor in water conservation and management. Since the specific needs and vulnerabilities of the poor are central in formulating sound and equitable water strategies, the poor must be enabled to influence decisions that affect their access to water for both consumptive and productive uses. The policy also notes the considerable potential for mobilizing community effort to directly contribute to pro-poor water development, and that knowledge bases of the water needs of the poor must be developed.

(b) Global and regional civil society organizations

With support from western countries, the World Bank, regional development banks, and other sources, a considerable range of new global and regional institutions have begun emerging to provide further support for integrated water resource management in river basin contexts. The following examples indicate how organizations are beginning to specialize at different levels, and build information and support to help meet the needs of various actors and stakeholders involved in these processes. One effect is a growing body of 'grey literature' that should not be ignored.

World Water Council[14]

The World Water Council seeks to be a global-level international water policy think tank dedicated to supporting the world water movement for improved management of the world's water resources and water services. In response to ideas discussed at the Dublin and Rio conferences, the International Water Resources Association organized a special session at its Eighth World Water Congress in Cairo during 1994, which resulted in a resolution to create the World Water Council. A founding committee was formed in 1995, and by 1996 the WWC was legally incorporated with its headquarters in Marseille, France. It has since organized a series of three World Water Forum events, and the fourth is to be held in Mexico during early 2006.

The mission of the Council is "to promote awareness, build political commitment and trigger action on critical water issues at all levels, including highest decision-making levels, to facilitate the effi-

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[14] http://www.worldwatercouncil.org

cient conservation, protection, development, planning, management and use of water in all its dimensions on an environmentally sustainable basis for the benefit of all life on earth". Council objectives are:

- To provide a platform for a common strategic vision on water resources and water services management on a sustainable basis, and to promote the implementation of effective policies and strategies worldwide;

- To provide advice and relevant information to institutions and decision-makers on the development and implementation of comprehensive pro-poor policies and strategies for sustainable water resources and water services management, with due respect for the environment, and social and gender equity;

- To contribute to the resolution of issues related to transboundary waters.

World Water Forum events are seen as leading movement from the World Water Vision (a prospective view of the future state of global water resources presented at the 2nd Forum) to establishment of concrete actions and commitments derived from the 3rd Forum. The 4th Forum will focus on achievement of water-related Millennium Development Goals, and the Council seeks to establish cooperation and coordination mechanisms to transform the global vision into concrete actions that integrate local knowledge.

The Council also claims to have had a strategic role in promoting and facilitating establishment of dialogues at basin, local and national levels, on crosscutting issues that were not sufficiently addressed, such as Water for Food and Environment, and Water and Climate. In 2001, the Council established a Panel on Financing Water Infrastructure, whose mandate is to look for new sources of funding for water to achieve the 2025 'water security' scenario of the World Water Vision. The WWC is also home for the *Water Policy* journal, but its cost limits worldwide access.

Global Water Partnership[15]

The Global Water Partnership seeks to help build a working partnership among all those involved in water management – government agencies, public institutions, private companies, professional organizations, development agencies and others committed to Dublin-Rio principles. This wide-ranging partnership seeks to identify critical knowledge needs at global, regional and national levels, help design programs for meeting these needs, and serve as a mechanism for alliance building and information exchange on integrated water resources management. The GWP's specific objectives are:

- Clearly establish principles of sustainable water resources management,

- Identify gaps and stimulate partners to meet key needs with available human and financial resources,

- Support action at the local, national, regional or river basin level that follows sustainable water resources management principles,

- Help match needs to available resources.

The range and directions of its interests are reflected in the web-based "ToolBox" that GWP is in the process of developing (see Figure 3-2). Although now mostly still in early stages of development, web pages contain definitions, descriptions, characteristics, lessons learned, references, links to other sources, *etc*. Figure 3-3 displays the initial information on river basin organization characteristics and lessons learned.

As a further indicator of the flavor of information from GWP, their website suggests that four things need to be done to do to make water governance more effective

- establish water policies, laws, regulatory framework; devolve decision-making, encourage better service delivery by autonomous public sector agencies and private sector operators.

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[15] http://www.gwpforum.org

- establish policies and institutional structures for managing river basins and aquifers and processes to overcome conflict over water allocation.

- facilitate realignment of economic and financial practices, including full cost pricing for water services - with appropriate mechanisms to protect the poor.

- establish with help of international partners mechanisms to strengthen river basin management, and transboundary water agreements allowing for equitable use of shared waters.

GWP-Southeast Asia[16]

In addition to its global activities and websites, the GWP is also developing regional-level platforms, including one in Southeast Asia. The GWP Southeast Asia Technical Advisory Committee (GWP-SEATAC), whose members are professionals from several countries, including Thailand, developed the document "Our Vision for Water in the 21st Century" as a Southeast Asia contribution to the Second World Water Forum and Ministerial Conference at The Hague, the Netherlands during 2000 [GWP-SEATAC 2000]. The document includes Southeast Asia's framework for action for a better water future, formulated to meet the foremost challenges facing the region, which are seen to be:

- Managing water resources efficiently and effectively

- Moving towards integrated river basin management

- Translating awareness to political will and capacities

- Moving towards adequate and affordable water services

Thailand has been an active participant in GWP activities in Southeast Asia, largely through the initiative of Dr. Apichart Anukularmphai and his colleagues, who were central in efforts

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[16] http://www.gwpseatac.org

Figure 3-2. *The GWP "ToolBox"*

A: THE ENABLING ENVIRONMENT
    A1. Policies setting goals for water use, protection & conservation.
        A1.1. Preparation of a National Water Resources Policy.
        A1.2. Policies with relation to water resources.
    A2. Legislation water policy translated into law.
        A2.1. Water rights.
        A2.2. Legislation for water quality.
        A2.3. Reform of existing legislation.
    A3. Financing & incentive structures - allocating financial resources.
        A3.1. Investment policies.
        A3.2. Public sector institutional reform.
        A3.3. Role of the private sector.
        A3.4. Cost recovery and charging policies.
        A3.5. Investment appraisal.

B: INSTITUTIONAL ROLES
    B1. Creating an organisational framework forms & functions.
        B1.1. Transboundary organisations for water resource mgmt.
        B1.2. National apex bodies.
        B1.3. River basin organisations.
        B1.4. Regulatory bodies and enforcement agencies.
        B1.5. Service providers and IWRM.
        B1.6. Civil society institutions & community based organisations.
        B1.7. Local authorities.
    B2. Institutional capacity building developing human resources.
        B2.1. Participatory capacity and empowerment.
        B2.2. IWRM capacity in water professionals.
        B2.3. Regulatory capacity.
        B2.4. Knowledge sharing.

C: MANAGEMENT INSTRUMENTS
    C1. Water resources assessment - understanding resources & needs.
        C1.1. Water resources knowledge base.
        C1.2. Water resources assessment.
        C1.3. Modelling in IWRM.
        C1.4. Developing water management indicators.
    C2. Plans for IWRM - options, resource use, human interaction.
        C2.1. River basin plans.
        C2.2. Risk assessment and management.
    C3. Demand management - using water more efficiently.
        C3.1. Improved efficiency of use.
        C3.2. Recycling and reuse.
        C3.3. Improved efficiency of water supply.
    C4. Social change instruments - water-oriented civil society.
        C4.1. Education curricula on water management.
        C4.2. Training of professionals.
        C4.3. Training of trainers.
        C4.4. Communication with stakeholders.
        C4.5. Water campaigns and awareness raising.
        C4.6. Broadening participation in water resources mgmt.
    C5. Conflict resolution - managing disputes & ensure water sharing.
        C5.1. Conflict management.
        C5.2. Shared vision planning.
        C5.3. Consensus building.
    C6. Regulatory instruments - allocation and water use limits.
        C6.1. Regulations for water quality.
        C6.2. Regulations for water quantity.
        C6.3. Regulations for water services.
        C6.4. Land use planning controls and nature protection.
    C7. Economic instruments - value & prices for efficiency & equity.
        C7.1. Pricing of water and water services.
        C7.2. Pollution charges.
        C7.3. Water markets and tradeable permits.
        C7.4. Subsidies and incentives.
    C8. Information management & exchange - improve knowledge.
        C8.1. Information management systems.
        C8.2. Data sharing - national and international.

Figure 3-3. From the GWP ToolBox: B1.04. River Basin Organizations

Characteristics

River basin organisations (RBOs) are specialised organisations set up by political authorities, or in response to stake-holder demands. RBOs deal with the water resource management issues in a river basin, a lake basin, or across an important aquifer. The focus here is the basin organisations that are domestic, not transcending state boundaries. River basin organisations provide a mechanism for ensuring that land use and needs are reflected in water manage-ment - and vice versa. Experience has varied dramatically in the ability of these organisations to achieve IWRM. Their functions vary from water allocation, resource management and planning, to education of basin communities, to devel-oping natural resources management strategies and programs of remediation of degraded lands and waterways. They may also play a role in consensus building, facilitation and conflict management (C5).

Recent innovation has focused on an integrated river basin management approach (IRBM), a subset of IWRM, and catchment management rather than single sector approaches. (See also C2.2 Basin management plans)
The form and role of a river basin organisation is closely linked to its historical and social context. Key characteristics of sustainable river basin management are:
- Basin-wide planning to balance all user needs for water resources & provide protection from related hazards;
- Wide public and stakeholder participation in decision-making, local empowerment (B2.1);
- Effective demand management (C3);
- Agreement on commitments within the basin, and mechanisms for monitoring those agreements;
- Adequate human and financial resources.
- Varying opinions exist about the most effective scale of application: the success of a river basin organisation may depend on such things as, the level of human and institutional capacity of the civil society, the degree to which water resources are developed, and climatic variability (arid versus temperate river basins, for example). The pol-icy and legislative framework will govern the purpose and effectiveness of the RBO.

Lessons learned

Experience shows that all RBOs evolve with time and see their composition and duties adapted from time to time re-flecting the real needs of the moment.   Successful river basin organisations are supported by:
- An ability to establish trusted technical competencies;
- A focus on serious recurrent problems such as flooding or drought or supply shortages, and the provision of solu-tions acceptable to all stakeholders;
- A broad stakeholder involvement, catering for grassroots participation at basin-wide level (*e.g.* water forums);
- An ability to generate some form of sustaining revenue;
- The capacity to collect fees, and attract grants and/or loans;
- Clear jurisdictional boundaries and appropriate powers.

to organize the First Southeast Asia Water Forum in Chiang Mai during 2003. The theme of that forum was 'conflict resolution and basin organizations'. It reaffirmed regional views on the need for both integrated water resource management and river basin organizations. Some of this effort now appears directed toward efforts of an ASEAN Working Group on Water Resource Manage-ment (AWGWRM) focusing on strengthening integrated water resource management in the region.

Network of Asian River Basin Organizations (NARBO)[17]

Acknowledging that integrated water resources management needed partnerships for action, and that such partnerships need support through knowledge sharing and capacity building, the Network of Asian River Basin Organizations (NARBO) was established to share knowledge and build ca-pacity for IWRM in river basins throughout monsoon areas of Asia. NARBO was jointly estab-lished in 2003 during the 3rd World Water Forum through a letter of intent signed by the ADB, the ADB Institute, and the Japan Water Agency (JWA). The network was officially launched during November 2003 at the 1st Southeast Asian Water Forum held in Chiang Mai, and its charter was ratified during its first general meeting in Indonesia during February 2004.

The goal of NARBO is to achieve integrated water resources management in river basins through-out Asia. Its objective is to strengthen the capacity and effectiveness of RBOs in promoting IWRM and improving water governance, through training and exchange of information and experiences

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[17] http://www.narbo.jp

among RBOs and their associated water sector agencies and knowledge partner organizations. Its scope of activities includes:

- Promoting advocacy, raising awareness, sharing information, good practices and lessons learned on IWRM through the NARBO web site, publications, case studies, electronic newsletter, guidelines and sourcebooks, and media relations.
- Supporting establishment of river basin organizations (RBOs).
- Supporting NARBO members to improve water governance for IWRM through capacity building of RBOs by training courses, workshops, performance benchmarking activities, advisory visits, scholarship programs, RBO exchange visits, staff exchange programs, and twinning programs.
- Building capacity of RBOs to implement IWRM through technical advice on planning, conservation, development, and the proper and efficient operation and maintenance of water resources facilities.
- Fostering regional cooperation for improved management of water resources in transboundary river basins.

As of January 2005, NARBO membership includes 12 River Basin Organizations (including the Bang Pakong River Basin in Thailand), 15 government organizations (including Thailand's Ministry of Natural Resources and Environment), 15 regional "knowledge partners" (including the Thailand Water Resources Association chaired by Dr. Apichart Anukulamphai), 3 inter-regional knowledge partners, and one multilateral development cooperation partner (ADB). Its website is managed by the Japan Water Agency in collaboration with ADB and the ADB Institute. The ADB Institute will also lead work on developing guidelines and sourcebook materials on IWRM practices and lessons learned, river basins in Asia, standards and manuals, and other topics of interest to be shared through website downloads and CDs, in collaboration with JWA, ADB, the International Water Management Institute, the Mekong River Commission, and other interested partners.

Training activities conducted thus far include the 1st NARBO training on IWRM held during 2004 in Thailand, a benchmarking workshop, and its 2nd IWRM training workshop held in Sri Lanka during April 2005. It also has held general meetings, initiated twinning arrangements, and plans the 3rd training course for November 2005 in Korea. It also plans to participate in the 2nd Southeast Asia Water Forum scheduled for August 2005 in Indonesia.

2. Recent international literature on river basin organizations

This section introduces key recent international literature on river basin organizations of a more conventional nature by first presenting a very brief picture of recent trends in international river basin literature, followed by a focus on findings from some very recent major reviews and comparative studies of river basin organizations supported by the World Bank.

(a) Recent trends in international literature

Given the policies, resources and human effort being directed toward these worldwide efforts to promote integrated water resources management through river basin organizations, it should not be surprising that it is also leading to a very rapid growth in the literature associated with these subjects. As might be expected, much of this literature has been generated by research staff based in development banks and their networks of associates, including key centers of the Consultative Group for International Agricultural Research (CGIAR)[18] now operating under the Future Harvest banner, and especially the International Water Management Institute (IWMI)[19], the International Food Policy Research Institute (IFPRI)[20], and their academic colleagues. Indeed, internationally funded initiatives such as the CGIAR system-wide Food and Water Challenge Programme are likely to further stimulate research activity generating such literature.

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[18] See www.cgiar.org
[19] See www.iwmi.org
[20] See www.ifpri.org

Given the relatively limited access that this author has to more conventional repositories of international literature, which increasingly reside in ever more expensive journals and books published in major centers in developed western countries, this section is based primarily on literature that is available in the public domain and accessible via the open internet. This in itself has been an instructive experience because these are the same limitations that are faced by people in the vast majority of "developing world" contexts where integrated water resources management in a river basin context is being promoted. One advantage is that most all literature cited in this and following sections in this part of the report is included in PDF versions on a CD that accompanies this report.

Assuming the literature accessible for this review is reasonably representative, there seems to have been three general but somewhat overlapping surges of relevant literature since the Dublin and Rio Conferences. The first surge of literature appears to have focused primarily on reviewing existing theory and experience. As momentum for integrated water resource management and promotion of River Basin Organizations was first building during the mid-1990's, new reviews of earlier experience began to be published [*e.g.* Lee 1995]. One obvious early target for a case study example was the Tennessee Valley Authority (TVA) in the United States [Miller 1998], and researchers began digging into more that would emerge later. Researchers also began to review the growing body of research on local organizations for natural resource management [*e.g.* Rasmussen 1995], as well as on integrated water resource systems [*e.g.* Keller 1996] modeling water resources management at the basin level [*e.g.* McKinney 1999], and taking a closer look at relationships between land use and maintenance of watershed and environmental services [Chomitz 1998, Calder 1999]..

In the second surge of literature, which seems to have begun growing rapidly near the turn of the millennium, continuing reviews helped provide building blocks for researchers to focus more on how several relevant lines of activity were beginning to converge. One area of convergence was embodied in work contributing to the emerging field of natural resource governance [*e.g.* Bruns 2000, Kaosa-ard 2000, Knox 2001, Dupar 2002]. Water resource engineering and economics began jointly exploring simulation modeling at different spatial scales [Droogers 2001], analyses of river basins began articulating hydronomic zones [Molden 2001b], risk began to be factored into integrated water resource management [Rees 2002], and water use and productivity began to be assessed at river basin levels [Molden 2001c]. Linkages of land and water degradation with food and environmental security were reviewed [Penning de Vries 2003], and methods developed to assess land and water legal and institutional frameworks in Asia [Hannam 2003]. Building on emerging insights, a World Bank background paper articulated linkages between water and rural development [Molden 2001a], integrated water resource management was re-articulated in the new context [GWP TAC 2000], a framework was developed for more careful institutional analyses of water resources management in a river basin context [Bandaragoda 2000], and river basin closure and development trajectory concepts began emerging [Molle 2002, 2003]. There was also exploration of issues and gaps in linkages between policy and research on environmental services [*e.g.* Tomich 2004, Douglas 2005, FAO-Cifor 2005], as well as efforts to employ multiple types of simulation modeling to address policy questions that included sites in Thailand [van Noordwijk 2003].

Especially near the end of this period, we also begin to see emergence of some challenges to the "conventional wisdom" underlying especially policies of the World Bank and regional development banks regarding integrated water resources management and river basin organizations. Analysts in India [*e.g.* Shah 2002] began to be particularly prominent in efforts to articulate differences in contextual conditions in western developed societies where most examples of promising integrated water resource and river basin management have been cited, and conditions in densely settled, poor areas such as found in much of Asia. In a somewhat similar vein, issues related to the scale of orientation of river basin institutional arrangements, and needs for 'locally embedded processes' are identified by some as critical in contexts such as the Mekong River Basin [Miller 2003]. Some also began viewing debate reflecting contested views of civil society and its role in redefining state-society relationships as a key emerging arena of dialogue important for river basin management in Thailand and the Mekong Regions [Laungaramsri 2002].

These developments helped set the stage for the third surge of literature that has just begun emerging during the last two years. Much of the focus of this literature is on assessing Post-Dublin-Rio experience with river basin organizations, and particularly on how well they are functioning as resource management institutions. Although still quite short by many historical standards, there has been enough experience at many locations to make at least a preliminary round of assessments to see what lessons can be learned from this recent era of experience. While a substantial range of research supported by the World Bank and regional development banks is still underway, one of the first high priority lines of work has recently been releasing a series of outputs directly related to this project.

(b) World Bank sponsored comparative studies

Along with review [Pitman 2002] and further articulation of its water policy [World Bank 2004], several lines of research obtained World Bank support. Institutions organizing and contributing to various related and often cross-linked sets of studies have included the World Bank, the International Water Management Institute, the International Food Policy Research Institute, and various associated academic institutions.

One line of activity particularly relevant to this project is being conducted under the Agriculture and Rural Development Department in association with the Water Resources Management Group of the bank. The central theme of this work seems to have been captured rather well in the name of a major study *Integrated River Basin Management and the Principle of Managing Water Resources at the Lowest Appropriate Level*, which has now published a summary report on institutional and policy analysis of river basin management decentralization [Kemper 2005]. This work is based on a coordinated set of river basin institutional studies that includes:

(i). Accountability through decentralization: Lessons for integrated river basin management

This synthesis study was based on a review of literature on decentralization, including experience in various river basins from different continents, and in the fields of education, health care, roads, irrigation and public infrastructure, with the aim of drawing lessons for productive decentralization in integrated river basin management [Mody 2004]. The study's definition of its understanding and expectations of decentralization are worth quoting here:

> "Decentralization is a process of transitioning from a governance structure in which power is concentrated at the central or national level to one in which the authority to make decisions and implement them is shifted to lower level governments or agencies (including parastatal organizations). The resulting governing structure is anticipated to deliver public services more efficiently and equitably. Because of proximity to the locus of action, decentralization offers the prospect of lower transactions costs and the generation of information most relevant for serving the consumer of public services. As such, it is expected that decision-makers at decentralized levels may be held more directly accountable for the outcomes of their actions than an anonymous bureaucrat in the central government.

In addition to accountability, successful decentralization depends on a number of other factors including negotiated voluntary arrangements, conflict resolution mechanisms, and the institutions necessary to support them. Moreover, the study sees common challenges to decentralization as including: "(1) inadequate financing; (2) paucity in skills, particularly with respect to management and supervision; (3) resistance from those who benefit from the centralized structure; (4) how to sustain interest in the participatory process for the long term. Leadership is also critical to ensuring that administrative, political, and fiscal decentralization operate in tandem."

Findings of the study see key trade-offs between central control and decentralization that include:

- Centralization tends to have greater technological economies of scale;
- Decentralization tends to have lower transaction costs, due to greater information and accountability
- Decentralization can result in greater equity, if institutional structures for local accountability are present to prevent local elites from capturing all benefits.

- Conflict resolution is essential to reduce transaction costs and for any progress to be made under decentralization. Decentralized structures can more effectively reach negotiated resolution, but it may require clearly defined property or priority rights, whereas central authority can use more authoritarian means.

- Centralization can result in a larger pool of highly qualified technical expertise, whereas this tool may be dissipated with decentralization

- Regarding service provision, central agencies are best at providing services requiring advanced technical expertise, management and information that are difficult to provide through a distributed system, but decentralization may perform better where information about local conditions and more direct monitoring are important.

- Local tax bases, especially in developing countries, are inadequate to meet funding needs, whereas centralized agencies have access to funds that can be transferred to improve equity, but also to influence or distort local decision-making. This suggests need for a balance between central and local powers.

Lessons learned from other sectors suggest there are four high priority areas that need to be addressed in river basin decentralization: (1) devising ways to overcome financial inadequacy at the lower level; (2) making a commitment to incorporating opportunities to upgrade skills, particularly management skills, when designing programs while also ensuring that the expertise accumulated in central bureaucracies is not dissipated; simultaneously encouraging those facing retrenchment to contribute to the new systems wherever feasible; (3) assuring beneficiaries of the pre-reform structures that their rights would be protected; and (4) planning to sustain a long-term commitment to the decentralization process as it is likely to be slow and drawn out, perhaps by demonstrating positive outcomes in a key element of the sector in question.

(ii). A quantitative global analysis of experience with decentralization in river basins

This study is based on questionnaires returned from 83 river basin organizations from around the world [Dinar 2005]. Analysis of this data was also integrated into a broad cross-country analysis of the economics of water institutions and performance that was published as a monograph in institutional economics [Saleth 2004], which also includes an interesting recent review of institutional theory and interpretations associated with water and river basin management.

Four different sets of variables in the questionnaire result in findings that can be summarized as:

- Stressed resource conditions (*e.g.* water scarcity) and the presence of multiple major problems appear to be stimulants to effective action that result in perception of more improvement after decentralization, and more success in meeting basin management objectives.

- A relevant agenda based on broad basin management objectives that addresses all stakeholders' concerns and provide fora for dispute resolution are perceived to be effective and successful; some improvements take long periods of time before they can become evident.

- Government support is an important factor that has to be included at the right dose – supportive governmental involvement is good as long as it allows the stakeholders to initiate and lead the reform process.

- Presence of existing user groups in the basin is linked with greater improvements after decentralization, and an RBO budget is an important tool for management, enhancing participation, and if managed well, can promote the decentralization process.

(iii). Comparative study of institutional arrangements for river basin management in 8 basins

This research was based on much more in-depth studies of eight RBO's selected to represent a range of contexts and conditions. Study sites and sources of background and detailed institutional analysis on each include:

- Fraser River Basin in Canada [Calbick 2004, Blomquist 2005f];
- Tarcoles River Basin in Costa Rica [Ballestero 2003, Blomquist 2005e];
- Alto Tiete River Basin in southeastern Brazil [Johnsson 2005b];
- Jaguaribe River Basin in eastern Brazil [Johnsson 2005a];

- Guadalquivir River Basin in Spain [Giansante 2004, Blomquist 2005d];
- Warta River Basin in Poland [Blomquist 2005c];
- Murray Darling River Basin in Australia [Haisman 2004, Blomquist 2005b][21];
- Brantas River Basin in Indonesia [Ramu 2004, Bhat 2005].

Some of the key characteristics of the study river basins are presented in Figure 3-4, along with a few comparative points for the Ping River Basin. Basin institutional studies were combined into a comparative study of institutional arrangements for river basin management [Blomquist 2005a].

These studies found a very substantial range of basin characteristics, initial conditions and major water management problems across the 8 basins, as indicated in Figure 3-4, as well as differences in performance of the RBOs over time. Comparative analysis completed at this time has identified three factors associated with effective start-up of RBOs, and six factors associated with the longer-term sustainability of effective operations. Factors affecting start-up include:

- Stakeholder involvement. Means need to be established to attract the interest of all relevant stakeholders, and to get them actively involved in RBO processes. Means for accomplishing this have varied widely, but all of the 8 basins were successful in securing initial involvement.
- Incentives: One of the most important incentives for stakeholder involvement was the presence of major water resource problems, but prospects for infrastructure investments were also important in some cases. Strong cultural conflicts were only present in one case.
- Champions: Government commitment for support made them a champion in some basins, while individual charismatic leaders were very important in several. Supra-national influences in some basins included World Bank projects and the EU Water Framework Directive.

Factors affecting sustainability of effective RBO operations over the longer term include:

- Keeping stakeholders engaged: Stakeholder perceptions that they are engaged in important issues, and are making a positive difference are especially important. Consistency of government support is also important, as are regular and frequent interaction, and perceptions that their views and interests are welcome.
- Participatory decision-making: Stakeholders need to participate in substantive basin management decisions, which was most common in planning, water allocation, infrastructure operations, and design of headwater protection; but less common in levying water charges, collecting fees, flood control, monitoring, or altering land use.
- Balancing stakeholder incentives with achieving desired outcomes: Incentives need to be tied to performance criteria, to help assure that their involvement improves management.
- Responsiveness to environmental change: Conditions and problems change as a result of many factors, and in order to remain relevant the RBO needs to be able to effectively respond to changing environmental conditions.
- Consistency of government support: Consistency of government support is very important, and at least as important as magnitude of support in the longer term. Longevity is also associated with financial resources coming from multiple levels, and less reliance on central government funds is linked with autonomy to keep plans locally relevant.
- Managing conflict: It is important for opposing parties to have representation and ability to voice their views and communicate constructively. While champions are important in processes like this, for the longer term RBOs also need to develop mechanisms not dependent on them.

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[21] Organizational arrangements in the Murray Darling River Basin are also promoted by Australians as a model for improved management in other areas, including the Mekong River Basin. For example, see http://www.mekong.es.usyd.edu.au/case_studies/rbm/MDMK/index.htm

Figure 3-4. River Basin sites with in-depth case studies

	North America		South America		Europe		Australia	Asia	Thailand
Continent									
Country	Canada	Costa Rica	SE Brazil	East Brazil	Spain	Poland	SE Australia	Indonesia	Thailand
River Basin Name	Fraser	Tarcoles	Alto Tiete	Jaguaribe	Guadalquivir	Warta	Murray-Darling	Brantas	Ping
Area (square kilometers)	238,000	2,155	5,985	72,560	57,017	55,193	> 1,000,000	11,800	34,659
Population (millions)	2.7	2.0	17.8	2.0	4.0	6.8	2.0	15.0	2.5
Principal water management problems									
• Flooding	X	X	X		X	X		X	
• Seasonal water scarcity			X	X	X	X	X	X	
• Drought exposure				X		X			
• Water storage				X					
• Water allocation				X	X		X		
• Inter-sectoral conflict	X			X	X		X		
• Pollution	X	X	X		X	X		X	
• River ecology							X		
• Erosion		X							
• Headland urbanization			X						
Basin organization initiation	1997	Early 1990's	1994 (1997/98)	Early 1990's	1927 (1985/99)	1991 (1999)	1914 (1992)	1990 (1999)	
• Central government initiation			X	a. X	X	X		X	X
• Stakeholder initiation	X	X					X		
• Accompanied by broader reforms			X	X	X	X		X	X
• Supra-national influence	-	IADB	WB	WB	EU	EU	-	WB	tech asst
Type of basin organization	NGO	Quasi-govt commission	committee + RB agency	Commission + state company	Central govt agency	Central govt agency	Inter-govt commission + self-finance unit	State company under water agency	?
Responsibilities									
• Planning &/or coordination	X	X	X	X	X	X	X	X	?
• Infrastructure operation & maintenance				X	X	X	X	X	?
• License water use / allocate supply				X	X			X	?
• Set / collect water charges				X	X			X	?
• Water quality monitoring				X	X		X		?
• Land use or new water use/discharge			X			X			?
Stakeholder organizations	multi-scale	Representative	multi-scale	Sub-basin committees	Representative	none	Basin advisory committee	none	multi-scale
Funding sources	Gov+projects	Cent govt	Cent govt	Users	Govt+users	Cent govt	Govt+users	Govt+users	Govt

3. Major overall lessons for river basin organizations

This section draws on information from sources discussed in previous sections, in an effort to summarize some of the major lessons for river basin organization that can be learned from international experience. These lessons are then employed in and adapted to the specific context of sub-basins in the Ping River Basin in subsequent sections.

(a) Absence of a "blueprint" for RBOs

Not only are there are no blueprint models for river basin organizations, but the very notion is finally being discarded, and replaced with acceptance of diversity coupled with recognition of the need for RBOs to be 'localized' in their specific environmental, historical, cultural, social, political and economic context. Yet there are still many lessons to be learned from the diverse experience with RBOs from around the world. What is emerging from studies and experience, however, is that lessons need to be viewed at a somewhat more abstract level, in order to allow for variation associated with localization processes that drive adaptation for different specific contexts.

Thus, major elements for learning from this diverse experience include basic operational principles that are associated with different types and degrees of RBO performance, as well as considerations regarding organizational structure of RBOs that can facilitate or constrain their performance.

(b) Key principles for RBO operation and development

Basic concepts underlying all this current interest in RBOs have a fundamental central focus on integrated water resource management, decentralization and accountability.

Scope of IWRM-IRBM. A key basic proposition is that the increasingly complex and contentious context of water resource and river basin management requires its integration with a growing range of natural resource, environmental, economic, political, social, and cultural considerations. Indeed, it is the very importance of water to so many aspects of life and human society that is bringing us to this more complex approach requiring more holistic systems-oriented points of view. Thus, one of the first challenges is where to draw boundaries for the mandates of integrated water resource management and integrated river basin management, or how integrated is 'integrated'?

While there is considerable anxiety among many about the growing scope of integrated river basin management, there is a growing amount of evidence that RBOs with relatively wide mandates are better able to attract and hold interest of major stakeholders, who feel they are involved with work that is relevant to their needs, especially in basins where there are multiple major problems. Clarity and mutual understanding of the scope of an RBO mandate, however, as well as the capacity, organizational arrangements and resources to cope with it, are essential factors.

Subsidiarity and decentralization. Associated with this complexity is the concept of subsidiarity, which provides much of the rationale for decentralization programs. It is based on the key proposition that, especially in complex management systems, decisions are best made at the most local level where they are possible and viable. A corollary is that where local decisions are not possible or viable, they should be raised to the next higher level in the hierarchy, where the same principles are then applied. The end result is seen to be decisions that are made at their most appropriate levels, resulting in the greatest overall efficiency and equity possible for the management system. Thus, where systems are highly centralized, decentralization reforms are a means to improve subsidiarity, efficiency and equity.

Experience with decentralization to and within river basin organizations indicates: (1) There are some trade-offs, and centralized approaches may still be especially important where there are technological economies of scale, where substantial pools of high-level expertise need to be maintained, or where local tax bases are inadequate. Centrality is less effective where local experience, knowledge, negotiation or monitoring are required. (2) decentralization does appear to provide significant improvements in efficiency and equity in most decision-making processes, including re-

duced transaction costs and negotiated resolution of disputes, but it requires basic rules, procedures, and capacities in local institutions, and often clearly defined rights and priorities regarding access to and use of water and related natural resources [see also Bruns 2005].

Accountability. One of the important justifications for decentralization using the subsidiarity principle is that the resulting management system will have greater efficiency and equity. This is largely based on the proposition that decentralization results in improved accountability. This, in turn, results from the lower transaction costs associated with closer proximity, as well as generation of information that is more relevant for consumers of public services. Moreover, local decision-makers may be held more directly accountable for the outcomes of their actions than anonymous bureaucrats in central governments.

Experience with decentralization to and within RBOs indicates that greater accountability can indeed be achieved. This is dependent, however, on adequate local institutions to prevent benefit and organization capture by groups of local elites, on accessibility to venues for negotiation of disputes, and on sufficient stakeholder participation, leadership, expertise, information and financial resources. Funding from central sources can reduce accountability in decentralized systems when it is accompanied by conditions that distort local decisions, although it can also help achieve greater overall equity.

Moreover, in RBO organizational hierarchies there is a need for both upward and downward types of accountability. Most assessments of experience have focused on downward accountability to constituent stakeholders and consumers of public services, where decentralization can result in substantial improvements. They also acknowledge, however, that there is a need for upward accountability, at least to the degree that it can help assure that stakeholders located beyond the domain of local jurisdictions receive fair consideration and treatment of their legitimate views, concerns and needs. One manifestation of this concern about balance between local autonomy and central control is reflected in conclusions that a combination of funding from central and local sources is often associated with strong RBO performance.

(c) *Structural considerations that can facilitate or constrain RBO performance*

Assessments of experience indicate that structural characteristics of RBOs can either help to facilitate, or impose significant constraints on the performance of RBOs, while others are more neutral in their performance, but often important in specific social and cultural contexts. Major examples include:

Type of organization. RBOs come in a great variety of forms, that include agencies, committees, commissions, companies, NGOs, *etc*., and there are numerous sub-type variations for each of these. Indeed, even among the small sample of RBOs where the in-depth studies reported above were conducted, as figure 3-4 indicates, only two of them were of the same type (agencies of the central government), and several had different official identities for different parts of their operations. The main point is that the RBO is able to function effectively to achieve its objectives under its mandate, and its ability to do so under any given type of organizational format or official or legal identity will depend on what it seeks to do, how it seeks to do it, and how these different forms of organization are operationally, technically and legally defined and operated in the context of a specific society.

Levels of organization. There is wide variation among RBOs regarding the number of hierarchical levels of organization. Some have a single organizational level, while others have several nested organizational levels. Lower levels of organization can be made up of existing groups or organizations that associate themselves with the RBO, or they can be newly formed subsidiary units that have a dependent or relatively autonomous relationship with the RBO. While there are no major rules for what is best, there are conclusions that where relevant existing groups already exist, RBO performance is much better when they become building block units at more local levels. There are also observations that scale matters, in that as sub-units become smaller, their relative advantages

for various functions change. Thus, very small units often find local financing to be more difficult, there may be limitations in the pool of expertise available, they may find it difficult to employ technologies or conduct activities that have significant economies of scale, and it may be more difficult in some cases to avoid capture by local elites. On the other hand, very small units often have stronger interpersonal relationships and social capital, more shared views, experience, interests and needs that enables them to organize more efficiently and effectively. Thus, much depends on the local context of the RBO.

Stakeholder representation and roles. RBOs employing integrated water resource management principles clearly function best when the full range of stakeholders is represented and actively participating. Means for trying to achieve stakeholder participation, however, have varied widely, from RBOs with only informal interaction with stakeholder groups, to RBOs with elaborate stakeholder organizations at multiple nested levels. While most RBOs have been able to attract initial stakeholder interest, many have seen diminished stakeholder participation over time. Assessments of experience indicate that stakeholders need to perceive that they are engaged in important issues, that their views and interests are welcome and considered, that they actually participate in important decisions, that stakeholders with different views are treated fairly, and that real progress is being made toward achieving RBO objectives in an open, fair and equitable manner. And, actual stakeholder groups want representatives who really represent their views.

Leadership. Experience confirms that leadership and emergence of individual 'champions' is a very important factor in RBO performance. Top-down institutional leadership, however, appears to have a negative effect on performance. Moreover, where leadership is strongly focused on particularly charismatic local leaders, RBOs face a challenge in seeking to facilitate emergence of other leaders, or altering their approach in order to achieve long-term organizational sustainability.

Responsibilities. Again, there is a wide range in the types of roles played by RBOs. Most all of them have a major role in planning, policy and/or coordination functions, which is seen as one of the most important roles of most RBOs. Depending on the characteristics of the basin, its types of problems, and the quality, caliber and availability of expertise from different sources, the RBO may also play a major role in monitoring conditions and identifying and analyzing problems as part of the overall planning process cycle, and there may be various types of activities, projects or operations that it conducts directly. Some RBOs also play a major role in employing and operating regulatory or economic incentive tools, including registration, zoning, allocation, licensing, fees, *etc.*, where they are relevant. Where RBOs operate and maintain water resource infrastructure, such as those for irrigation, water supply, drainage, or electrical generation, they often establish self-financing units that can take on the form of a parastatal or private company.

Information. Virtually all studies and assessments of experience agree on the need for high quality and openly accessible information. In some societies, this can be provided from a substantial range of sources with which the RBO can develop an alliance or collaboration. In many others, however, information and data are scarce and often of dubious quality, gaps are wide, expertise is low or highly concentrated in particular agencies or stakeholder groups, and public information access is not a cultural norm.

Coalitions and alliances. Increasingly, RBOs face a situation where they are expected to respond to broader mandates, but in a more decentralized manner. Experience confirms that, under the right conditions, this can increase stakeholder participation, accountability, efficiency and equity. But those 'right conditions' include needs for more capacity, tools, information, and other resources at local levels of distributed systems where such things are often scarce. Moreover, RBOs cannot do everything themselves, and most of them depend on agencies, local governments, civil society organizations, and private sector interests to implement their plans and provide various types of material, social and intellectual support for their operations. Accordingly, it is now widely recognized that RBOs need to join with a range of other groups and organizations to form and build coalitions,

alliances and networks at various levels, beginning within their basins, but extending outward as far as possible in all relevant directions.

Indeed, the emergence of efforts from local to global levels to support such coalitions and networks, and to accumulate and provide access to information, training and resources that can assist them in their efforts, is clearly evident from the growth of internet websites devoted to these issues, a few of which are mentioned in the first part of this section. While work they do is not yet recognized or incorporated into more academic reviews in the literature, it probably has far more potential for reaching and assisting the actual managers of RBOs.

(d) Management tools and policy instruments

One of the advantages of the web-based venues for information exchange is their orientation toward the interests and needs of users and actors. One interesting example of this is the organization of the web-based 'toolbox' for integrated water resource management that the Global Water Partnership is constructing.[22] They classify 'management instruments' under 8 categories:

- Water resource assessments (knowledge base, modeling, indicators, assessments)
- IWRM Planning (with a special sub-section on river basin plans)
- Demand management (use efficiency, recycling and reuse, supply efficiency)
- Social change instruments (curricula, training, communications, campaigns, participation)
- Conflict resolution: (shared vision planning, consensus building, conflict management)
- Regulatory instruments (regulations for water quality, quantity, services; land use control)
- Economic instruments (water pricing, pollution charges, water markets/trade, subsidies)
- Information (information management systems, data sharing)

The GWP toolbox also includes additional information under the heading of an 'enabling environment' that has information on water policies, laws, investment policies, incentive structures, cost recovery policies, and investment appraisal, which many economists or development organization types would consider "management instruments" at higher levels of social organization. The website design even includes ways to combine selected components of the toolbox to see how they might interact in contributing toward a 'solution' of a problem.

Some elements of various of these tools are incorporated into discussions in remaining sections of this report, in the more specific context of Ping River sub-basins and pilot management organizations for them. Other elements, and particularly those related to economic instruments, are the subject of a separate consultancy under this project, and thus not discussed further in this report.

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[22] See figure 3-2 for full listing, or access at http://gwpforum.netmasters05.netmasters.nl/en/index.html

B. Structural Considerations for River Sub-Basin Organizations (RSBOs)

Having reviewed various characteristics, conditions, trends and current issues related to development of sub-basin organizations in the Ping River basin, as well as international experience with river basin organizations, this section turns to considerations necessary for configuring organizational structures and arrangements under the range of conditions present both in pilot sub-basins and in other Ping sub-basins targeted for future expansion. These considerations will help determine the identity, composition, range of responsibilities, and set of relationships in a RSBO. Subsequent sections employ these considerations in proposing an indicative array of potential organizational models from which sub-basins can choose and adapt, followed by suggestions for some basic stages and steps for establishing and further developing pilot Ping River sub-basin organizations (RSBOs).

1. Mandate, responsibilities & authority

These factors relate largely to the identity of the RSBO, and set the framework under which configuration of other components can be considered:

(a) Scope of the Mandate

As discussed in previous sections, the first wave of central government-initiated basin management activities in the Ping Basin focused quite narrowly on water resource issues. Especially in the Upper Ping, a second wave added emphasis on forest land use, pollution from agricultural chemicals and trash. This project is now committed to an even broader mandate for RSBOs that, in addition to natural resources and the environment, includes consideration of at least related public health and poverty-linked socio-economic equity issues. Moreover, one important component of the current confusion that needs to be addressed in this project is directly related to these expanding mandates.

In comparison with RBOs elsewhere that have been reviewed in recent international literature, initiatives in the Ping Basin have already become quite broad. Problem identification exercises under this project, as well as predecessor and parallel activities, indicate people understand that at least several dimensions of natural resource and environment issues will require quite broad consideration of issues related to quality of life and sustainability if fundamental causes of problems are to be effectively addressed. The CMU studies and plans seek to push the frontiers of consideration further into the realm of culture, esthetics, and other aspects of the quality of life in riparian communities.

Thus, this movement toward more holistic perceptions appears to be initiated from both national and local levels. Moreover, there appears to be an interesting parallel with trends in the administration hierarchy to focus efforts for coordination and integration at the most local levels of governance. Accordingly, although this may be a quite ambitious undertaking, it appears that conditions within the Ping Basin (and especially the Upper Ping) favor a broader, more holistic and integrated mandate for RSBOs. The main exception appears to come from elements of government agency hierarchies that would prefer, or feel constrained to keep matters focused on issues clearly within the mandate domains of their agency. This raises questions about ownership of these efforts, actual operational definitions of participation, and whose vision will be reflected in RSBO mandates.

It is also clear, however, that RSBOs cannot do everything, and that they are not intended to be a substitute or rival organization that competes with the development planning processes of the administration hierarchy. The challenge, then, if RSBOs are to employ broad considerations of natural resources, environment, livelihoods and life in their respective sub-basins, will be how to define RSBO roles and responsibilities in a way that can constructively complement regular development planning processes of local government, central agencies, and the administration hierarchy.

(b) Role and Responsibilities

Thailand appears committed to a multi-level RBO system, and even the earliest consultations indicate stakeholder groups are demanding this approach [Anukularmphai 2004a]. The degree and manner of engagement by stakeholders has also been evolving, along with the effective operational definition of stakeholder participation [Tan-kim-yong 2001]. Based on both Thai and international experience, there appear to be four general areas of possible roles and responsibilities where RSBOs need clarity:

- <u>Problem identification & analysis</u>. Up to this point in basin organization development, there have been two distinct pathways for problem identification and analysis. The first has been based on analysis by 'experts' from government agencies or their consultants that has relied heavily on available data sets obtained primarily from government agencies or research studies they have commissioned. The second has centered on local communities, local leaders, and local governments, often with facilitation or assistance from outsiders, who employ their detailed experience-based knowledge of local conditions to identify and analyze problems. Although there have been various common conclusions from application of these two different types of knowledge systems, there have also been some substantial differences [Walker 2002].

  Thus, recent projects, including this one, have been making increasing efforts to combine these two pathways, in order to provide cross-checks, as well as to benefit from the different strengths of both approaches. There are also efforts in some areas to adapt some of the scientific tools normally used only by government agency or academic research institutions for direct use by local communities [*e.g.* Thomas 2004a], as well as efforts by academic groups and some officials and NGOs to integrate local knowledge into their monitoring and research programs.

  In any event, there now appears to be widespread consensus that both types of knowledge systems are relevant to problem identification and analysis, and that activities at the sub-basin level should be seeking some type of synthesis. If a joint approach is accepted, the main issue then becomes whether RSBOs will be expected to take the lead in identifying and analyzing problems, with support by staff from agencies and other sources, or if leadership is provided by agencies and others, with RSBOs playing a supporting role.

- <u>Program and project planning</u>. This appears to be the area where general stakeholder support for a strong role by RSBOs is strongest, and this resonates with international experience. While ideas and suggestions for specific activities and projects have been, and are expected to be forwarded by government agencies and the range of other stakeholder groups, the RSBO is expected to play a major role in the screening, narrowing and sorting of what is desired by various stakeholders, into what is most acceptable and doable in short, medium and longer terms, according to priorities established for each time frame.

  The major challenges for the RSBO are to establish priorities and planning criteria that reflect the goals and objectives of their overall management program, to articulate how specific activities are expected to help achieve those objectives and goals, and to allocate available resources in a transparent manner according to mutually agreed upon priorities and criteria. In order to provide an overall framework for this type of approach, international experience suggests that an overall river sub-basin management plan needs to be developed. This usually requires a multi-year process that involves extensive stakeholder interaction, public discussion, consensus building and public education.

  At least at this point, major funding for implementation activities is expected to come from central government sources that would be distributed to appropriate implementation units. Thus, there is also a major question about the degree to which central agencies or other stakeholders influence the goals, objectives, criteria, and priorities employed in this process. Again, the issue is whether RSBOs will be expected to take the lead in these processes, with support by staff from agencies and other sources, or if leadership is provided by agencies and others, with RSBOs playing a supporting role.

- <u>Implementation</u>. There appears to be two lines of thinking about the potential role of RSBOs in implementing programs and projects in Ping sub-basins:

The most common view is that RSBOs would primarily serve as ***planners and coordinators***, and specific action-oriented projects and activities will mainly need to be implemented through regular administrative and budgetary channels of some combination of local governments, local administrations, and/or central agencies. This is also common in international experience, except for cases where specific authorities, companies, or agencies are established to implement or operate what is usually some type of income producing infrastructure facility or service, or where activities are not conducted through other agencies or organizations. Since income generating types of operations have not yet been proposed for Ping RSBOs, this view would see RSBO implementation activities limited to those that are not conducted by other agencies or organizations in the sub-basins. Examples might include information, studies, consensus building, public education or various types of monitoring activities, as well as other areas that may emerge under the specific conditions in a particular sub-basin. Even where such activities are implemented directly through an RSBO, however, much or most of the organizing, mobilizing, and operating work may well be delegated to local building-block organizations associated with the RSBO, such as local networks or civil society organizations. In any event, emphasis is on working with local government and organizations to strengthen their capacity to implement programs and projects compatible with RSBO mandates and plans, and to only create new implementation channels to fill gaps in existing systems. Given this type of context, it is most likely that roles for sub-basin organizations in implementation processes for most major projects would be limited to advisory, assistance, and monitoring roles. Leadership of project implementation would most likely be specified in the project design, and budgets would be allocated and supervised by the relevant agency or local government unit.

A second point of view sees RSBOs as much more ***implementers*** that could receive substantial amounts of funding directly from central government channels for the full range of major project activities under their mandate and plans. It is not very clear, however, the extent to which this view supports development of RSBO implementation capacity that would duplicate those of local governments, agencies, or other groups within the sub-basin. Experience both in Thailand (such as the Ministry of Interior's former Department of Accelerated Rural Development) and internationally suggests that efforts to duplicate or compete with such existing capacities would undermine rather than enhance the ability of RSBOs to develop effective integrated programs with broad-based stakeholder participation. While it might be feasible to develop RSBO capacity to receive block funding from central budgets that it could manage and allocate to local governments and organizations within their sub-basin, it is less clear how such a process could work in relationships to activities conducted by local units of central government agencies. This approach would also require much greater effort to develop RSBO financial management capacities and procedures providing transparency and accountability in managing relatively larger amounts of funds. There also needs to be careful consideration of the degree to which this might conflict with government concepts of not introducing additional levels of bureaucratic structure into national governance systems.

- <u>Regulation</u>. River basin organizations in other countries are sometimes tasked with applying tools to affect human behavior through regulatory or economic means. Examples include regulation of water use, water discharge quality, land use, *etc*., using methods such as licensing, taxation, zoning and prohibitions. To be effective, such tools also require authority for monitoring and enforcement. In Thailand, many of these options are currently limited by the absence of basic legislation related to water rights and to recognition of land use in upper watersheds. Moreover, exploration of what types of incentives may be possible, effective, and workable in pilot sub-basins is the subject of a separate specialized consultancy under this project. Thus, while this report does not consider these issues and aspects in detail, this could be another dimension of RSBO roles and responsibilities that will need to be considered. Such du-

ties could have structural implications for elements such as authority to issue and enforce regulations, as well as how to manage any financial flows that are associated with economic tools.

- <u>Monitoring & learning</u>. International experience seems mixed in the degree to which river basin organizations assume responsibility for monitoring functions. In many cases this appears to be related to a more narrow focus on water resources that can be monitored by trusted specialized units and agencies. At least three factors appear to be emerging in the Ping River Basin that would argue for a relatively strong RSBO role in monitoring. The first reason follows from the broad issue area mandate that seems to be emerging, at least in the Upper Ping, that will require information on conditions and parameters far more diverse than specific water resources that can be relatively easily instrumented (at least in more wealthy societies). The second reason is that the type of analysis and planning processes that will be required to fulfill this broad mandate over the long term will require an iterative learning process that will clearly require feedback information on how this range of conditions and parameters are changing over time. The third factor relates to the awareness raising and public education value of participation in monitoring and assessment processes, and active engagement in linking the findings with problem identification, analysis and planning in a learning cycle.

While these arguments may seem to make monitoring an area of obvious importance for longer term management operations at the sub-basin level, it is perhaps the type of role that has had the least attention under initiatives in Thailand thus far. This may be related to the great emphasis on planning that has occupied most effort do date, along with the fact that little implementation of planned projects has actually been done (except for the numerous small check dams built last year in the Lower Ping). But it may also be related to aversions to monitoring and evaluation in general, as discussed in the previous section of this report.

If a monitoring and learning component is to be incorporated into RSBO operations, there are three types of monitoring that will need to be developed: (1) monitoring inputs and outputs of projects implemented through the various channels of central agencies or local governments, in order to assure and understand linkages between plans and implementation and how they can be improved; (2) monitoring of local environmental and other parameters needed to assess changing conditions in the sub-basin, and assessment of improving conditions or emerging issues or problems; and (3) assessment of management program outcomes and their impact on target and other conditions in the sub-basin relative to their objectives and goals.

(c) Main Sources of Authority

In order to function effectively, river sub-basin organizations will also need to have various types of authority, depending on the nature of their roles and responsibilities. In any event, they will need to be able to convene meetings and workshops, including invitation of government officials and people from various sectors of society, as well as access to information from a range of official and other types of sources. RSBOs will need sufficient authority, or access to authority, to conduct planning processes that can be incorporated into central government and local government planning and budgetary processes. They will also need to be able to manage at least funds for their own operational activities. And to the extent that they may become involved with regulatory types of issues, they may also need at least access to authority for issuance of regulations or licenses, collection of any fees or taxes, and means for enforcement of compliance. If they lack these types of authority themselves, then they essentially become advisory bodies that would need to either be attached to, or otherwise formally linked with, some type and level of official organization, or become a semi-governmental organization with formal status. Where RSBOs retain only an advisory and public awareness role, they might remain a non-governmental organization with formal or informal legal status. International experience displays a wide range in primary sources of authority for RBOs, from government agency status, to semi-independent commissions or parastatal companies, to NGO status and authority.

In Thailand, RBO initiatives have thus far primarily been led by elements of the central government, most of which have now been consolidated within the Ministry of Natural Resources and

Environment (MoNRE) – exceptions include the Royal Irrigation Department and some others. Thus, responsibilities for planning programs to date have been assigned to departments within MoNRE (DWR and DNP) that have sufficient staff based in Ping sub-basins to seek and facilitate local participation in the planning processes. The various committees have been established through official directives issued either by agencies, or by provincial governors, who have very considerable authority in their jurisdictions including local administration operations. Local governments are seen as a very important source of increasing authority in the longer term, but their individual jurisdictions are relatively small. Thus, at the sub-basin level, authority derived from local government would need to be based on arrangements with multiple local government units, which could perhaps be facilitated by network relationships among them. An informal but potentially important additional source of authority can also come from general public awareness and consensus, especially if it can be mobilized through social or political channels to enforce its wishes on formal institutions at various levels.

Access by RSBOs to these various sources, types and levels of authority could vary, and is likely to be strongly influenced by the sense of involvement or ownership felt by each type of source in RSBO structures and operations. If, for example, the RSBO is seen as an extension of a central agency, it is likely to have strong access to the central authority of that ministry, but may lack substantial access to authority in other ministries, provinces and local administration, or local government. If, on the other hand, there are mutual perceptions of a real partnership arrangement, the RSBO may be able to access multiple sources of authority, but perhaps to a somewhat lesser degree than if it was under the exclusive authority of that source. In this case, much will depend on the ability of RSBO leadership to cultivate a common sense of ownership among the various sources of authority, and on incentives for the sources of authority to collaborate with RSBOs.

2. Representation: core membership, constituencies, selection processes

One of the key determinants of the sense of partnership or ownership of stakeholders in RSBO operations will relate to how they are represented in the membership and operational processes of the RSBO. And, the complexity of representational issues increases quite dramatically with the scope of the RSBO mandate, and the associated range of stakeholder interests and relevant sources of authority. Since emerging conditions in Ping River sub-basins suggest needs for a relatively broad mandate, and thus inclusion of stakeholders from various sectors and levels, considerations related to representation are likely to be both complex and important. Three general areas of consideration appear particularly important:

(a) Balance

Relevant stakeholders need to perceive that their interests and views are included in RSBO considerations, that they have a clear role in RSBO processes, and that decisions are not dominated by other particular factions or groups. One of the primary measures that can help establish such perceptions is balance in stakeholder representation in the organization. Thus, particular attention needs to be given to overall levels of balance of representation in several dimensions:

- <u>Sector balance</u>. Overall balance is needed among the various sectors of stakeholder interest that are relevant to the mandate of the RSBO, as well as the specific conditions that are present in that specific sub-basin. Moreover, sectors need to be considered on both an institutional and subject area basis. Examples of subject area sectors often include distinctions among forests, water, subsistence and commercial agriculture, industry, tourism & recreation, urban areas, public health, *etc*. In principle, there are various ways that these subject areas might be combined or further sub-divided in order to make them fit more appropriately with conditions in a particular sub-basin. Thus far, however, it appears the most common approach has been to define sectors to fit with institutional organization, and especially central government agencies. And given the nature of the government agency sub-culture, this means each relevant agency feels a strong need to have its own representative. Thus, if overall institutional balance is to be achieved, there needs to be at least as many representatives from outside government agencies.

Under broad mandates, numbers begin multiplying rapidly, and this does not yet included issues related to appropriate relative numbers, and thus weights of representation.

- Central-local balance. Another type of institutional balance reflects representation from at least operational home bases of stakeholders that are located at different levels of organizational hierarchies. Of particular concern would appear to be central agencies based in Bangkok, provincial administrations and associated decentralized agencies, and local governments. Similar types of levels may be relevant for private sector and/or civil society organizational units in some sub-basins. The common theme is balance among views that represent concerns of constituencies at these very different spatial, organizational, social, and political scales.

- Local balance. Even within the 'local' level, there are still several representational issues that may be important, although concern may vary according to sub-basin conditions and contexts. Local administration, local government, local civil society, and local private business can sometimes hold quite different 'local views' that are difficult to lump into the role of one or few representatives. Moreover, there are also concerns about representation of views of substantial numbers of local villagers, farmers, urban groups or other types of ethnic, cultural, social or livelihood groups that may differ from these institutional views, and there may be sentiment toward having participation by respected local leaders or figures who derive their personal charisma and/or respect from other types of sources (elders, teachers, monks, advisors, *etc.*). In sub-basins where ethnic minorities are stakeholders, there is clearly a need for their views to be adequately represented.

- Gender balance. This type of balance is not listed here as an effort to pander to the concerns of the World Bank or international audiences. Rather, it is a reflection of the fact that in all of the project meetings held thus far – at all levels – women have made up only a very tiny fraction of the people participating in these process events. While it is still very common in Thai society for men to dominate participation in public political and governmental events (in contrast to many other aspects of society and life), one cannot help but be somewhat concerned about how well interests of women are being represented in this process. This is especially true when broad RSBO mandates include water, agriculture, health, livelihood and other issues in which (as all stakeholders are aware) women play a very prominent, if not dominant role. It is also worth noting that no one ever seems to raise or explore this issue.

As these discussions indicate, full representation of all of these elements in a relatively large and complex sub-basin could grow to a very large number. Thus, it is important to consider whether particular types of representatives could be perceived as representing constituencies that include multiple components of groupings among which balance is sought. It may be worthwhile to invest in efforts to facilitate dialogue and negotiation among some of these stakeholder groups to explore potential for common representation. In any event, consideration must also extend to overall balance among components, and whether some should have relatively greater voice (and votes) than others in order to achieve an overall sense of equity.

(b) Scale of core membership

Social interaction processes change with the size of a group. This has been clearly demonstrated in early project meetings with plenary sessions at Upper/Lower Ping basin and individual sub-basin levels, as well as with smaller working groups, and even smaller informal discussions. Different people feel more or less comfortable at these different scales, as reflected in who speaks, how they speak, and what they say. This, in turn, strongly influences their perceptions of the degree to which they have been able to participate. Of course, participation is also influenced by familiarity and a wide variety of other social factors, and even the venue and facilities where interaction takes place.

As a 'rule of thumb', it would probably be best if the main decision-making body or 'assembly' of the RSBO could be limited to a size of about 20-50 representatives, depending on needs for representation and balance. While there is no 'magic' number, smaller groups are likely to function more efficiently and effectively. The central challenge, then, is how to keep the core assembly

membership as small as possible, while also achieving the types of balance discussed in the previous section.

Of course, this does not mean to imply that all RSBO activities need to be conducted at the full RSBO assembly scale. As is normal practice in most such organizations, one would expect that the assembly would appoint various working groups or sub-committees to conduct detailed activities and report their findings and recommendations back to the full assembly for overall consideration and decisions as appropriate.

(c) Selection processes

Another factor that is likely to have very strong influence on perceptions of representational balance, ownership and participation in an organization such as an RSBO is the process through which representatives are selected. One of the several very interesting summary observations made by Dr. Apichart regarding development of river basin organizations in Thailand during earlier years [Anukularmphai 2004a], was that as stakeholders began to become more engaged in these activities, they also began to question not only the roles of various stakeholders, but also the degree to which they represented the real views of the constituencies they were supposed to represent. While most stakeholder groups wanted some transparent and participatory process for selecting their representative, he also notes that some groups preferred some form of election process, while others were more comfortable with consensus-type processes.

For stakeholders from government agencies, another set of considerations will most likely be needed. For central agencies, given the nature of their sub-culture, it is probably unlikely that most would accept a representative who is not at least an official within their department. And in some departments, it would have to be within their division or other sub-unit. Even if they are based within the area, differences can still be associated with their being based at the regional, provincial or district level. At provincial levels, issues can arise in sub-basins that span the borders between multiple provinces, as we have heard from the Lower Ping. In many cases these concerns expressed by government agencies are really related to personal or factional rivalries among officials at various levels within or between agencies, which are often not seen or understood by outsiders. While it is fairly unlikely that it will be possible for the full range of government agencies potentially relevant to sub-basin activities to have their own full representation, most sub-basins will probably want to avoid representation by only one or a few narrow agencies. Thus, sub-basin groups may need to consider particular individuals who are likely to be able to coordinate among some set of agencies, or to allocate a specific number of positions to a group or range of agencies and ask them to work it out themselves according to their own protocols and processes.

A relatively new set of stakeholder groups now present in many areas revolve around agency-induced groups, some of which have relatively formal membership, and others of which involve an loose entourage of people associated with a "volunteer" position, such as a "soil doctor" (*maw din*) an environmental volunteer, or a village health worker. Similar situations can arise when there are members of the village who are closely associated with an NGO or other type of outside group. These groups are likely to already have their social structures in place and will be able to select their own representative, unless there are rivals competing for group leadership. There is sometimes a tendency, however, for people who are using these positions to help build their social standing to want to try to speak for a larger group than they actually represent, and to echo the views of the organizations or agencies with whom they are associated and from whom they have received training and likely other benefits. Their presence in the "chemistry" of a sub-basin assembly can actually have a very positive effect, because of their ability to argue the point of view of the outside agency or organization in the context of their also being a member of the community, rather than an outsider. Problems are likely to arise, however, if they are allowed to dominate organizational processes. Thus, for these groups there is likely to be a problem not so much with the selection process as in the need for enough diversity to insure checks and balances.

Perhaps one of the most ideal situations is where relevant local networks have already emerged and have found ways to deal with representation among the internal elements of their constituencies. Known examples can include either *tambon*-centered or small sub-watershed-centered networks. These can, again be considered as building-block units that are capable of forwarding their own representative in whatever way they see fit. There can be some confidence in this approach where the nature of the network is such that it will fall apart if leaders or representatives do not respond to or represent the needs of their constituencies. Even in this case, however, there will likely need to be some positions where those who do not subscribe to networks and their interests or views, have a chance to help select other representatives, through local elections or other types of processes.

Thus, probably the most difficult aspect is likely to arise from components of the sub-basin population who are not already part of the entourage of an organized interest group, and who will thus find it more difficult to have their views represented. Some of these potential groups can be large, such as various types of agricultural interests, or women or children, for example. Others can be quite few in number, but particularly vulnerable to negative impacts on their livelihoods or well being resulting from sub-basin management activities. Still others may be few in number but very powerful and skeptical of sub-basin management processes, such as local businessmen, wealthy investors, absentee landlords, or others. For cases where groups are small, it is more likely that they will be able to reach a consensus on who would be most appropriate to represent their interests. But where groups are large, with diverse points of view, and/or where they have factions or rivalries among their leaders, some type of more formal but open and transparent process of voting may be necessary.

Thus, experience indicates that selection processes will need to consider identification of various types of local context-specific stakeholder constituencies, in which selection processes can be established that are most compatible with group perceptions of equity and appropriateness. A single 'blueprint' approach is unlikely to be satisfactory, so flexibility for localization of these processes needs to be preserved. In any event, however, representatives need to be downwardly accountable to the constituency groups that selected them, so that fixed terms for re-selection and other suitable mechanisms (possibly including recall-type procedures) need to be identified and established to assure that this occurs. Since more detailed assessments or outside assistance needs to be context-specific, further support from outside needs to involve interactive and on-site processes.

3. Leadership

Leadership will be another key element that will influence perceptions of identity and ownership, as well as the practical functionality, quality, and pace of the RSBO and its activities. This is strongly echoed by international experience. While many of the most important characteristics of leadership are associated with personal traits, there are also pressures to define the institutional pool from which leaders can be selected, or even to link leadership positions with status or position within associated institutions. Various government agencies and officials, for example, feel that various leadership positions need to be earmarked for someone from their agency or at least a government official, and preferably one associated with their ministry. Others feel it is appropriate for someone assigned to a particular agency position to automatically assume an RSBO leadership position. The converse of this approach may occur when stakeholder groups outside government circles want to exclude consideration of government officials (or other stakeholder groups) from holding the leadership position.

However, many stakeholder groups – in both government and non-government circles – also recognize the central importance of individual leadership qualities and characteristics. This is inferred by Dr. Apichart's comments about how early progress at the Upper Ping/Lower Ping levels began to accelerate as individual leaders began stepping forward to play active roles in the consultative workshops and processes they were tying to conduct [Anukularmphai 2004a]. Moreover, ONEP leadership and senior staff from several agencies have also expressed their willingness to open top RSBO leadership positions for selection through elective or consensus processes within sub-basins. Their only reservation has been that some of the secretariat-type positions may need to be reserved

for agency staff who can provide appropriate technical assistance and capacity building support, at least until RSBOs reach a point in their development that they can provide these functions from other sources.

Effective open election or consensus processes for selecting RSBO leadership can also help build stronger cohesion among the assembly of representatives. In the case of elections where numerous factions exist, sometimes this process can be further encouraged by setting the standard for election higher than a mere plurality of voters. At the same time, close attention may also need to be paid to assure that elections are not divisive so that one alliance of factions can effectively capture the organization, and thus exclude the views and interests of others. This is one reason why some groups prefer processes that can result in a consensus whenever possible.

It is also important to note that, as Dr. Apichart has mentioned, there are already various capable and promising people who have stepped forward to assume leadership roles in predecessor activities to this project. ONEP and project staff are familiar with many of these people and have made efforts to include them in project events and activities. If establishment of more long-term RSBO arrangements entails new processes for selecting its leaders, some special effort should be made to make the reasons for this process clear to these people, so that they will be encouraged to be candidates if they so desire, and that the process does not reflect dissatisfaction regarding their previous work.

4. Institutional positioning and linkages

As we have seen in previous sections, RSBOs will need to develop various types of linkages with different types of organizations at levels that are both above and below the sub-basin level in organizational and natural resource hierarchies.[23] Perhaps one of the simplest ways to think of these linkages is to distinguish between two types: primary vertical linkages associated with subsidiarity and accountability, and primary horizontal linkages associated with alliances or coalitions.

(a) Subsidiarity and accountability (vertical) linkages

Subsidiarity. As introduced earlier[24], the principle of subsidiarity seeks to locate decision-making at the most local level where it is possible and effective. For RSBO's, this would mean that they would look to more local levels contained within their domain as the primary source for ideas, initiatives, and actions. Assuming households and villages are at the most local level, intermediate levels still more local than the RSBO would include local governments (TAO, *tessaban*), the district level of local administration, and civil society groups and organizations with membership and interests at smaller that sub-basin levels, and especially local sub-watershed management networks. Thus, in relationship with these more local levels, the RSBO would seek to address issues that more local levels find difficult or impossible to address by themselves, and to assess and address issues that only emerge at the broader sub-basin level.

On the other hand, the sub-basin level is the most local level of hierarchies that include larger 'sub-basins' (*e.g.* Upper Ping / Lower Ping), provinces, river basins (*e.g.* entire Ping), regions, river systems (*e.g.* Chao Phraya), and national levels. Within this context, the RSBO needs to be seen as a primary source of ideas, initiatives and activities at the sub-basin level, which would be at the component building block level of efforts to address legitimate concerns that emerge at, or are best managed by, these broader components of society and its natural resources. The RSBO would also view higher levels as a venue to which they could pass issues that it finds difficult or impossible to address within its own jurisdictional domain.

Accountability. While resource governance-related organizations at these various levels need to have sufficient recognition, authority, and resources to take the initiative on issues that are best addressed at their level, good governance also requires that they be accountable for their actions.

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[23] Sections I.B.3 and I.B.4 identify and discuss the relative positioning of sub-basins in these hierarchies.
[24] Section III.A.3.

Thus, RSBOs need to be accountable to levels both below and above their position in these hierarchies. Accountability requires mechanisms and tools that can provide real incentives and disincentives to help assure appropriate behavior.

Under current conditions, incentives for upward accountability to higher-level organizations relate closely to access to authority and funds derived from central sources. Downward accountability to lower levels relates primarily to the degree to which local constituencies can determine participation in the RSBO, both in terms of representation and the rules of the game. While higher-level authorities can withdraw funds or recognition, lower level groups can change members (if they have the authority) or withdraw local legitimacy through non-participation, non-compliance, boycott or active opposition. To the extent that implementation activities would be channeled through central agencies, provincial local administration, or local government, any of them could also withdraw support and any matching funds or other resources they are requested to provide – provision of such support is also a positive incentive for behavior seen as acceptable. Some groups may also be able to access auxiliary channels for seeking incentives or resolving disputes, such as through political organizations and hierarchies that are able to influence behavior at other levels.

(b) Alliances and coalitions (horizontal) linkages

It will also be useful, and at least for some issues important, for RSBOs to establish linkages with other organizations at or near the same level of institutional and natural resources hierarchies. As these would be essentially peer-to-peer types of relationships, they are conceived more as alliances or coalitions among organizations that share similar types and levels of concern.

Within the RBO framework, the most obvious type of horizontal linkage would be with other RSBOs. Since this current project focuses on pilot organizations in three of the 20 official sub-basins of the Ping River Basin, it will not yet have an opportunity to deal with dynamics that will occur at the river basin level once all sub-basins have functional RSBOs in place. Once this occurs, however, there should be an increase in sub-basin-to-sub-basin exchange. This is likely to result in the emergence of some degree of alliance formation among sub-basins with relatively similar characteristics and interests. Land use insecurity in forest lands and associated inability of local governments to establish local tax bases might be one possibility, concern about industrial water pollution might be another, and many more possibilities are conceivable. Insofar as these relate to upstream-downstream issues at river basin level (Upper/Lower Ping or entire Ping), negotiations among groupings of sub-basins may emerge. In another dimension, we might also see groupings of sub-basins wanting to focus on similar types of capacity building or public education lines of activity, or even groupings wherein RSBOs with greater capacity seek to help develop capacity of weaker ones. Many forms are possible, and such alliances may be short, medium or long-term in nature, and relatively focused or broad in scope. Relevance and appropriateness should determine the pathway, and flexibility should be substantial.

As a second type of linkage, RSBOs could also seek to facilitate building of horizontal alliances or coalitions among various types of organizations within their sub-basin. Participation by district administrations, local governments, civil society networks and groups, and local business operations and interests could be sought, as well as by units of central agencies based in or responsible for areas of the sub-basin. Even within various of these sector groupings, RSBOs could seek to facilitate alliances through which relevant issues are assessed, discussed and negotiated, including the manner in which their interests can be best represented in RSBO processes and negotiations. Emerging higher-level civil society networks could play a major role in such efforts in sub-basins where they are active, including direct collaboration with RSBOs.

A third type of linkages may involve support for building alliances or coalitions among similar types of groups, and/or groups with similar types of concerns, which cross sub-basin boundaries. Some of these groupings may already exist, such as the association of TAO in Chiang Mai province, for example, and may well be able to help assist with RSBO-related issues or activities.

Given this substantial range of promising directions for building alliances and coalitions, RSBOs may well want to consider where the comparative strengths of their own operations lie, and where they should seek to build partnerships with institutions that may be more advanced and capable of conducting various types of activities. Indeed, they may even want to seek assistance from RBO or other types of organizations at higher levels to help facilitate emergence or extension of civil society or other types of groups with special capacities to play prominent partnership roles in multiple sub-basins.

5. Legal status

There has already been considerable discussion under this project regarding the preferred legal status for RSBOs. While various parties appear to have their clear preferences, there are in principle a variety of options that could be adopted.

One option about which there has been little discussion, is for RSBOs to simply be <u>organizational sub-units under a River Basin Organization</u> and thus assume the same legal status as its parent organization. While this might simplify the overall procedures for establishing RSBOs, it would only pass to another level the question of legal status, which would then be raised regarding the RBO. Moreover, the uniformity this would impose on all RSBOs would undermine efforts to encourage self-determination, and decrease flexibility for local adaptation.

In any event, if we assume that each RSBO would have its own legal status, at least in principle, there would appear to be several options. The organization could be:

- <u>Operational unit that is a direct extension of an agency domain, and remains under the official authority of a ministry</u>. This type of unit would presumably be subject to all relevant general government and ministerial regulations and procedures. It would thus need to function in a manner similar to other government agencies, most probably as an analogue to a regional office of a central agency, or a unit similar to a national park. Non-ministry stakeholders would probably have a status of advisors, and official planning and budgets would follow normal procedures.

- <u>Separate government agency authorized to coordinate with other agencies and outside organizations</u>. This type of unit would be quite similar, but would need an institutional location within the central government that would allow it to have official linkages with multiple ministries. This option has been used at the RBO level in some other countries. Given the government coordination difficulties in the Thailand case, it is difficult to see where it could be located other than under the Prime Minister's Office. And even then, history indicates its ability to function effectively would in no means be a foregone conclusion.

- <u>Committee established under the authority of a provincial governor</u>. This type of unit would rely on the coordination mandate of the provincial governor and the local administration system to bring together multiple ministries and non-governmental groups and interests. Sub-basins with portions of their area in different provinces would need to seek arrangements that could be mirrored and matched in each province. This is the approach that appears to be most commonly proposed and used to establish the initial sub-basin committees.

- <u>Semi-independent commission or authority</u>. While this is a less common practice that would probably involve a quite elaborate establishment process in the case of Thailand, it is a form of organization that has been used at the RBO level in several countries. Although constrained to follow various basic government procedures, this type of organization could have considerably more flexibility and greater engagement with non-governmental groups and interests, depending on the terms specified in its establishment.

- <u>Independent semi-formal organization recognized through registration under one or more specific ministries</u>. This might be a relatively easily implemented option that has been used in the past by various ministries. While it can be rapid, simple and relatively flexible, one of its major limitations is its lack of recognition and legitimacy in relationships other than with the ministries under which it is registered and recognized.

- <u>Legally independent non-profit association or foundation</u>. This option would make the organization a legally registered and recognized juristic entity (*nittibukon*) that can, among other things, engage in legal contracts and be sued in a court of law. It would become, in essence a formal NGO (although that term commonly has a more narrow definition in Thailand).

- <u>Informal network of local government and civil society institutions</u>. This informal network option would mean the organization would remain at the informal civil society level, although it might be able to become recognized as a *prachakhom* organization by local government institutions in the sub-basin.[25]

Another option employed in some cases elsewhere in the world, is where RBOs have been established as <u>semi-private or private companies or corporations</u>. This option is usually associated with situations where the company operates income generating infrastructure or services (most often associated with hydropower, irrigation, or water supply), and where the government may hold some degree of ownership or stock. Since no such activities have been proposed thus far for RSBOs in Thailand, this option is not explored further in this report. If such operations became part of plans in the future, however, this type of company or parastatal enterprise might also be considered.

Juristic identity

A significant point of discussion and debate as this project has been unfolding is whether and when RSBOs should register as juristic entities (*nittibukon*). As seen in the listing above, in Thailand this usually implies official registration as an association, a foundation or a private company or corporation. In this respect, TAO are both elected local governments and juristic entities, but such status is derived from special legislation passed by Parliament that provides for their establishment and enhanced functions. Thus, if RSBOs are to be registered under existing legal provisions, we must assume that their choices are limited to the usual legal options.

Major positive impacts of becoming a juristic entity that are frequently mentioned include: (1) both perceived and legal independence from any parent or patron institution or organization; (2) ability to enter into legal agreements; (3) accountability through the regular legal system; and (4) accessibility to a range of funding sources.

Some of the potential negative aspects of becoming a juristic entity that sometimes enter into the opposite sides of these discussions include: (1) more formal structures and rules may decrease organizational flexibility and advantages of informal communications and relationships; (2) it may increase perceptions that the RSBO is seeking to compete with TAOs, *tessaban* or provinces regarding mandates, jurisdictions, duties, power, and/or budgets; (3) there may be legal problems regarding the authority of RSBOs if there are needs for them to engage in regulation and enforcement activities; (4) it is not clear whether they would be legally able to receive regular budgets from central government sources, as some have said they would like to see, or whether they would be limited to grants through processes similar to other NGOs; (5) it is not clear what tax implications there may be for various types of activities in which they may engage. Specialized legal counsel may be able to answer some of these questions.

In short, there appears to be no 'magic' associated with juristic entity status, and there may be some trade-offs involved. In principle, juristic entity status may appear to be most desirable for RSBOs organized along the lines of multi-level and/or cross-sector partnerships (such as models 2, 3 and 4 in section III.C.), whereas there the advantages for RSBOs associated more strongly with central government agencies (such as models 1 and 2 section III.C.) are much less clear.

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[25] See section II.B.2.(h) for discussion of these types of institutions and arrangements

6. Operational components and specialists

RSBOs must also consider the types of operational component sub-units that the organization should have, and the types of specialist skills that will be required for them to function properly. Given the large variation in conditions among Ping River sub-basins, a standard one-size-fits-all type of blueprint approach appears to be very inappropriate. It is also inappropriate in principle to seek to impose a particular structure on a 'participatory' organization. There are, however, at least three basic types of components that RSBOs need to consider:

(a) RSBO assembly.

This would be the main plenary body where the full range of representatives in the sub-basin conducts overall deliberations and decision-making processes. Whether it is called an assembly, an association, a commission, a committee or something else is not important, although it may be desirable to have some degree of consistency in terminology among sub-basins. Major issues regarding its membership and the manner in which they are selected were discussed above under representation.[26]

(b) Working groups.

In most all cases, RSBO assemblies will likely need to establish working groups or sub-committees to focus on individual issues and/or types of activity. Some of these may be 'standing' or relatively permanent working groups that conduct activities that are necessary on an on-going or periodic basis over long periods of time. Others may be 'ad hoc' or more temporary working groups that are organized to address a specific issue or task, and they can be disbanded when the issue is resolved or task is accomplished. Establishment and membership of both types of working groups should be deliberated and approved by the RSBO assembly, which should be the source of authority and mandate of the working group.

In terms of permanent working groups, we have already noted that at the Upper Ping and Lower Ping levels there are currently three working groups focused on (1) planning (2) data and information, and (3) public relations and awareness. Dr. Apichart has noted how participation and local initiative increased after working groups were established, which underscores the importance of these working groups, as well as the need for them to have capable and motivated leaders and staff, along with the resources required for them to conduct effective operations.

The types of permanent working groups at the Upper/Lower Ping level covers three important areas, although this author would prefer to rename the groups as (1) program and project planning; (2) data and information; and (3) public participation and awareness. In addition, it is strongly recommended that two additional areas be considered[27]: (4) problem identification and analysis, and (5) monitoring and learning. These are all functions that need to be considered, but each RSBO assembly should ultimately determine how they are operationally grouped and labeled in a given sub-basin, along with other functions that they may identify themselves.

In considering these issues, the RSBO assembly should also consider interests, special skills, and capacities of RSBO assembly representatives and potential staff, as well as the special interests, local knowledge and skills of individuals, groups and organizations in the sub-basin that may be well suited for forming partnerships with the RSBO in conducting some of these activities. In such cases, however, the RSBO will still need to retain a strong oversight role. In any event, the RSBO will need to identify any gaps in the mix of specialist skills needed, and develop a strategy for building appropriate capacity, or gaining access to those skills from other sources.

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[26] See section III.B.2.
[27] See discussion of RSBO roles and responsibilities in section III.B.1.

(c) Secretariat.

RSBO assemblies will also most likely need to establish secretariat operations to conduct regular administrative and operational tasks that will be required for the RSBO to function smoothly, efficiently, and effectively. Administration, communications and financial management will be among the important core functions for all sub-basins, and others may be identified locally.

In addition to its core operational tasks, a second set of important secretariat functions would be to provide the operational base for activities of both permanent and temporary working groups. One obvious example would be for a permanent working group on data and information management, which will be of critical importance for many RSBO functions and will require some type of supporting technical staff and equipment infrastructure. Similarly, a group on public participation and awareness is likely to require a fixed contact point, and its own materials and equipment.

There will be an important set of decisions associated with where secretariat functions will be located and how they will be operated, and preferred outcomes are likely to vary among sub-basins. At least initially, there may well be a need for at least facilities and logistical support that may need to be provided by a unit of a central agency, local administration, or other type of organization in the sub-basin. And in the case of such support coming from a government unit, its policies or regulations may require that an official from that unit be an official member of the secretariat. While it is not recommended that any particular agency should automatically be head of the RSBO secretariat in all sub-basins, universal presence at the request of RSBOs should pose on problem. Indeed, there may be certain functional relationships that an agency could provide to RSBOs, from which such widespread acceptance would be a logical result. Such arrangements might be particularly relevant in relation to data and information systems (especially GIS, databases and electronic networking) and capacity building. Indeed, capacity building is particularly important, and concerted efforts should be made by all major stakeholder groups to help build relevant aspects of capacity in the RSBO and its working groups and secretariat.

C. Proposed Array of Organizational Alternatives for RSBOs

Given the various alternative structural options under each of the considerations discussed in the previous section, it appears there are an almost infinite number of structural variations possible for RSBOs to choose from. There are, however, some important factors that further constrain the domain of choices. Perhaps the most important ones relate to the need for some internal consistency to avoid incompatibilities among options for different dimensions of RSBO structure and function. Many such incompatibilities would most certainly lead to important problems or the demise of the organization within a short period of time, while others would sow the seeds of tension and contradiction that would at least be likely to cripple the organization over the longer term.

In order to paint a clearer picture of how various relatively internally consistent and compatible combinations can provide a set of reasonably realistic alternative scenarios for RSBO organization, this section describes five alternative organizational models that represent variations falling under three generic types. The unifying theme for distinguishing these generic types centers on identity, participation and subsidiarity issues discussed in previous sections.

Under this participatory watershed management project, it must be stakeholders within a sub-basin who decide for themselves what type of 'model' of organization is best for them. Thus, to help facilitate decisions by sub-basin committees and stakeholders regarding the type of RSBO they want to establish, a comparison chart of various major structural and organizational characteristics of each indicative type of model is presented in Figure 3-5. In addition to providing an overview of model types, the chart may also be useful in considering how changes in various components are associated with changes in overall orientation of alternative types of RSBOs. Indeed, the choices made in pilot sub-basins, and the similarity or differences among them, should be very informative for efforts to develop support services, and to anticipate options and needs for Ping sub-basins at the overall level.

It is important to note that many of the attributes described for each of these models could be altered or adjusted in various ways. Thus, the specific combinations chosen are meant to be indicative of a certain type of RSBO organizational model, but each can be further 'tweaked' and 'fine tuned' to improve its performance under specific conditions.

1. Government-oriented models

These two indicative models continue past trends in Thailand toward establishment of RBOs and RSBOs through central government initiative aimed primarily at improving government programs.

Type 1. Focused government model

The central focus of this model is on efficiency and effectiveness in utilizing the institutional apparatus of a single ministry to implement activities within the mandate of that ministry – in this case the Ministry of Natural Resources and Environment (MoNRE). Thus, participation under the RSBO is primarily to assist and improve the design and implementation of MoNRE programs. Major characteristics include:

- Mandate: Since this model focuses on the mandate of MoNRE, the scope of the RSBO mandate is limited primarily to issues related to water use, forest land use, various forms of pollution, and solid waste and waste disposal.

- Roles & responsibilities: The role of the RSBO is primarily to provide advice and assistance for MoNRE agencies in identifying and analyzing problems, project planning, and monitoring environmental conditions. Central agency staff conduct implementation, other types of monitoring, and any regulatory or incentive measures through their normal operational channels, but are assisted by the RSBO in public awareness and training activities.

- Main source of authority & legal identity: MoNRE provides authority for establishing the RSBO and for the various lines of activity it conducts, in a manner somewhat similar to a regional office of a central agency. It is probably not particularly necessary to seek an independent legal status.

- Representation: All relevant departments and agencies of MoNRE contribute representatives. Provincial local administrations are invited to assign representatives, including district officers, kamnan and village headmen in the sub-basin, in addition to TAO leaders. Relevant livelihood, business and/or industry representatives are nominated by heads of agency units of the ministry located in the sub-basin, and/or local administration leaders. MoNRE conducts final selection of representatives and appoints them through an official directive.

- Leadership, assistance, information: Chairman, deputy and main secretariat positions are all filled by officials from units of agencies under MoNRE. Under a lead agency approach, DNP continues to provide leadership in Upper Ping sub-basins, and DWR continues to lead work in Lower Ping sub-basins. Technical assistance and information are provided by various units of MoNRE, who are able to hire consultants or commission studies when needed.

- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on the administrative hierarchy of MoNRE. Downward linkages focus primarily on local units of agencies under MoNRE, and on district officers, kamnan and TAO leaders. Relationships with local civil society organizations are informal and under the discretion of local agency and local administration staff.

- Main funding sources: Funds come primarily from central government budget allocations to MoNRE and its relevant departments and agencies, through which allocations are made to RSBO activities. Project plans are incorporated into regular processes, and implementation flows through normal agency and TAO channels.

While in many ways this appears to be a government agency business-as-usual model, there are still several ways in which it would be an improvement over current conditions. It would, for example, require some real coordination among departments of MoNRE, in order to develop a uniform set of ministry guidelines regarding sub-basin delineations, leadership and responsibilities, a single set of sub-basin organizational arrangements, *etc*. Moreover, many of the issues related to confusion could be clarified in the context of a relatively narrow focus, and action plans could be adapted quite readily from earlier plans already produced under activities led by DWR and DNP. In comparison to other approaches, this model would be relatively quick and easy to define and organize, and it could probably be established through a ministry-level directive issued by MoNRE.

The key potential weaknesses of this model relate to its tendency to be dominated by the views and policies of a single ministry. The identity of the RSBO will likely tend to become regarded as a public relations interface for MoNRE and its agencies and associates. Emphasis will tend to be strong on water, soil and forest conservation, water use and pollution, waste and trash reduction and disposal, and any other major programs of the ministry. Remedial measures will tend to be strong in these areas, but unable to address major underlying causes that require broader consideration or action by other ministries or sectors.

RSBOs preferring this type of model might seek to mitigate potential weaknesses by modifying arrangements to include, for example, at least some elected leaders and broader local network and civil society representation, by employing public hearings and other types of tools to enhance public participation and transparency, and/or by seeking stronger interaction with planning processes of local governments in the sub-basin regarding broader underlying issues and associated development needs.

Type 2. <u>Broader government model</u>

The main focus of this model is still on efficiency and effectiveness in utilizing government institutional arrangements and mechanisms, but the scope is broadened to include activities within the mandate of multiple ministries. Given the difficulties in coordination among ministries at high levels, the provincial local administration hierarchies are brought in as a partner to assist with coordination and integration of plans at more local levels. Its major characteristics include:

- <u>Mandate:</u> Since this model focuses on mandates of multiple ministries (MoNRE, MoPH and MoAC), the scope of the RSBO mandate includes issues related to water use, forest land use, various forms of pollution, and solid waste and waste disposal, as well as agricultural production and public health.

- <u>Roles & responsibilities:</u> The role of the RSBO is primarily to provide advice and assistance for agencies of MoNRE and other partner ministries in identifying and analyzing problems, project planning, and monitoring environmental conditions. Agency staff under each ministry conduct implementation and other types of monitoring, as well as any regulatory or incentive measures, through normal operational channels, and are assisted by the RSBO in conducting public awareness campaigns and training activities.

- <u>Main source of authority & legal identity</u>: Since this model involves multiple ministries, the highest level of authority needs to come from either a unit such as the Prime Minister's Office, or through a formal agreement among the three ministries. This is complemented by authority from provincial governors for establishing the RSBO and conducting coordination and integrated activities within each province. It may seek an independent legal status in the future if it is useful.

- <u>Representation:</u> All relevant departments and agencies of MoNRE and partner ministries contribute representatives. Provincial local administrations, including district officers and kamnan, are represented. Local governments are represented by TAO leaders. Relevant livelihood, business and/or industry, and civil society organization representatives are

nominated and selected by other representatives. Final appointments are by the provincial governor through an official directive.

- <u>Leadership, assistance, information</u>: Chairman, deputy and main secretariat positions are all filled by officials from units of agencies under MoNRE, partner ministries, or the provincial local administration. Technical assistance and information are provided by various units of MoNRE, partner ministries, local administration offices, and/or short or long-term consultants that can be hired by the RSBO or participating agencies.

- <u>Primary linkages</u>: Upward linkages for subsidiarity and accountability place strong emphasis on the administrative hierarchies of MoNRE and partner ministries, as well as any higher level office (*e.g.* PM's Office) that may be involved. These may include organizations at higher river basin levels (RBOs), which may be an intermediate level for relations with higher levels for various issues or processes. Downward linkages focus primarily on local units of agencies under MoNRE, partner ministries, and local administration officials and kamnan, as well as TAO leaders. Relationships with other local civil society organizations are informal and accountability depends on their relationships with local administrations and local government.

- <u>Main funding sources</u>: Funds come primarily from central government budget allocations to MoNRE and partner ministries, and perhaps to some extent provincial governors, through which support is provided for RSBO operational activities. Project plans are incorporated into regular processes, and implementation flows through normal agency and TAO channels.

Relative to the focused government model, this may be a more ambitious model to implement, but it also provides some important additional features. In addition to requiring substantially improved coordination among MoNRE policies and agencies, the model also seeks coordination among multiple ministries. As this is not likely through normal channels, the model relies on an umbrella high-level directive or cross-ministry agreement, combined with a partnership with provincial governors and local administration to help coordinate activities at sub-basin and more local levels. With broader government participation, it may be able to consider and address some more complex underlying causes and effects of sub-basin problems, and encourage more broad-based local participation.

The key potential weaknesses of this model relate to tendencies toward domination associated with its still strong links with central and provincial government. It may be difficult to attract and maintain participation by strong local leaders who want to avoid domination by officials, and local factions friendly with government officials may seek to capture control. Moreover, there may be a tendency for the RSBO to be regarded primarily as a source of government funds, resulting in local tendencies to say what they think central agencies want to hear in order to obtain funds that can help boost factional prestige and welfare.

RSBOs preferring this type of model might seek to mitigate potential weaknesses, for example, by modifying arrangements to include at least some elected leaders, by more transparency and local initiative in selecting local representatives, and by employing public hearings and other types of tools to enhance public participation and transparency. It may also want to emphasize strong interaction with planning processes of provinces and local governments in the sub-basin regarding broader underlying issues and associated development needs, both within and beyond mandates of participating ministries.

2. Multi-level partnership models

These two indicative models employ multi-level partnerships to establish the sub-basin level as the primary venue for an interface between top-down and bottom-up processes.

Type 3. <u>Central – local partnership model</u>

This model places its main focus on creating a real partnership among groups and organizations from central to local levels, but with a degree of asymmetry that assigns somewhat greater weight to central and provincial government agencies. Primary coordination and integration functions are shifted to provincial and local levels, and implementation plans are integrated into the regular development planning process. This reduces or eliminates needs for formal cross-ministry agreements at high levels, while expanding the range of issues available for RSBO consideration. Major characteristics include:

- <u>Mandate:</u> Since this model centers on a central-local partnership, its mandate can be broader than issue areas directly under the mandate of MoNRE and specific partner ministries. Thus, RSBO mandates could expand to include water use, forest land use, agriculture, pollution, solid waste and waste, public health, education, infrastructure, livelihoods and/or other issues of local relevance and importance for management at the sub-basin level.

- <u>Roles and responsibilities:</u> The role of the RSBO under this model shifts into more of a leadership mode for tasks such as identifying and analyzing problems, planning, monitoring of environmental conditions and program impacts, and conducting public awareness campaigns. Project implementation and monitoring are probably still through normal agency, local administration and local government channels, with the RSBO providing more advice to improve implementation operations and monitoring, and assisting with training activities. It may also be possible for the RSBO to have a stronger implementation role and directly receive funds that it manages and allocates among partner institutions, local governments and civil society groups and networks. In any event, the RSBO takes a leading role in monitoring environmental conditions and program impact, with assistance from its various stakeholder groups.

- <u>Main source of authority & legal identity</u>: There are multiple sources of authority that include MoNRE and other participating ministries, provinces and their local administrations, and local governments in the sub-basin. RSBO establishment is under the authority of provincial governors. It may well want to seek a more independent legal status whenever members feel it is appropriate and useful, but it will need to consider how that may affect any regulatory roles or funding channels that are included in its operational design.

- <u>Representation</u>: Central ministry representation includes MoNRE and any other ministries that are seen as important for fulfilling the scope of the locally agreed upon RSBO mandate. Local administration is represented by provincial, district and kamnan levels, and local government is represented by TAO leaders or their selected representatives. Representatives of business, industry, livelihood groups, civil society and local communities are invited, and may be selected by voting or consensus in the RSBO assembly – selection of the initial set of representatives may require a larger forum or other mechanism to solicit nominations from a relatively broad base within sub-basins. There is a rough balance among governmental and local representatives.

- <u>Leadership, assistance, information</u>: Under this model, RSBO chairman and deputy positions are filled by the RSBO assembly through voting or consensus procedures. Secretariat positions are filled by a mix of officials designated by agency or local administration leadership, and staff selected by the RSBO assembly through voting or consensus procedures. Technical assistance and information are solicited from and provided by a wide range of

government and non-government sources, including agencies, local governments, academics, civil society organizations, and other non-governmental and private sector sources.

- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on provinces and higher-level river basin organizations (RBOs), as well as administrative hierarchies of MoNRE, other ministries that may be involved, and provincial governors. Downward linkages emphasize local governments, participating civil society organizations, and other groups represented in the RSBO assembly, as well as district administrations and local units of agencies under MoNRE and other participating ministries.

- Main funding sources: Funding for RSBO operations and activities come from a combination of sources that include budgets allocated to MoNRE and other central agencies, discretional funds under the provincial governor, and local government budgets.

This model represents efforts by MoNRE and its agencies to reach downward in administrative and natural resource hierarchies to form a real partnership with local administration, local governments, civil society and other local stakeholder groups. While the ministry and province local administration still provide a degree of leadership, this model encourages and requires much more active local participation and decision-making.

Key potential weaknesses relate to its greater complexity and needs for coordination, as well as a need for strong local leadership that can balance tendencies toward domination by government, local elites, business interests or other locally influential factions.

RSBOs preferring this type of model might seek to mitigate potential weaknesses by seeking multi-level dialogue with partner institutions, and by seeking ways to encourage and strengthen capacity of local leaders, as well as mechanisms to assure transparency, accountability and access to information.

Type 4. **Local – Central partnership model**

The main focus is also on creating a real partnership among groups and organizations from central to local levels, but with a degree of asymmetry that assigns somewhat greater weight to local government and civil society groups and institutions.

- Mandate: Since this model centers on a local-central partnership, its mandate can be much broader than issue areas directly under the mandate of MoNRE and specific partner ministries. Thus, RSBO mandates expand to include water use, forest land use, agriculture, pollution, solid waste and waste, public health, education, infrastructure, livelihoods and/or any other issues deemed to be locally relevant and important at the sub-basin level.

- Roles and responsibilities: The role of the RSBO under this model is to provide leadership for most tasks, including identifying and analyzing problems, formulating programs and plans, and monitoring of environmental conditions and program impacts. Projects are implemented and monitored through normal agency, local administration and local government channels, but the RSBO provides both advice to and local assistance for implementation operations, and assists with project monitoring. It may also be possible for the RSBO to have a stronger implementation role and directly receive funds that it manages and allocates among partner institutions, local governments and civil society groups and networks. The RSBO takes the lead role in monitoring environmental conditions and program impact, with assistance from its various stakeholder groups, and in conducting active public awareness campaigns and public education programs.

- Main source of authority & legal identity: There are multiple sources of authority that include sub-basin local governments, provinces and their local administrations, MoNRE and its agencies, and other participating ministries, as well as from public awareness and support. Initial RSBO establishment is under the authority of provincial governors. In order to

strengthen its identity as an independent organization, it would most likely want to register as an independent juristic entity as soon as possible. In doing so, however, it will need to consider how that may affect any regulatory roles or funding channels that are included in its operational design.

- Representation: Central ministry representation includes MoNRE and any other ministries that are seen as important for fulfilling the scope of the locally delineated RSBO mandate. Local government representatives play very active roles, while local administration is represented by provincial, district and kamnan levels. Representatives of business, industry, livelihood groups, civil society and local communities may be selected by voting or consensus in the RSBO assembly, or selected by local constituent groups where they are present. Development of constituent groups or alliances at the sub-basin level is encouraged, and new groups or alliances may petition the RSBO to request representation. While governmental representatives are prominent, local representatives have at least a modest majority.

- Leadership, assistance, information: Under this model, RSBO chairman and deputy positions, as well as secretariat positions, are filled by the RSBO assembly through voting or consensus procedures. People are nominated for these positions according to their personal characteristics and standing, rather than their institutional affiliation. Technical assistance and information are solicited from and provided by a wide range of government and non-government sources, including agencies, local governments, academics, civil society organizations, and other non-governmental and private sector sources.

- Primary linkages: Upward linkages for subsidiarity and accountability place strong emphasis on provinces and higher-level river basin organizations (RBOs), as well as units of MoNRE and other ministries responsible for national and other relevant policies that affect sub-basin issues and activities. Downward linkages emphasize local governments, civil society networks and organizations, local communities, and other constituent groups represented in the RSBO assembly, but also include local units of agencies under MoNRE and participating ministries.

- Main funding sources: Funding for RSBO operations and activities come from a combination of sources that include local government budgets, discretional funds under provincial governors, and budgets allocated to MoNRE and other central agencies, as well as any available grants or non-governmental sources.

This model represents efforts by local governments and organizations in the sub-basin to organize themselves and reach upward in administrative and natural resource hierarchies to form a real partnership with provincial local administration, government agencies under MoNRE and other participating ministries, and any other relevant stakeholder groups. Its structure helps reduce threats of government domination, but requires strong local leadership, participation, and initiative.

Key potential weaknesses relate to its complexity, and threats of local factional domination, or stagnation if different local interests cannot negotiate effectively among themselves.

RSBOs preferring this type of model might seek to mitigate potential weaknesses by seeking ways to strengthen the roles and capacity of local networks, civil society institutions, local government, and constituency groups, by encouraging local leadership and initiative, by strengthening negotiation and conflict management capacity, and by providing regular forums for communication among all sectors, as well as through mechanisms to assure transparency, accountability, and strong public information, education and participation programs.

3. Non-government alternative models

This indicative model views the RSBO as a further extension of bottom-up non-governmental processes.

Type 5. <u>Local non-government model</u>

The main focus is on effectiveness in mobilizing non-governmental groups and civil society institutions to formulate, advocate and monitor activities within the mandate of the RSBO. Its major characteristics include:

- <u>Mandate:</u> Since this is a non-governmental model, its mandate is very flexible and can be much broader than issue areas directly under the mandate of any set of ministries. Thus, RSBO mandates can include water use, forest land use, agriculture, pollution, solid waste and waste, public health, education, infrastructure, livelihoods and/or any other issues deemed to be locally relevant and important at the sub-basin level, and they can be re-grouped and repackaged according to local analyses and needs.

- <u>Roles and responsibilities:</u> The role of the RSBO under this model is to provide leadership especially for identifying and analyzing problems, and for monitoring project and program impacts. While they can also provide leadership for program and project planning, they can only propose and advise that their plans are adopted by local governments and/or central agencies and their ministries. They can also serve as advisors for implementation projects under normal agency, local administration and local government channels, including monitoring. The RSBO takes an advisory or assistance role in monitoring environmental conditions, with assistance from its various stakeholder groups. The RSBO places very strong relative emphasis on public awareness and public education, as well as on mobilization campaigns to place constructive pressure on politicians and government agencies to improve their programs.

- <u>Main sources of authority & legal identity</u>: Given its non-governmental orientation, the main sources of its authority are less formal than other models. Much of its authority is determined by the degree to which it is recognized as a relevant civil society *prachakhom* institution by sub-basin TAOs, and can thus act as an advisor to local government. Its other primary source of authority comes from popular support through its public awareness, public education, and mobilization campaigns, and resulting political influence through electoral processes. Initial RSBO establishment is as an informal network, but it may seek to evolve into a more independent legally registered non-government entity in the future.

- <u>Representation:</u> RSBO membership centers on representatives of civil society, livelihood groups, business, industry, and local communities that may be selected by voting or consensus in the RSBO assembly, or selected by local constituent groups where they are present. Development of constituent groups or alliances at the sub-basin level is encouraged, and new groups or alliances may petition the RSBO to request representation. Central ministry, local administration, and local government representation is through advisors invited by the RSBO assembly.

- <u>Leadership, assistance, information</u>: Under this model, RSBO chairman and deputy positions, as well as secretariat positions, are filled by the RSBO assembly through voting or consensus procedures. Chairman and deputy positions are limited, however, to those who are not government officials. Technical assistance and information are solicited from and provided by local governments, as well as academics, civil society organizations, and other non-governmental and private sector sources. Information, data, and training assistance are also solicited from local administration and relevant government agencies, but access is often limited to what is available to the general public.

- <u>Primary linkages</u>: Upward linkages for subsidiarity and accountability place strong emphasis on higher-level river basin organizations (RBOs). Downward linkages emphasize civil

society networks and organizations, local communities, local governments and other constituent groups represented in the RSBO assembly.

- Main funding sources: Since regular funding for RSBO operations and activities from government sources are extremely limited, support is primarily from local governments through their *prachakhom* status, grants from various government or non-government organizations (usually on a project-type basis), and any other available non-governmental sources.

This model represents efforts by local non-governmental groups and organizations in the sub-basin to lead efforts to organize themselves into an independent RSBO outside the government sphere, in order to conduct independent analyses, program planning and monitoring activities that seek to provide advice and some assistance to local governments, provincial administrations, and central agencies, as well as strong efforts to raise public awareness and mobilize public support and pressure for integrating improvements into all relevant decisions made in the public policy arena. Its strengths relate to its independence, flexibility, and strong grounding in local communities and conditions, and its access to information, advice and assistance from a wide range of non-governmental and academic sources. Similar models have sometimes been applied internationally, such as in the Fraser River Basin in Canada where strong issues between the government and Native American communities made it the option most acceptable to all stakeholders [Calbick 2004, Blomquist 2005f].

Key potential weaknesses relate to the absence of formal links with government organizations, which may result in weakened ability to influence develop planning processes, less access to government information, less ability to interact constructively with higher policy levels representing wider stakeholder interests beyond the sub-basin, and less access to basic support to sustain its operations over the long term.

RSBOs preferring this type of model could seek to mitigate potential weaknesses by upgrading roles for at least local governments, by building mechanisms to assure regular constructive interaction with relevant government institutions and agencies at multiple levels, by registering with ministry funding programs for NGOs and peoples organizations, as well as by seeking clear *prachakhom* recognition by all TAOs and *tessaban* in the sub-basin. The RSBO secretariat may also want to include a unit responsible for exploring a wide range of possible funding sources.

Figure 3-5. Comparison chart of five indicative alternative models for sub-basin organization.

	Focused Government	Broader Government	Central-Local Partners	Local-Central Partners	Local Non-Government
Scope of Mandate					
water use	X	X	X	X	X
forest land use	X	X	X	X	X
agriculture land use		X	X	X	X
pollution	X	X	X	X	X
solid waste / trash	X	X	X	X	X
health		X	X	X	X
education			X	X	X
infrastructure			X	X	X
livelihoods			X	X	X
Duties					
identify & analyze problems	advice/assistance	advice/assistance	lead	lead	lead
planning	advice/assistance	advice/assistance	lead	lead	lead / advise
implementation		advise	advise	advise / assist	advise
implementation monitoring		advise	advise	assist	advise
environmental monitoring	advice/assistance	advice/assistance	lead	lead	advise / assist
impact monitoring		advise	lead	lead	lead / assist
Main authority sources	ministry	ministries - prov	min - prov - TAOs	TAOs - prov - min - public	TAOs advisor / public awareness
Representation					
ministries	MoNRE agencies	MoNRE, agric, health	MoNRE, other relevant	MoNRE, other relevant	invited advisors
province / district	Prov - Dist Officers	Prov - Dist Off-Kamnan	Prov - Dist Off-Kamnan	Prov - Dist Off-Kamnan	invited advisors
local government	TAOs, Kamnan	TAOs	TAOs	TAOs	invited advisors
business / industry	selected	selected	invited / voted	voted / group-selected	voted / group-selected
livelihood groups	selected	selected	invited / voted	voted / group-selected	voted / group-selected
civil society	<informal>	selected	invited / voted	voted / group-selected	voted / group-selected
local communities	selected PYB	selected	invited / voted	voted / group-selected	voted / group-selected
Leadership					
chairman / deputies	Officials	Officials	voted	voted	voted local non-gov
Secretariat	Officials	Officials	officials / voted	voted	voted
Technical info/advice	Officials	Officials / consult	offic / acad / priv / non-gov	offic / acad / priv / non-gov	gov / acad / priv / non-gov
Primary Linkages					
Upward	Ministry	PingRB / Ministries	PingRB / Prov / Min	PingRB / Prov / Min	PingRB
Downward	Min units / District	Districts / TAOs	District / TAOs	TAOs / Networks / groups	Networks / groups
Main funding sources	MoNRE	Ministries	Min / Prov / TAOs	TAOs / Prov / Min / non-gov	TAOs / grants / non-gov

D. Proposed Process for Developing RSBOs in Pilot Sub-Basins

This section seeks to place decisions related to establishing and developing long-term RSBOs in pilot sub-basins in the context of five general development phases. This sequence of phases has already begun, and will extend far beyond the timeframe of this project. International experience confirms that development of effective long-term river basin organizations is a long-term process. Thus, expectations about the contributions that a project such as this one can make to RSBO development in Ping sub-basins need to be realistic, and they need to be formulated and assessed within this longer-term framework.

Sequential Phases in RSBO Development

The five phases of RSBO development proposed in this section are based on a range of assessments from international literature, much of which is listed in the bibliography. But they are also constructed in a manner that reflects the particular circumstances faced by this project in the context of current conditions in the Ping Basin, as discussed in previous sections of this report. The five phases of RSBO development proposed for this project are listed in Figure 3-6.

Figure 3-6. Phases of Ping RSBO Development

1. Getting started
   - Preliminary sub-basin committees
   - Initial action planning process

2. Establishing long-term organization and processes
   - Review initial planning experience
   - Select, localize and establish long-term RSBO organizational model

3. Launching implementation in a River Basin Management framework
   - Outline initial long-term River Basin management plan
   - Begin implementation and monitoring
   - Begin systematic capacity building
   - Build parallel Ping Basin – level support capacities

4. Strengthening long-term management planning and learning processes
   - Management plan elaboration, refinement and consensus building
   - Annual progress reviews, learning and adjustments

5. Maintaining long-term organizational relevance, vitality &performance

In theory, and for many river basins in practice, efforts to establish and develop river basin organizations seek to move through a logical process of analysis, consensus building, organization and planning before any implementation activities begin. In this case, however, a multi-stage process is proposed wherein an initial 'getting started' phase provides for a preliminary sub-basin committee and initial action planning process, in order to build on existing plans and locally perceived needs to begin implementation. This is followed by a second phase wherein experience from the first phase is reviewed as a basis for informing the process of selecting and establishing an organizational structure for the long term RSBO. The third phase completes the launching process for the long term RSBO by formulating an initial outline for a long-term basin management plan, and beginning implementation, monitoring, and capacity building activities. The fourth phase moves to a multi-year time frame wherein the long term management plan is carefully elaborated and refined based on the most widespread consensus possible among stakeholders, and on learning and adjustments that follow from annual reviews of progress. The fifth and final stage employs an even longer time frame, wherein the overall goals, programs, structure and functions of the RSBO are reviewed and adjusted in order to assure its continuing relevance, vitality and performance. A final section discusses factors likely to affect the time that is likely to be required during these phases.

1. Getting started

This initial phase is somewhat unusual when compared to international literature and guidelines on river basin organization development. It is proposed, however, in response to contextual conditions present in the pilot sub-basins, and indeed in all sub-basins of the Ping river basin. As explained in previous sections, this project is the most recent in a series of efforts to develop action plans for the Ping river basin. But thus far, there has been very little implementation of any of the activities and

projects that have been planned, and many have begun questioning the credibility of the overall Ping basin program. Thus, this phase is designed to mitigate some of these concerns by quickly establishing a preliminary basin committee and developing an initial action plan that seeks to build on previous plans while introducing a broader mandate, formulation of initial sub-basin goals and objectives, and articulation of initial priorities and selection criteria, which are then applied during review and screening of existing and new project proposals.

(a) Preliminary sub-basin committees

The approach of this project was to establish an initial sub-basin committee for each pilot sub-basin. A draft directive specifying membership (Figure 3-7) and major responsibilities for each committee was reviewed during initial workshops in each sub-basin. Workshop suggestions were incorporated into a final version being prepared for provincial governors to issue as a directive. Coordination issues were also explored regarding requirements in the sub-basins where more than one province is involved (Mae Kuang and Ping part 5), as well as issues raised in Ping Part 5 (Lower Ping) regarding wider agency representation. Draft directives were similar in form and format to earlier directives used to establish committees under previous planning activities.[28] Indeed, even during a further expansion phase, a convening function and authority will be necessary.

Although discussions and plans have varied as the project unfolded, at this point the author was told to consider preliminary committees as already established. More formal long-term RSBOs would be considered later in the project. Thus, the focus here is on long-term RSBOs to manage and further develop sub-basin programs into the future.

If the final structure of preliminary committees was reasonably similar to

	Ping 1		M Kuang		Lower Ping	
DWR official					chair	1
DNP offical	chair	1	chair	1		
Province MoNRE	vice chairman	1	vice chairmen	2	vice chairmen	2
ONEP	secretary	1	secretary	1	secretary	1
Head, SB coordinating WG	secretary	1	secretary	1	secretary	1
district officer	position	5	position	7	position	8
TAO	representatives	4	representatives	8	representatives	8
local people rep	named	1	named	1	named	1
local advisors rep	named	1	named	1	named	1
NGO rep	named	1	named	1	named	1
SB witayakorn	*to be selected*	1	*to be selected*	1	*to be selected*	1
ethnic minorities	*to be selected*	4	*to be selected*	1	*to be selected*	0
teacher/respected person	*to be selected*	1	*to be selected*	2	*to be selected*	2
local farmers	*to be selected*	3	*to be selected*	2	*to be selected*	3
local industry	*to be selected*	1	*to be selected*	2	*to be selected*	2
service sector business	*to be selected*	2	*to be selected*	2	*to be selected*	2
Total number:		28		33		34

Figure 3-7. Preliminary sub-basin committees (1st draft for comment)

what is listed in Figure 3-7, it appears to be closest in form to the focused government model presented in the previous section of this report. However, its mandate is more similar to the broader government model, but without including any official coordination or representation linkages with other ministries. It also appears open to at least a modest level of civil society representation. Central agency officials are kept to a small number, but they occupy most leadership positions. Thus, it appears reasonable to consider experience under the preliminary committee to be work under a focused government model that has been somewhat modified in the direction of a broader government model. As will be seen in the next part of this report, the project finally settled on a temporary modified focused government model working group operating under the authority of ONEP until stakeholders select their own preferred type of longer-term organization. This appears to have been a reasonable compromise that could be used elsewhere.

(b) Initial action planning process

Responsibilities of preliminary sub-basin working groups include preparation of the first sub-basin action plan. The action planning process is planned to begin with articulation of sub-basin program goals and objectives, as well as criteria and priorities for selecting proposed action projects and incorporating them into short, medium and long term plans.

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[28] See section I.B.1 for more information on previous governmental planning activities

Given the short time frame for this project, however, the time available for developing widespread understanding and consensus was quite limited. Thus, the project sought to develop initial action plans through a series of three sub-basin level action planning workshops. In addition, further input into the process was to be sought through workshops at district level, and possibly smaller meetings at even more local levels within each district. Projects developed under earlier DWR and DNP led planning processes were to be reviewed and considered for inclusion under these plans, as well as revised and new proposals that fit under this project's expanded mandate to consider public health and poverty-related livelihood issues. Staff of Panya Consultants were to assist a team of local co-ordinators selected from volunteers, in facilitating the action planning process at multiple levels in each sub-basin.

The project needs to recognize some of the limitations and trade-offs in this initial planning process. In principle, it would be good to start the action planning process with a relatively 'clean slate', and follow a logical process to systematically develop plans and component projects in an appropriate sequence. The reality is, however, that each sub-basin has one or more set of projects that have already been developed under previous planning processes. Those associated with these plans and projects want first consideration to be given to results of these previous efforts. Under the circumstances this seems both reasonable and quite unavoidable, especially since any alternative approach would be likely to generate negative results that would probably undermine implementation of a more theoretically desirable planning process.

Moreover, while this may be a situation where planning redundancies are unusually great, it is very highly unlikely that any sub-basin in the country does not already have various relevant projects that have already been planned. Indeed, action planning processes can build on this aspect by also seeking to review regular local development plans of TAOs in the sub-basin at the same time. This in itself could be a learning opportunity, as well as a precedent for coordinating and reconciling among local plans and planning processes.

Thus, there are four areas in which the initial action planning process needs to place particularly strong emphasis:

- Formulating initial goals, objectives, priorities, criteria. Perhaps the most important challenge for the action planning process is to attempt to quite quickly articulate goals and objectives for initial sub-basin action planning, as well as initial priorities and appropriate criteria to use in assessing and selecting projects for inclusion into initial short, medium and long term components of the action plan. While particular emphasis needs to be placed on the short term component, it will also be important to obtain at least an initial map of thinking about the medium and longer term components as well.

- Reviewing and screening existing sub-basin plans. These efforts will apply the initial criteria and priorities during review and screening processes. As they do this, they will also be seeking to establish and implement logical processes that will link proposed actions with objectives and goals, and thus make these action plans more than just an aggregation of projects.

- Reviewing and linking with TAO and provincial plans. These efforts should help to identify common interests and areas where initial sub-basin goals, objectives, and priorities may overlap with existing TAO and provincial development plans. They may also lead to discussions about what types of activities and projects might be most appropriate and effectively implemented at sub-basin or TAO levels, as well as TAO capacity building needs and the types of partnership arrangements that may be most useful and effective for both levels.

- Selecting priority initial 'demonstration' activities. In order to maximize the learning that can be derived from the initial action plan developed during this first phase, it is also proposed that selection of activities and projects for inclusion in the action plan place considerable emphasis on 'demonstration' projects. This term is meant to include projects that will either test some commonly held beliefs about means for achieving sub-basin objectives and goals, or projects that will demonstrate the potential of innovative ideas about which there is still considerable local skepticism. By including these types of projects, the sub-basin working

groups can gain experience with negotiations associated with them, and they will make good targets for developing monitoring systems that can check in a transparent manner whether claims of their proponents are justified. Similarly, appropriate studies of complex or particularly difficult issues could also be part of these demonstration activities.

Although it would be challenging to achieve these objectives during the short period of time available under this project, Panya staff and their local facilitation teams were expected to invest a great deal of effort into doing the best job they can do within these constraints. It is important to try to complete the initial action plan so that it can be submitted for funding consideration as quickly as possible. In addition, it may be useful for project staff to view the action planning process conducted under the preliminary sub-basin working group structure as producing outputs that will then feed into processes to consider and establish a long term RSBO that will manage and refine the full appropriate range of sub-basin activities from that point forward.

2. Establishing long-term organization and processes

Once the flurry of activity required during the first phase is completed, it will become time for sub-basin stakeholders to reflect on and learn from their experience in order to establish an improved organizational framework for a long-term sub-basin management organization. If sub-basin stakeholders are fairly satisfied with initial arrangements, or if they are reasonably united in their views about how they should be modified, this phase could be quite brief. In any event, we have hoped that as much as possible could be accomplished within the short time frame of this current project.

(a) Review initial planning experience

Some stakeholders may suspect that preliminary sub-basin working groups and initial action plans may pre-empt some important considerations and decisions regarding the nature and design of RSBOs and their programs in pilot sub-basins. Some may even claim it makes any further efforts to consider RSBO structure, function and planning unnecessary. It can also be argued, however, that preliminary working group and action plans will give a range of sub-basin stakeholders experience in trying to develop more systematic planning processes under a somewhat expanded mandate, which could provide them with more experience, understanding and insight that may be valuable in selecting and adapting the most appropriate type of long-term RSBO arrangements for conditions in their sub-basin.

Thus, the first task during this phase is to review sub-basin experience with conducting initial action planning processes under the organization provided by the preliminary watershed working group structure. In conducting this review, sub-basin stakeholders may wish to bring some additional representation into their discussions, perhaps including elements in the sub-basin who may have expressed any dissatisfaction with the initial committee structure or the action planning processes, and they may also wish to seek assistance from a facilitator from outside the sub-basin. The review should include consideration of experience related to the structural considerations discussed in III.B, relative to the range of model options presented in section III.C of this report. The main questions here are whether sub-basin stakeholders feel there are ways in which the mandate, structure and/or function of a long-term RSBO may need to differ from the initial phase.

(b) Select, localize and establish long-term RSBO organizational model

Based on the foregoing review of first phase experience, it will now be time for sub-basin stakeholders to select, localize and establish their desired RSBO organizational model, including its registration as a juristic entity if desired at this point.

Experience with the preliminary sub-basin working group that is similar to a modified type 1 model could help underscore the importance of two factors about the indicative alternative models proposed in this report. First, the indicative models seek to describe an array of possibilities for RSBO configuration, so that experience with one model can help them see more clearly how the other models differ or are similar. Second, as their experience under this process will indicate, components of any one of the models can be modified in many different ways, and RSBOs should feel

free to experiment with refinements they believe will improve their performance under specific and changing conditions within their domain. Moreover, experience with this two stage process can also help point out that RSBO configurations can be dynamic over time, and configurations can change along with perceptions, needs, capacities and conditions.

Comparison of modified RSBO configurations with the array of indicative models in this report may also help alert RSBOs to various issues and/or contradictions that may need to receive special attention in order to avoid new problems. One example has already been seen in comparing the draft preliminary committee structure, where the mandate was broadened to include issues under ministries outside of MoNRE, but those ministries have no representation or coordination agreements. Participants in the Lower Ping workshop that reviewed the draft already noticed this issue.

In any event, preliminary sub-basin working groups, augmented by appropriate additional stakeholders if necessary, should open their minds to consideration of at least the full range of alternative RSBO possibilities proposed in this report. Moreover, they can also consider both what is practical for them now and in the near term, as well as the type of organization toward which they would like to evolve over time, and the types of capacities and requirements that would entail.

During sub-basin efforts to select, modify and localize a suitable organizational model, we should also not be surprised if the three pilot sub-basins – and other sub-basins in the future – decide on different preferred configurations for their RSBO. Based on discussions at early project workshops, for example, we might speculate – as indicated in Figure 3-8 – that:

Figure 3-8. Possible starting points and trajectories in pilot sub-basins (speculative)
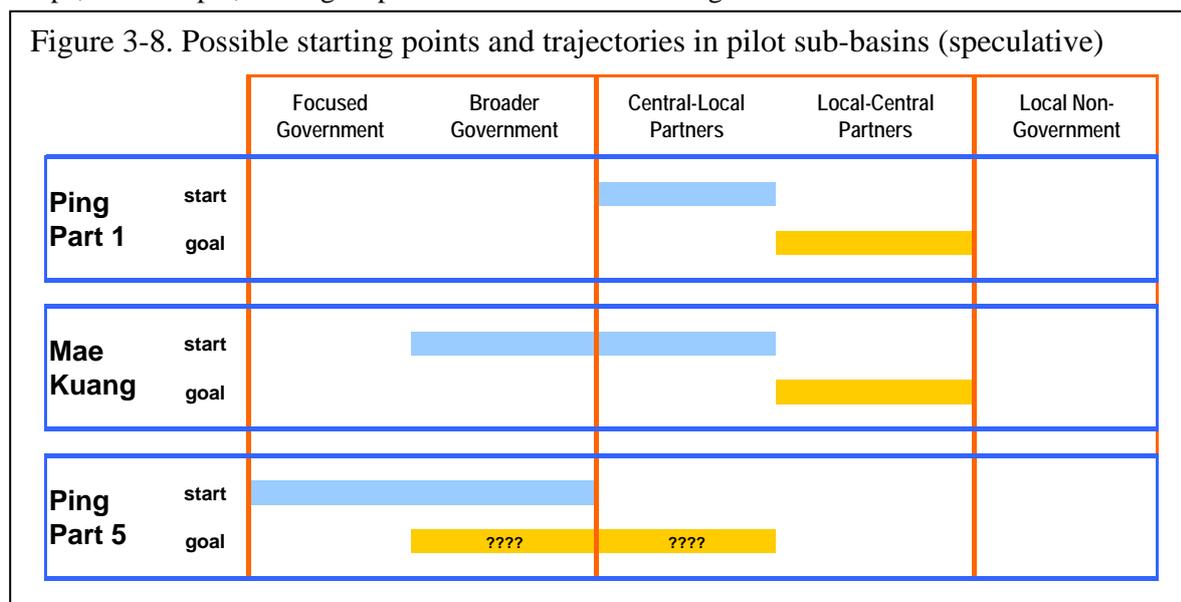
- In the Ping part 1 sub-basin, informal networks among local governments and civil society groups are already quite advanced. A substantial range of stakeholder groups appear able to communicate rather well and have some mutual understanding of each other's positions, even on topics where they disagree. Leaders appear quite confident and have already established network relationships among local governments in the sub-basin. Thus, it would not be surprising if they choose an RSBO configuration that is more in the direction of one of the multi-level partnership models based on strong local initiative and leadership. As suggested in Figure 3-8, they may want to begin with more of a central-local partnership model, but would probably want to move to more of a local-central partnership as soon as they are confident enough in their capacity to do so.

- In the Mae Kuang sub-basin, there has also been substantial progress in developing informal linkages among local governments and civil society groups and networks. But a wide range of strong stakeholder interests are present in the sub-basin, including powerful urban, industrial, service enterprise, and private investor interests and groups, as well as a particularly poor area involving ethnic and cultural minorities. There are also some key rivalries among local leaders.

As this makes local communication, organization and negotiation initiatives quite difficult in some respects, it would not be surprising if they choose an RSBO configuration that has a somewhat stronger degree of government agency, or at least local administration involvement. As Figure 3-8 suggests, this might take the form of a central-local partnership model, or even a broader government model. Given their confidence and expressed desire for self-determination, however, it would also not be surprising if they would want to work toward a multi-level local-central partnership model as they continue to build their already considerable local capacities.

- In the case of the Lower Ping sub-basin, it appears that government initiative and management are very strong and important in the minds of most stakeholders, and that even most relevant civil society organizations are government-induced. Thus, it would not be surprising if they choose an RSBO configuration that is more in the direction of one of the government-oriented models, and perhaps one that is similar to the draft preliminary committee but with broader agency representation. Whether or how this might change over the longer term is not yet clear, but as Figure 3-8 suggests, they may well want to maintain substantial government agency leadership even if they move in the direction of a multi-level partnership model.

It bears repeating that this is mere speculation based on preliminary general impressions and discussions, and that it is highly possible that the outcome of stakeholder decisions in each sub-basin will differ somewhat, or even drastically from these hypothetical outcomes. The choice of structural options for an RSBO lies, as it should, with the stakeholders of each sub-basin. Speculation about their decision is only provided to help illustrate general principles.

3. Launching implementation in a River Basin Management framework

This phase moves into somewhat more of a multi-tasking mode, which may well extend somewhat beyond the time frame of this initial pilot project. Thus, this phase builds on experience during the first 'getting started' phase, and employs the long-term RSBO structure established during the second phase, in outlining an initial long-term river sub-basin management plan, beginning actual implementation and monitoring of activities and projects under the initial action plan, and launches systematic long-term capacity building efforts. If the RSBO was not registered as a juristic entity during phase 2, such registration may be considered during this phase.

(a) Outlining a long-term river sub-basin management plan

International experience from around the world is very consistent in claiming that effective long-term management plans need to be formulated through processes that employ extensive stakeholder participation and consensus-building processes. Moreover, such processes are almost without exception multi-year endeavors. Indeed, efforts in the Ping Basin would appear to be very ill advised to believe that the initial action plans formulated under the brief first phase of the sequence here could possibly substitute for the 'real thing' over the longer term.

Thus, given the sequence of phases proposed here for RSBO development under conditions specific to the Ping River Basin, this phase begins with providing an opportunity for the newly established long-term RSBO to develop an outline of a long-term management plan. While this outline would build on experience during the first phase, it would also refine the scope of the mandate and the planning and operational processes to be consistent with the structure and functions of the long-term RSBO established during the second phase.

The RSBO Management Plan provides a broader framework within which action plans are embedded. Figure 3-9 provides an example of the types of components that would need to be contained within the management plan. These are, of course, indicative components that are subject to modification according to local conditions and circumstances. Indeed, the partnership and capacity building component is already an addition to what is commonly included in such management plans in places like the U.S., in recognition of some of the relatively different needs, and often somewhat more difficult conditions encountered here.

- <u>Statement of priority problems to be addressed in the management plan</u>. Many of the major problems in pilot sub-basins have already been identified, and will be further explored and articulated during the first two development phases. Initial criteria and priorities are also developed during the first phase, while the second phase adds reconsideration of RSBO mandate, structure and function. Thus, by this point the RSBO should be in a reasonable position to make a quite clear articulation of the priority sub-basin problems that the

> **Figure 3-9. Management Plan Components**
>
> **RSBO Management Plan**
>
> 1. Statement of priority problems to be addressed in the management plan
> 2. RSBO vision statement, goals and objectives
> 3. Action plans for achieving goals and objectives
> 4. Monitoring and information strategy
> 5. Partnership and capacity building strategy
> 6. Funding strategy

management plan will seek to address. At least some of these problems are quite likely to include aspects about which there currently is insufficient information or understanding, and efforts to address these needs or gaps are clearly eligible for inclusion in the management plan.

- <u>RSBO vision statement, goals and objectives</u>. Again, experience from the first phase, which was reviewed during the second phase, together with considerations made in selecting and localizing the long-term RSBO mandate, structure and functions, should put the RSBO in a good position to clearly state the basic vision of the role of the RSBO, the goals toward which it aspires, and the more specific objectives it seeks to accomplish. Objectives are likely to continue to be grouped into those for short, medium and long-term time horizons.

- <u>Action plans for achieving goals and objectives</u>. One or more action plans provide the logically linked specific activities and projects through which the RSBO will seek to achieve its objectives and goals. Having passed through several potentially evolutionary steps since the initial action planning process, this should be a good time to review the logic of the initial action plan, identify gaps, additional needs, and perhaps some dubious activities that do not merit pursuing further. Some RSBOs may even wish to begin formulating separate but coordinated action plans that will seek to begin steps toward addressing some of the larger and more difficult issues that underlie various problems in the sub-basin, to conduct public education campaigns and mobilize participation, or to group activities and projects that will address needs in different sectors, or that will be implemented by different partner institutions or groups.

- <u>Monitoring and information strategy</u>. International experience confirms that monitoring is so important for river basin management that an overall monitoring strategy needs to be a separate component of the sub-basin management plan. The strategy needs to include all three basic monitoring sub-components: (1) monitoring activity and project inputs and outputs; (2) monitoring indicators of changing conditions in the sub-basin, including criteria and means for measuring the indicators; (3) monitoring outcomes and assessing impacts of activities and projects under RSBO action plans. It also needs to map out what will be done, who will do it, how it will be done, how findings will be assessed, and how findings will feed back into RSBO learning processes. Moreover, the strategy needs to include an information component that maps out how information will be acquired, how it will be managed, and especially how it will be accessed, used and disseminated to provide a basis for learning and public education, as well as a means for helping achieve transparency and accountability. Needs for information tools, including items such as measurement technologies, spatial information or negotiation support systems, should also be incorporated into this strategy as needs are identified.

- <u>Partnership and capacity building strategy</u>. It should be clear by now that RSBOs will not be able to be effective or sustainable unless they develop both vertical and horizontal partnership linkages with other organizations and institutions, as discussed in previous sections of this report. In order to reduce complexity and avoid potential confusion and conflict, the partnership component of this strategy will clarify existing and desired RSBO partnerships, and designate key persons responsible for maintaining or developing the linkage mechanisms involved. Ob-

vious elements for emphasis within the sub-basin include local governments, sub-watershed networks and other relevant building block groups, but hopefully there will also be a substantial and growing number of other productive peer-to-peer, cross-sector, upward and downward partnerships that continue to emerge. The capacity building component of this strategy will map out RSBO capacity building needs and means for addressing these needs, including consideration of partners as both beneficiaries of and providers of capacity building efforts.

- Funding strategy. Basically, the previous sub-basin management plan components map out what will be done and why, how it will be done, who will do it, and what they will need to accomplish it. This strategy maps out ideas about how the funding resources can be obtained to pay for it. While there may be some special funding provided for river basin and sub-basin activities and projects during the next few years, they are not likely to be sufficient or flexible enough to meet all needs, and there is considerable uncertainty about sustainability over the longer term. While the government needs to make a clear commitment to helping sustain these efforts over the longer term, RSBOs also need to be aware of the need for them to prove themselves and establish their credibility through the strength of their performance in addressing sub-basin issues and problems. They also need to consider how they can mobilize funding from a range of sources to maintain their programs and operations over the longer term, including how many if not most of their activities and projects can be integrated into processes such as the regular development planning mechanisms of local governments and provinces.

All of these component statements, plans and strategies that contribute to the RSBO management plan are meant to be first iterations based on current views, understandings and conditions. They are expected to be subject to change as RSBOs continue to grow and evolve. Moreover, conscious efforts during the next phase to deepen participation and consensus building in the sub-basin, are designed to encourage further evolution of the management plan.

(b) Beginning implementation and monitoring

Hopefully, funding for activities and projects in the initial action plan will have been approved by the beginning of this phase, so that implementation can begin. This will undoubtedly be an important element in verifying the credibility of RSBO development efforts. And perhaps just as importantly, it will begin to make most of these rather abstract considerations come to life as real people implement concrete projects that their advocates claim will improve conditions in the sub-basin. Thus, it will also provide clear and concrete objectives for monitoring and information components to begin focusing their efforts, as well as specific needs for capacity building and partnerships. Moreover, to the extent that first phase efforts were successful in including activities and projects with demonstration value, they should begin providing real world input into sub-basin learning processes.

(c) Beginning systematic capacity building

As the initial outline of a long-term sub-basin management plan is formulated by the new long-term RSBO, activities and projects begin move into action, and monitoring and information systems begin to come online, RSBOs will need to begin implementing their capacity building strategy. While the project includes provisions to assist with some initial aspects of capacity building, as international experience indicates, this will be a high priority objective for some time to come.

What is likely to be most urgently needed is practical information, tools, training, study tours and other means to respond to the immediate practical needs of emerging RSBOs. The time for propaganda and often sanctimonious preaching of the gospel of environmentalism is rapidly passing in most sub-basins, and the time for identifying, developing, adapting and refining practical and effective approaches, methods and tools to accomplish the tasks at hand is rising. Thus, an appropriate balance between two types of practical educational materials is needed: (1) materials that provide specific and practical tools and assistance for addressing needs that are already locally perceived as important; and (2) materials that expand local horizons with new ideas and tools. Both are important, but participatory decisions about priorities would be most appropriate.

There is a specific component of this project that is focused on training and capacity building, and Panya staff working on that component have been conducting activities to assess needs in pilot sub-basins and seek information and other means for meeting those needs. In doing this, they can anticipate some of the needs related to building capacity to conduct action planning processes and other aspects of RSBO management planning, including process such as awareness raising, negotiation and conflict management. They can also anticipate capacity building needs related to various lines of activity as reflected in projects already included previous plans developed under processes led by DWR and DNP. It is probably quite safe to assume that at least most of these lines of activity will be included in initial action plans formulated under this project. They may also anticipate that some materials might be useful for increasing attention to areas where this project is expanding the RSBO mandate, with particular emphasis on aspects related to public health, poverty and livelihoods. And perhaps particular attention should also be given to various aspects of monitoring. Such anticipation, however, needs to be grounded in interaction with stakeholders in the sub-basin, in order to be consistent with the bottom-up participatory mandate of this project.

As part of these efforts, the project provides for training and development of 'tool kits' for RSBOs. It is increasingly common to use terms like 'tool kits', as in the Ramsar handbooks and case studies[29] that include topics such as river basin management, participation and water management and allocation [Ramsar 2004a, 2004b, 2004c], or the term 'toolbox' as in Global Water Partnership website[30] that provides information materials to support integrated water resources and river basin management. Indeed, the organization and basic options presented in the GWP toolbox may be useful in the process of considering models for the Ping RSBO tool kit, although the content for various component tools is at this point still rather sparse. As materials continue to be accumulated at websites such as these, some may well be worthy of translation and adaptation into Thai language and context. A few other examples of materials supporting operations of river basin and watershed management organizations are from the U.S., many of which are somewhat more developed than the global and Asian websites at this point in time. They include watershed guides accessible through the "know your watershed" website coordinated by Conservation Technology Information Center[31], and publications in the bibliography of the "watershed academy"[32] and other publications[33] of U.S. Environmental Protection Agency [*e.g.* EPA 2005, 2003a, 2003b, 1997a, 1997b]. There are also numerous other interesting examples, such as the watershed primer prepared for river basins in Pennsylvania [Novak 2000], watershed management planning publications linked to the Potomac River Basin website[34], the Center for Watershed Protection website[35], and many more that can be accessed through searches on the internet. Many also include examples of existing river basin management plans, as well as links to training materials and tools related to numerous associated topics and technologies.

There are also, of course, a substantial number of materials, training curricula, and tools that have already been developed, tested, and used by various networks, projects and organizations in Thailand that may be very relevant for RSBOs and this project. Staff of Panya Consultants have been making efforts to seek some of these out. Obvious examples include the sub-basin planning handbook that the CMU Social Research Institute developed for ONEP, which uses the Ping part 1 sub-basin as an example [ONEP 2004], as well as the handbooks for stream detectives, and other materials developed and published by the Green World Foundation – and there are many others, often of varying quality. Unfortunately, there are few, if any repositories in Thailand where such materials are systematically collected that could serve as a library or knowledge base about these matters.

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[29] http://www.ramsar.org/lib/lib_handbooks_e.htm
[30] http://gwpforum.netmasters05.netmasters.nl/en/index.html
[31] http://www.ctic.purdue.edu/KYW/
[32] http://www.epa.gov/owow/watershed/wacademy/itsannot.html
[33] http://www.epa.gov/owow/watershed/publications.html
[34] http://www.potomacriver.org/get_involved/wmp.htm
[35] http://www.cwc.org/index.html

(d) Building parallel Ping Basin – level support capacities

There will clearly be needs for information support systems, technical assistance and technical analysis, as well as education, training and other types of support systems that will need to be based at higher than sub-basin levels in the river basin hierarchy. If such facilities and services have not yet emerged in the Ping Basin, strong efforts should be made during this phase to build at least three types of RSBO support functions at the Ping Basin level:

<u>Ping RBO Knowledge Center</u>. Given the major information needs of the RSBO development process, and the absence of systematic collections of many of the types of information most needed, development of an RBO-level knowledge center needs to be developed to serve as:

- Library and clearinghouse for access to a wide range of relevant Thai language training curricula, materials and publications. Distribution could be through hardcopies, web-based digital forms, and links with organizations that prefer to handle distribution by themselves.

- Contact center for links with groups, organizations, agencies and individual resource persons with useful experience, tools, and local or scientific knowledge that can assist with RSBO organization, program development, implementation and capacity building, including training, demonstrations, cross-visits, study tours, and a range of additional formats.

- Center for facilitating development of appropriate forms and formats of communication and training materials that can help meet need of the full range of different types of stakeholders and interest groups in Ping sub-basins.

- Center for coordinating two-way translation and adaptation of relevant materials to facilitate information exchange at international levels, as well as with minority languages spoken within the Ping Basin.

Ping River Basin projects need to take initiative in helping establish and develop such a center for use by the pilot and other sub-basins, which can be a source of information and a model of knowledge accumulation and access for other basins and sub-basins in the future.

<u>Mobile RSBO Technical Support Teams</u>. Although not necessarily a large operation, a few small mobile teams could provide specific types of largely on-site technical assistance to RSBOs to help build capacity in areas where systematic on-site assistance is difficult to obtain from existing groups, organizations or institutions. Examples of topics where technical assistance could be most helpful during early phases of development include: (1) participatory analysis, learning and planning; (2) stakeholder participation, negotiation, consensus building, and public education; (3) monitoring and information management systems and technologies. Contacts, scheduling, and organizational and administrative support for mobile technical support teams could be through the Ping RBO Knowledge Center. Depending on demand, teams may include part-time staff with regular employment at partner institutions such as academic institutions, private sector businesses, or civil society organizations.

<u>Ping RBO Data & Analytical Support System</u>. There are also needs for some more sophisticated tools and technologies to provide support for RBO and RSBO programs and activities in the Ping Basin. Spatial information systems and analytical modeling are clearly relevant here, as well as other types of databases and analytical tools. Some of these technologies will currently be beyond the human resource and financial capacities of most RSBOs. Employing principles of subsidiarity and coalitions, the most logical location for centers of this type activity would be at appropriate regional institutions – and at least linked with major universities – that could operate facilities that could function at a river basin level, but designed and operated to be able to provide support services for RSBOs and their stakeholder groups. Their operations, information and services must be clearly and easily accessible, and at least linked with the Ping RBO Knowledge Center. They must not be hidden away in an obscure cubicle in Bangkok where they can be accessed only by a small circle of 'insiders'. Initial efforts in regional institutions related to spatial information systems and environmental monitoring are already being supported by ONEP and, as already mentioned[36], there

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[36] See, for example, section I.B.6(e)

are equally important efforts supported by others. There is a strong and urgent need to begin linking these various efforts and to facilitate their convergence into a system with very important potential and implications.

As the various phases of RSBO development continue to unfold, there may also be additional needs for support functions or services at river basin or other higher levels of social organization. In order to provide one example, it is conceivable that a need for an ombudsman function could emerge, in order to provide a channel for various sub-basin stakeholders to seek redress for unjustifiable damages, abuse, or exploitation they believe they are suffering from RSBO programs, and that their plight is being unduly excluded or ignored by RSBO participatory processes.

Clearly, these types of activities should be developed through partnerships with various institutions, organizations, and groups already based and active in the Ping Basin. This is definitely not a call to create more high-overhead bureaucratic institutions that will try to compete with existing activities, or an information control point for any type of elitist cliques or special interests. Organization to meet these needs should be flexible and directed by a mindset that seeks coordination and partnerships aimed at facilitating widespread learning and mutual improvement of performance in achieving common objectives and goals. In any event, it makes sense to anticipate some of these needs now, and contribute to efforts that can help make them become a reality.

4. Strengthening long-term management planning and learning processes

International experience indicates that performance and long-term success of river basin organizations are strongly associated with careful assessment, consideration, and consensus building. These processes normally require a multi-year process even in highly developed countries where local capacities are already quite strong. Moreover, there is no evidence that substitute short-cut approaches have been able to meet these needs.

Thus, this phase shifts into a multi-year mode, wherein RSBOs seek to further broaden and deepen understanding and consensus in the sub-basin, and reflect results in further refinements of RSBO analysis, planning, monitoring and learning processes under the draft river sub-basin management plan. Emphasis during this phase needs to be on efforts that are conducted systematically and carefully, and not unduly rushed by unreasonable time constraints.

It is particularly important that these processes are not seen as yet a further iteration of redundant planning processes. As this phase begins, long-term RSBOs will be operational, initial action plans will have begun implementation, and monitoring processes will have begun operating. Thus, real experience and information will be providing a concrete context for considering how well processes are working and the directions in which they are headed. Hopefully, this should help facilitate efforts to further refine these processes and directions in order to achieve a broad enough consensus among stakeholders to make RSBOs meaningful and viable organizations. There are two basic lines of activity that are central to efforts during this phase to strengthen long-term management and planning processes, and both may wish to draw upon technical assistance from the basin-level support activities launched during the previous phase.

(a) *Management plan elaboration, refinement and consensus building*

There is a range of issues and concepts that stakeholders may need to consider as they elaborate and refine the sub-basin management plan and build consensus among sub-basin stakeholders. In order to encourage and support local decision-making, some of these considerations are posed here in the form indicative questions, rather than in the form of instructions or requirements. These questions have been constructed to reflect issue areas seen as important both from international experience and from current operational issues identified from previous and current activities in the Ping River basin and its sub-basins. They are meant to be indicative, however, and not an exhaustive list of the considerations that RSBOs might wish to make. Thus, efforts to answer these questions should help RSBOs raise even more questions, the answers to which should help lead to their

articulation improved long-term management plans and component strategies and designs for further developing and refining their RSBO through processes that are localized to the needs and wishes of sub-basin stakeholders in the context of their perceptions of conditions they face.

How discussion of these questions occurs is also likely to vary according to sub-basins, the type of organizational configuration they have selected, and the local adaptations they have made. Some answers are likely to be readily available, while others are not. Some will be more appropriate than others under conditions in a specific sub-basin. The considerations involved are many, and considerable time may be required to address the full range of issues. In some cases, stakeholder consensus may have already been reached, and representatives may feel confident to answer questions in multi-stakeholder meetings or workshops. In other cases, it may require a more iterative process where stakeholder representatives feel a need to confer with their constituency groups before interacting with other groups. Again, what is deemed as appropriate must be determined in the context of conditions and perceptions of stakeholders in each sub-basin.

Management plan components 1-2. **Linking mutual understanding with RSBO processes:** *How will a sense of common identity and direction be further developed and maintained?*

- What are the different views about what the sub-basin should look like 20 or 50 years from now? In order to achieve those views, what things need to be maintained or restored, and how? What things need to change, and how? Is there widespread agreement about these views? Who disagrees, and why?

- What are the common interests and the differences among stakeholder views inside the sub-basin about these issues? How do these differ from views of stakeholders downstream or connected with interests, agencies or organizations outside the sub-basin?

- Do stakeholders with different views have a mutual understanding of why those differences exist? If not, what can be done to improve communication and mutual understanding?

- Under each different view, who will benefit and be better off? Who will lose benefits, and what will they lose? How do you know? Who thinks this would be fair? Who thinks it would not be fair? Why?

- How can the RSBO assure all stakeholders (inside and outside the sub-basin) that their voice will be heard, and their needs and views will be fairly considered? How will they know if this is true? How often will stakeholders meet? Who are the leaders? Who makes the rules?

- How much do RSBO efforts or various stakeholder groups rely on government agency leadership? How much do they rely on individual leaders? What can be done to encourage more and broader leadership within the sub-basin?

Management plan components 1-3. **Linking problems & priorities to goals, objectives, projects and activities:** *How can action planning processes help solve real important problems?*

- What are the most important sub-basin problems? What problems require the most urgent attention? How do you know what projects are most important and most urgent?

- Which of these are within the RSBO mandate? Who is affected by these problems, and how? How do you know? Who is not affected by these problems, and why?

- What are the plans and projects that have already been developed? What important or urgent problem will they address, and how? Who will benefit from them, and why? Who will not benefit from them, and why? How do you know?

- What urgent problems are not addressed by current plans and projects? Why? Who suffers from these problems, and how? Who is not affected? Who can address these problems? What do they have to do? When? What resources and funding are required?

- What important problems are difficult to address by sub-basin projects? Who suffers and how? Who benefits from the current situation? Who is not affected? Why are they difficult to address? Could progress be made with more time? With more resources? With more

analysis, technical or other assistance from outside sources? With wider social or political alliances? What needs to be done to begin making progress? Who can do it? When? What resources and funding are required? How will you know if progress is being made toward long-term or distant goals?

- Could negotiations among groups with different views and interests help formulate compromise views that all sides could view as reasonable and fair? How much would each group benefit and lose from a compromise solution? Could part of the benefits received by one group be used to help compensate for losses of others? How would you know what was fair?

- Who could help stakeholders with different views and interests negotiate among themselves? How would they do this? Are there methods or tools that could help? Outside assistance?

Management plan component 4. **Monitoring and information strategy:** *How can monitoring, analysis and information management capacity be improved?*

- How do you know that projects will be conducted as planned? How do you know if they achieve their objectives? How do you know if they have significant impact on the problem they seek to address? How can future projects be improved from their experience?

- How do you know if a project is likely to be implemented as planned? How do you know if project cost is appropriate? How do you know if the results of a project are worth its cost?

- What information do you need to answer all of the questions above? Do you have that information? Could you get the information from known sources? How do you know if the information is complete, balanced and/or correct? How could the information be improved?

- What are the kinds of information where measurements are made and data records are kept? Who makes the measurements and keeps the records? What are the methods they use? Do you have access to the data? Do you know how to interpret and use the data? Do you know if the measurements and data are correct?

- Are there other types of information or data that could help answer important questions, help improve communication, or help facilitate negotiations, but are not available? Do you know how to obtain that information? How much of the information could be gathered from assessments or measurements made by sub-basin stakeholders themselves? Which ones? How could assistance or training help? Who could provide it?

- What does the RSBO need to do to help raise public awareness? What types of public education are needed? What topics? How do you know? How can information be most effectively packaged and communicated to different types of stakeholders? How do you know what approach is most effective? How will information from the RSBO be communicated to different stakeholder groups? Does the RSBO need assistance with public communication? If so, what type of assistance? Who could best provide the assistance? When? What would it cost?

Management plan component 5. **Partnerships and capacity buildin**g: *What coalition and partnership relationships are important, and how will they be built?*

- What stakeholder groups have networks among individuals or small local groups in the sub-basin? Are there local sub-watershed management networks in the sub-basin? What other local groups and networks are involved with issues within the RSBO mandate? What have the networks or groups achieved? Where are they most effective or less effective? Why?

- How do stakeholder groups and networks interact with local governments? Does their local government listen to them? Do they have good suggestions or ideas that the local government could use? Do they ever get assistance from local government? Do they help plan or implement local government projects? Do local governments identify any as *prachakhom*?

- What stakeholder groups are parts of networks that reach beyond the sub-basin? What types of groups in other areas are also in their network? Are any of them linked with universities? NGOs? Other local governments? What information or assistance do they receive through the network? What do they contribute? Are there groups in other areas with whom sub-

> basin stakeholders would like to develop network relationships? If so, what kind of groups, and where are they located? Who could help develop such relationships?

- Are there important powerful stakeholders located inside or outside the sub-basin who refuse to participate in or cooperate with RSBO? What is the source of their power? Are there higher-level sources of authority that could help the RSBO gain their cooperation? How can the RSBO seek assistance from that authority?

- How can the RSBO join with other sub-basins to help address issues at the Ping river basin or Chao Phraya river system levels? What kinds of things could be done best at the sub-basin level? What kinds of things need to be done at higher levels? How could the sub-basin participate and contribute?

- Are there other Ping sub-basins with similar issues and problems? How do you know what people in other sub-basins are doing? Do people in other sub-basins complain about problems coming from your sub-basin? Do you have problems caused by people in other sub-basins? Do people in other sub-basins have experience, activities, organizations or skills that you would like to learn more about? Do you have experience, activities, organizations or skills that could provide good examples or lessons for people in other sub-basins?

<u>Management plan component 6</u>. **Funding strategy:** *What are the various ways that funding can be mobilized to help maintain RSBO operations and programs over the long term?*

- How will programs and projects planned by the RSBO be integrated into development planning processes of local governments? Of provincial plans? Of relevant central agency units? Are there activities/projects that can be implemented locally without outside assistance? Are there other sources of assistance or funding? How do you know? Where can you find out?

(b) Annual progress reviews, learning and adjustments

The second basic line of activity central to efforts during this phase to strengthen long-term management and planning processes is closely related, but is focused specifically on experience that is being generated by implementation of activities and projects under initial action plans. Moreover, this is a line of activity that will most likely continue over the longer-term, well beyond this phase of RSBO development.

More specifically, initiation of an annual review process is proposed, wherein implementation progress is reviewed by the RSBO. Especially during initial early annual reviews, particular attention may be given to progress of 'demonstration' activities and projects contained in action plans. Data and information from RSBO monitoring systems should be included in the review. Discussions should be held with people in the sub-basin who believe there are clear benefits from the activity, as well as with skeptics and any people who believe they are suffering as a result of the activity.

Example objectives of the review of specific activities and projects could include: (1) to verify that inputs are received and outputs are being delivered as planned; (2) to identify what problems are being encountered and whether any additional information, capacity building, or other needs have emerged; (3) to determine the degree to which outputs are helping achieve the desired outcomes; (4) to determine whether there are any unanticipated negative consequences of the activity. (5) to identify ways in which the activity or project could be improved; (6) to determine whether there is potential for replicating or scaling up the activity or project in other parts of the sub-basin or in other sub-basins.

Objectives at the RSBO systems level would seek to determine how well the monitoring, analysis, planning, participation, and capacity building strategies and processes are functioning, and to make recommendations about how they could be further improved and refined.

Moreover, this annual review process is intended to become a key component of a long-term continuous learning cycle of problem identification, analysis, planning, monitoring, and outcome and impact assessment. As this is intended to be a participatory process involving all relevant sub-basin

stakeholders, transparency, public information access, and downward and upward accountability will be key factors in the ability of the RSBO to establish and maintain perceptions of its relevance, usefulness, and credibility among stakeholders. This, of course is what will be a major determinant of the degree of local participation, involvement, initiative and support.

5. Maintaining long-term organizational relevance, vitality and performance

This final phase of RSBO development takes the strengthened and well functioning organization into its long-term operation and maintenance mode. RSBOs are seen as long term organizations devoted to improving natural resource management, the environment, health, livelihoods, and various other aspects of the quality of life in their sub-basin domains. By the beginning of this phase, RSBO operations should include an iterative cycle of analysis, updating of goals, objectives and rolling project plans, implementing projects and activities, and monitoring conditions, outcomes and impacts. It is through this type of learning cycle that they will be able to continue making clear and meaningful step-wise progress toward their long-term objectives. And, this needs to be done in a manner that is transparent for all stakeholders. Moreover, they need to remain credible and accountable to both their local constituency groups and legitimate interests of downstream and larger society.

In order to continue functioning effectively over the long term, RSBOs also need to maintain the active participation of stakeholders, and assure that they perceive their efforts as being relevant to their needs and part of something that is both important and making a difference. This will require that RSBOs work to continually improve their operational systems and respond to changing conditions. One important element of this process is to establish a second learning cycle at another level and time horizon. This cycle would focus on analyzing changing conditions in the sub-basin, and periodically assessing the need for RSBO programs and operations, identifying ways to improve RSBO structure and functions so that they can better respond to those needs, implementing the changes needed, and monitoring the outcomes and impacts of their efforts on RSBO performance and stakeholder satisfaction.

Although establishment of a learning cycle at this level is quite far beyond the ability of this short-term project to develop, test and establish, seeds can be planted even during early phases. Indeed, if seen from the appropriate perspective, for example, the transition from the phase 1 preliminary sub-basin working group to the long-term RSBO established in phase 2 can itself be viewed as a first experience with efforts to review how well the RSBO structure and functions are able to be effective in helping achieve significant improvements in management of sub-basin resources and environmental services. The consensus building, learning and refinement processes that are built into the third and fourth phases are intended to further strengthen these processes, mindsets and information in a manner that should make periodic review and refinement of overall mandates, programs and structures a logically obvious process.

6. Factors affecting the time horizon of RSBO development

The above discussions have indicated that the first three phases of RSBO development may be relatively short, whereas the fourth phase involves a multi-year process, and the fifth and final phase moves the RSBO into an open-ended long-term operation and maintenance mode.

This final section seeks to bring somewhat more clarity to time horizon issues by briefly presenting some of the factors and issues that are likely to affect the relative amount of time required to complete various key elements and thus phases of RSBO development:

RSBO establishment. Establishment of the RSBO as discussed in this report will be the central activity of the second development phase. Thus, time requirements will include first phase efforts to develop the initial action plan, review of first phase experience, and agreement on a suitable organizational model and modifications. The main factors that should affect the duration of these activities include: (1) the amount and quality of plan development available from prior action plan-

ning processes led by DNP and/or DWP; as well as other local planning processes (2) the degree to which stakeholders agree or differ in their views on experience during the first phase; (3) the degree of unity among and within stakeholder constituencies regarding the most suitable organizational model and modifications; and (4) motivation and availability of key leaders and stakeholder representatives required to make these decisions.

Initial outline of long-term management plan. This activity is scheduled for the beginning of phase 3. Its timing and duration will depend on the degree to which previous work of local networks, activities associated with prior action planning processes, and reviews of experience during phase 2 are able to provide a solid foundation for articulation of the components of a full-scale sub-basin management plan. If there are clear ideas and relatively unified views, it is possible that this could be done quite quickly. If there is still confusion, many questions, and divergent points of view, the process could require at least several months. In any event, if basin-level mobile technical assistance teams are also being established during the third phase, they may be able to assist sub-basins in negotiating agreement and articulating the plan in an appropriate form for further refinement during phase 4.

Action plan implementation. Initial sub-basin action plans will be developed during phase 1, and are likely to be largely based on projects and activities included in prior planning processes under the leadership of DNP and/or DWP. If these initial action plans are developed considering the framework of RSBO development proposed in this report, the initial action planning process should be able to be completed quite quickly – assuming sufficient sub-basin stakeholder availability and motivation. The RSBO development framework proposed here provides for action plan funding approval processes to occur during the second phase, so that implementation of the initial action plan could begin as phase 3 is entered. Since this could be a quite short period of time, one hopes that there are sufficient earmarked or discretionary funds available in the government system to allow for this type of timing. As indicated in various sections of this report, it is very important for the credibility and momentum of RSBO development efforts that implementation begins in this type of time frame. Moreover, this proposed RSBO development framework assumes this to be the case, and incorporates learning from initial action plan implementation as a key component of further RSBO development processes.

Capacity building. While there will be some capacity building activities that are to begin under the pilot project during phases 1 and 2, it should be very clear that capacity building will be a quite long-term process with needs that will continue to evolve at least through phase 4 of the RSBO development process. This is one of the primary reasons that a basin-level learning center and technical support operations are proposed for establishment during phase 3. These operations should receive very high priority for medium to long-term support, and if they can be implemented in an effective manner, they should be able to more than justify the investments required by accelerating and improving the quality of RSBO development processes.

Elaborating and refining the management plan and building stakeholder consensus. It should by now be clear that this core component of phase 4 efforts should be a multi-year process. Indeed, its companion implementation progress review and learning cycle refinement process will occur in annual cycle increments. Under most circumstances, it would appear that at least 2 to 3 cycles would be necessary to assure performance is adequate. Moreover, the breadth and depth of stakeholder understanding and consensus required for the sub-basin management plan to become a really meaningful element of local resource governance, and a guide for livelihood behavior and development, will in all likelihood require extensive and iterative investigation, analysis and consensus-building processes. Experience demonstrates that these should not, and cannot be unduly rushed. And, since action plans are being implemented in tandem with these processes, there would appear to be no reason why enough time could not be provided to conduct these tasks properly.

Long-term participation and satisfaction. This key component of phase 5 is in a category of its own in that this is an open-ended process. It is expected, however, that the periodicity of overall RSBO system reviews would not be likely to occur at less than about 5-year intervals. There could be pro-

visions, however, for a petition submitted by a specified percentage of stakeholder representatives in the RSBO assembly to conduct a special system review due to significant contextual changes, urgent unanticipated problems, or emergence of significant improprieties.

Summary of Suggestions and Recommendations in Part III:

1. It is useful for leaders of, and advisors to, efforts to develop sub-basin management organizations to understand the global context of trends toward river basin management, including:

   - intergovernmental agreements & institutional polices (discussed in section III.A.1(a))
   - emerging global & regional civil society organizations (discussed in section III.A.1(b))
   - recent international literature on river basin organizations (discussed in section III.A.2)

   Suggested overall lessons that can be drawn from international experience with river basin organizations are summarized in section III.A.3.

2. Based on review of experience at both international and Ping River Basin levels, six areas of consideration are proposed for priority consideration in developing models of organization for river sub-basin management organizations (RSBOs):

   - <u>Mandate, responsibilities & authority</u>. Conditions in the Ping Basin favor a broad and integrated mandate for RSBOs, but their roles and responsibilities need to constructively complement regular development planning processes and the administration hierarchy. Both 'expert' and local knowledge need to be combined in problem identification & analysis, but either agencies or local organizations probably need to take a leadership role. Program and project planning is an area for RSBO leadership, but an overall sub-basin management plan is needed to provide goals, objectives, priorities, and resource allocation. RSBOs need to clarify their roles in terms of project implementation and any regulation functions. Conditions in the Ping Basin argue for a strong RSBO role in monitoring & learning. Access to sources of authority will depend on a common sense of ownership.

   - <u>Representation: core membership, constituencies & selection processes</u>. Particular attention needs to be given to achieving appropriate stakeholder balance among sectors, between central & local government, among elements of local governance systems, and between gender groups. The main RSBO 'assembly' or decision-making body needs to be of a manageable size, probably in the range of 20-50 representatives, with appropriate working sub-groups, Selection of stakeholder representatives needs to be transparent and participatory, while allowing flexibility for election or consensus processes. Those outside the entourage of an organized interest group also need representation, and mechanisms such as fixed terms are needed to assure all representatives are accountable to their constituents.

   - <u>Leadership</u>. While flexibility needs to be maintained, attention needs to be given to the individual leadership qualities and characteristics of potential leaders. Where numerous factions exist, cohesion may be encouraged by election standards higher than a plurality of voters. If new selection procedures are established, current leaders should be encouraged to become candidates.

   - <u>Institutional positioning & linkages</u>. RSBOs will need to develop linkages with other organizations at levels above & below the sub-basin in organizational hierarchies, as well as peer-to-peer linkages among organizations at similar levels. The principle of subsidiarity implies more local levels should take the lead in most issues, and raise issues they have difficulty addressing to the RSBO. The RSBO should pass issues they cannot resolve to river basin or other higher levels. All levels need sufficient authority

and resources to take initiative at their level, and all must be accountable for their actions. Alliances will be needed among local organizations within sub-basins, among sub-basins in the context of river basin level issues and processes, and among local groups with similar concerns in networks that cross sub-basin boundaries. RSBOs should seek partnerships to strengthen their overall operations.

- Legal status. RSBOs should consider the advantages and disadvantages of different options for their official legal status, and there should be flexibility for it to change over time as capacity develops and conditions change.

- Operational components & specialists. While RSBOs should have flexibility to design their own structure, they need to consider at least 3 basic types of components: (a) an RSBO assembly where the full range of stakeholder representatives conducts overall deliberations & decision-making processes; (b) permanent & temporary working groups to lead efforts in program & project planning, data & communications, public participation & awareness, problem identification & analysis, and monitoring & learning; (c) a secretariat to conduct administrative & operational tasks, support working groups, & manage facilities. Location of the secretariat needs careful consideration.

3. An array of five alternative sub-basin organizational models is proposed for consideration, selection & adaptation by sub-basin working groups & stakeholders (see Figure 3-5):

- Focused government model. Main focus is on helping MoNRE design & implement its programs in a more effective & efficient manner, and coordinate work of its agencies. MoNRE takes a strong leadership role, with RSBO providing assistance.

- Broader government model. Main focus is on improving effectiveness & efficiency of programs within MoNRE, plus coordination with other ministries. Provincial administrations partner with MoNRE in coordination & integration of plans, with RSBO assisting.

- Central – local partnership model. Main focus is on a partnership between central & local levels, with the RSBO providing more leadership in identifying & analyzing problems, planning monitoring of conditions & impacts, and public awareness. Participating ministries are reaching down to local partners for work within their mandates.

- Local – central partnership model. Main focus is on a local-central partnership with RSBO leading most tasks. Local organizations and civil society groups are reaching up for partnerships with relevant ministries under locally defined mandates.

- Local non-government model. Main focus is on mobilizing non-governmental groups & civil society institutions to formulate, advocate & monitor activities within a locally-defined RSBO mandate.

4. A five phase process is proposed for developing river sub-basin management organizations (RSBOs) in the context of the Ping River Basin, as summarized in Figure 3-6:

- Getting started. This phase builds on existing organizations & plans in establishing a preliminary sub-basin working group & formulating initial action plans. Emphasis is on articulating goals, objectives, criteria & priorities for selecting action plan component projects, reviewing & screening existing sub-basin plans, linking with TAO & provincial plans, & selecting priority 'demonstration' activities & local studies.

- Establishing long-term organization and process. This phase centers on participatory review of experience with planning processes at sub-basin and other relevant levels, and selection and localization of an initial organizational model for a long-term RSBO. Views should also be solicited about directions in which the RSBO should evolve.

- Launching implementation in a River Basin Management framework. This phase moves into 'multi-tasking' mode, wherein activities under the initial action plan begin

implementation, and monitoring systems begin to be established and activated. At the same time, a broader RSBO Management Plan (see Figure 3-9) is outlined, which includes strategies for monitoring, information, partnerships, capacity building & funding. Initial implementation of the capacity building strategy also begins, in parallel with efforts at the Ping River Basin level to build support capacities in terms of a knowledge center, mobile technical support teams, and data & analytical systems.

- <u>Strengthening long-term management planning & learning processes</u>. This phase moves to a multi-year approach, with emphasis on broadening and deepening understanding and consensus in the sub-basin. RSBO structures, plans and processes are further refined, based on careful consideration of various views, and emphasis on learning from experience with actual implementation activities. To help stimulate these considerations, a number of questions are suggested in section III.D.4. An annual review process would become part of a long-term continuous learning cycle of problem identification, analysis, planning, monitoring, and outcome & impact assessment. This process should be participatory, inclusive, transparent, accessible, and both downwardly and upwardly accountable.

- <u>Maintaining long-term organizational relevance, vitality & performance</u>. The final open-ended phase takes well-functioning RSBOs into long-term operation & maintenance mode. In addition to annual learning & adjustment cycles, a second perhaps 5 to 6 year cycle is added to focus on longer-term changing conditions, & on assessments of RSBO performance & stakeholder satisfaction, including needs for programs & operations, and ways to improve structures & functions to respond to those needs.

5. Suggestions about factors that are likely to influence the time frame required to implement this five phase process of RSBO development can be found in section III.D.6.

IV. Project Implementation in Pilot Sub-basins

This part shifts discussion from analysis and preparation to the actual process of project implementation in the three selected sub-basins. We begin with discussion of the key activities involved in the implementation process. Following sections discuss project results, first in terms of outputs of the planning process, and then in terms of lessons learned from this experience. Since sub-basin plans developed under the project are still being finalized with assistance of the team from Panya Consultants, assessments of project outputs made in this report are still very preliminary. Lessons drawn from project experience, and recommendations contained in the final part of this report, however, are based more broadly on the author's assessments and views on overall implementation processes and experience.

A. The time factor

It is difficult to proceed with discussion about implementation under this project without first clarifying the context of timeframe issues. The core origin of these issues relates to a series of delays in project implementation. The nature of and reasons for many of these delays are beyond the knowledge of the author, and are not a specified concern of his job under this project. They have, however, had very substantial impacts on project components reported on here, and have directly affected the degree to which project outputs could be achieved, and their qualitative characteristics.

Major points made here follow from the partial information provided in Figure 4-1. Upper and lower parts of this figure represent different "slices" on the content of the project. The upper portion presents a sequential overall project implementation point of view, while the lower portion separates activities by project components. The content of this report is associated with component 1 in the lower portion, and with lines in the upper part labeled with the "WME" acronym. The three columns on the right side of Figure 4-1 represent time frames for project implementation that were noted at different points (there were also more intermediate iterations).

The first time column reflects the schedule in the proposal document approved through the ASEM funding mechanism. This document was submitted in May 2003, approved in July 2003, and followed in less than two weeks by formal approval by the Thailand Cabinet of Ministers, which authorized implementation of the project in the context of the Thai government system. Implementation under this schedule would have coincided with planning initiatives led by DWR and DNP.

For whatever reasons that followed, calls for proposals from consulting firms, and for applications for two independent consultant positions were issued just over a year later. The second time column reflects the revised timing cited during this application process. While the "watershed management expert" position was contractually established during September 2004, selection and conclusion of a contract with the consulting firm that would provide the central implementation function for the three major project components was not concluded until about February 2005.

Although various project implementation activities then began, such as Water Forum events to select pilot sub-basins during March 2005, subsequent delays arose that further affected "field" implementation activities led by Panya consultants. Thus, the last column in Figure 4-1 reflects the actual timing of some key project implementation activities.

Although lists of dates are only partially complete, information is sufficient to see that while some reconnaissance activities began in July, most activities conducted in direct association with people and institutions in the three pilot sub-basins have occurred during the four-month period of September through December 2005.

The central point to be made here is that interpretation of project activities and their results can only be fully understood when placed in the context of this timing issue. More specific implications are explained in the context provided by subsequent sections.

Figure 4-1. Project work plan timing revisions.

Work Plan for Participatory Watershed Management for Ping River Basin Project (FM-PO-001)

Item	Task/Report	ASEM proposal	First project proposed date	Actual date
0	**ASEM Tehcnical Assistance Funding Proposal submit/approve**	19 May 2003		18 Jul 2003
	Thailand Ministerial Cabinet Approval			29 Jul 2003
1	**Project Initiation and Area Scoping**			
	1.1 sign contract WME (watershed mgmt consultant)	Nov 2003	17 Sep 2004	17 Sep 2004
	1.2 sign contract EE (environmental economist consultant)	Mar 2004	17 Sep 2004	17 Sep 2004
	1.3 sign contract CF (consulting firm)	Mar 2004	01 Nov 2004	
	1.4 project team site visits		03-05 Nov 2004	09-12 Nov 2004
	1.5 project initiation meeting		08 Nov 2004	08 Nov 2004
	1.6 inception report WME submit/approve - selecting sub-basins		Nov 2004	Feb/Mar 2005
	1.7 inception report EE submit/approve - identify key pollution sources		Nov 2004	
	1.8 inception report CF submit/approve - project work programs		Dec 2004	
	1.9 watershed rapid assessment report		01 Dec 2004	
	1.1 Sub-Basin Water Forum events		24-25 Nov 2004	10-14 Mar 2005
	1.1 Execute participatory selection process		10 Dec 2004	
	1.1 Execute pollution sources selection process		10 Dec 2004	
2	**Project Initiation and Area Scoping**			
	2.1 sub-basin participatory environment & poverty assessment report		30 Dec 2004	
	2.2 interim report WME submit/approve - sub-basin management models		Feb 2005	Jul/Aug 2005
	2.3 interim report EE submit/approve - regulatory & incentive mechanisms		30 May 2005	
	2.4 final report WME submit/approve - summary & action plan	Apr 2004	Jun 2005	Nov/Dec 2005
	2.5 final report EE submit/approve - framework for assessing performance	May 2005	15 Jul 2005	
	2.6 reults measurement report CF submit/approve		30 Jun 2005	
	2.7 technical, organizational & educational toolkits		30 Apr 2005	Oct-Nov 2005
3	**Implementation and Training**			
	3.1 implementation of participatory sub-basin management model		15 Jul 2005	Nov-Dec 2005
	3.2 implementation of regulatory and incentive programs		15 Jul 2005	
	3.3 delivery and evaluation of training programs		30 Jul 2005	Nov 2005
	3.4 CF component 1 report	Apr 2004	30 Jul 2005	
	3.5 CF compontent 3 report	May 2005	30 Jul 2005	
4	**Monitoring**			
	4.1 assessing performance of pollution source groups		15 Jul 2005	
	4.2 modification of incentive mechanisms and monitoring framework		30 Jul 2005	
	4.3 CF component 2 report	Mar 2005	30 Jul 2005	
5	**Information Dissemination**			
	5.1 provincial and national workshops	Jun-Jul 2005	Jul-Aug 2005	
	5.2 final report and executive summary	Aug 2005	26 Aug 2005	
1	COMPONENT 1 : Participatory Micro-Watershed Management (PMM)	Nov 2003 - Apr 2004		
	1.1 Selection of 3 Pilot Micro-Watersheds		Feb-Mar 2005	
	1.2 Water Forum for Participatory Selection		Mar 2005	
	1.3 Detailed Assessment (Stocktaking)		Mar-May 2005	
	1.4 Micro-Watershed Association Establishment		Mar-May 2005	Oct-Dec 2005
	sub-basin working group establishment			Oct 2005
	sub-basin long-term organization workshops			Nov-Dec 2005
	1.5 Action Plan Development		May-Jul 2005	
	sub-basin project meeting 1			July 2005
	CF sub-basin PRAs on local plans			Sep 2005
	sub-basin working group meeting 1			Nov 2005
	sub-basin working group meeting 2			Nov 2005
	sub-basin working group meeting 3			Nov 2005
	1.6 Toolkits Design		May-Jul 2005	Oct-Nov 2005
	1.7 Dissemination		Aug-Sep 2005	
2	COMPONENT 2 : Enhancing capaicy of communities in pilot sub-basins	Mar 2004 - Mar 2005		
	2.1 Selection of Local Facilitators		Apr 2005	Oct 2005
	2.2 Identification of Training Needs		Apr-May 2005	
	2.3 Development of Training Materials		May-Jun 2005	Sep-Nov 2005
	2.4 Facilitators Training		Jul 2005	09-13 Nov 2005
	2.5 Assisting Community Groups Training		Jul-Aug 2005	Nov 2005
3	COMPONENT 3 : Strengthen regulatory & incentive structures in pilot sub-basins	Mar 2004 - May 2005		
	3.1 Identification of Key Polluter		May 2005	
	3.2 Selection of 20-25 Sources/MW		Jun 2005	
	3.3 Incentive Mechanism Program Development		Jul 2005	
	3.4 Regulatory and Incentive Options Dialogue with Deteriorators		Jul-Aug 2005	
	3.5 Supporting Program Implementation		Aug-Dec 2005	
	3.6 Evaluation Criteria Setting		Sep-Oct 2005	
4	COMPONENT 4 : Project management, results measurement & dissemination	Nov 2003 - Aug 2005		
	4.1 Project Coordination		2004-2005	2004-Feb 2006
	4.2 Results Measurement Framework Development		Jul-Sep 2005	
	4.3 Dissemination Workshop		Oct 2005	

B. Implementation activities

This section reviews the author's contact with, involvement in, and some impressions of the seven major types of implementation activities that were conducted under the leadership of other project and local leaders, primarily in a very intensive manner during the final several months of the project, which was identified in the previous section.

1. Preliminary surveys

After selection of the project's three pilot sub-basins, preliminary survey activities were conducted by members of the team from Panya Consultants. Although the author was not directly involved in these activities, there appear to have been three primary types of information involved. The first type was obtained through the gathering of secondary data and information from sources at provincial, agency and national levels. The second type of information was obtained from district and tambon level offices, officials and leaders within the individual sub-basins. The third type involved more primary types of data collection, primarily through collaborating with local key informants while conducting field reconnaissance surveys, which are described by the consultant team as participatory rapid appraisal (PRA) techniques.

Given the various Panya sub-teams involved, their often simultaneous activities at different sites, and their exploratory PRA approach, it was not possible for the author to have a close engagement with all these activities. Although the author has not yet seen any specific reports arising from these exercises, he has seen various data that have been presented or used in sub-basin working group meetings and deliberations. The author has also had a number of consultations with Mr. Kusol from the Panya team regarding the PRA work in pilot sub-basins related to land use, agriculture and agricultural pollution. As part of these consultations, the author has been provided with a fairly detailed printed version of their mapping of sources of agricultural pollution in the Ping Part 1 sub-basin.

Meanwhile, the author was involved in conducting further analysis of secondary data on all Ping sub-basins, and especially in analysis of village-level data from the national rural development database in order to further characterize especially socio-economic characteristics of the wider set of Ping sub-basins. Much of this data was presented in tables in Part II of this report. This has helped provide insights for discussions in sub-basin working groups, as well as what the author hopes will be useful data for consideration during further assessments and development of activities in other sub-basins and wider support programs.

As part of these further investigations of secondary sources, the author has also been collaborating with Dr. Methi Ekasingh at the CMU Multiple Cropping Center, in reviewing data in their pilot provincial decision support systems that are being introduced to Chiang Mai, Lamphun and Chiang Rai provinces. This has helped clarify in more detail the distribution of types of agricultural land use in middle and upper Ping sub-basins (see Figure 1-8), to complement the more natural resources oriented land use information available from MoNRE and associated sources (as in Figures 1-9 to 1-11). It has also helped provide biophysical, economic, ethnic and social data for use in various of the analyses associated with sub-basin selection criteria and indicators presented in Part II of this report. Dr. Methi has also kindly provided spatial maps of the middle and upper pilot sub-basins as shown Figures 4-2 through 4-5.

Most of the maps used under this project at individual pilot sub-basin level have focused on how sub-basins are divided among administrative units, including provinces, districts and tambons, or on boundaries of forest land categories or forest cover. While this is all helpful and very relevant information, Dr. Methi's maps are shown here to help display another dimension of spatial organization in the two pilot sub-basins that fall within the domain of his system.

Figure 4-2. Mae Kuang major sub-watersheds and settlements

Legend
- ■ **Highland community**
- ▲ **Villages**
- **Road**
- ── Hard surface, two or more lanes
- ── Loose surface, two or more lanes
- ── Hard surface, one lane
- ── Loose surface, one lane
- ── Fair or dry weather, loose surface
- ── Cart track
- ── Footpath, trail
- ── Others
- ▢ Mae Kuang sub-watershed level3
- ▢ Mae Kuang sub-basin
- ■ Mae Kunag Dam Reservoir

km
0 2 4   8   12   16
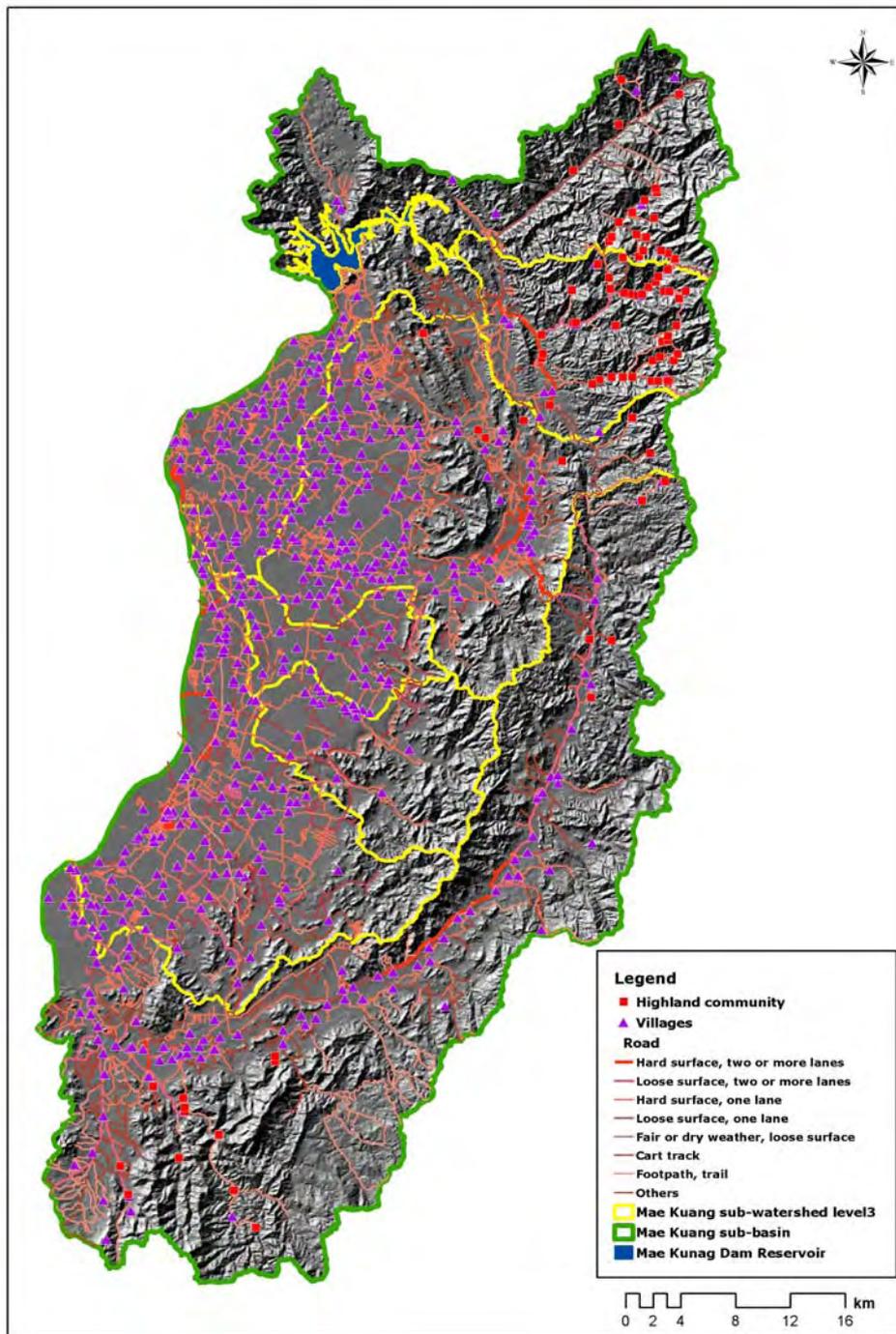
Source: Dr. Methi Ekasingh, CMU Multiple Cropping Center

There has been a considerable amount of discussion within this project, and in various parts of this report, about local sub-watershed units and various types of local management and networking activities that are occurring at this more local type of level. While such efforts are commended and acknowledged, some concern has also been voiced that these local sub-watershed (*lumnamyoi*) levels are too ambiguous and informal to be useful.

In order to help explore some of the available information that can help clarify these issues, Dr. Methi has employed multi-level delineations of watersheds in two of our pilot sub-basins, using his high-resolution digital elevation model and analytical features in his decision support system. Thus, Figures 4-2 and 4-4 present depictions of Mae Kuang and Ping Part 1 sub-basins, respectively, that include delineations of major sub-watersheds at the first more local level within the sub-

Figure 4-3. Mae Kuang more local sub-watersheds & water resources

Legend

Stream
- Irrigation canal
- Lake or pond
- Lake (dry during part of the year)
- First order stream
- Second order stresm
- Main stream
- Mae Kuang sub-watershed level4
- Mae Kuang sub-basin
- Mae Kunag Dam Reservoir
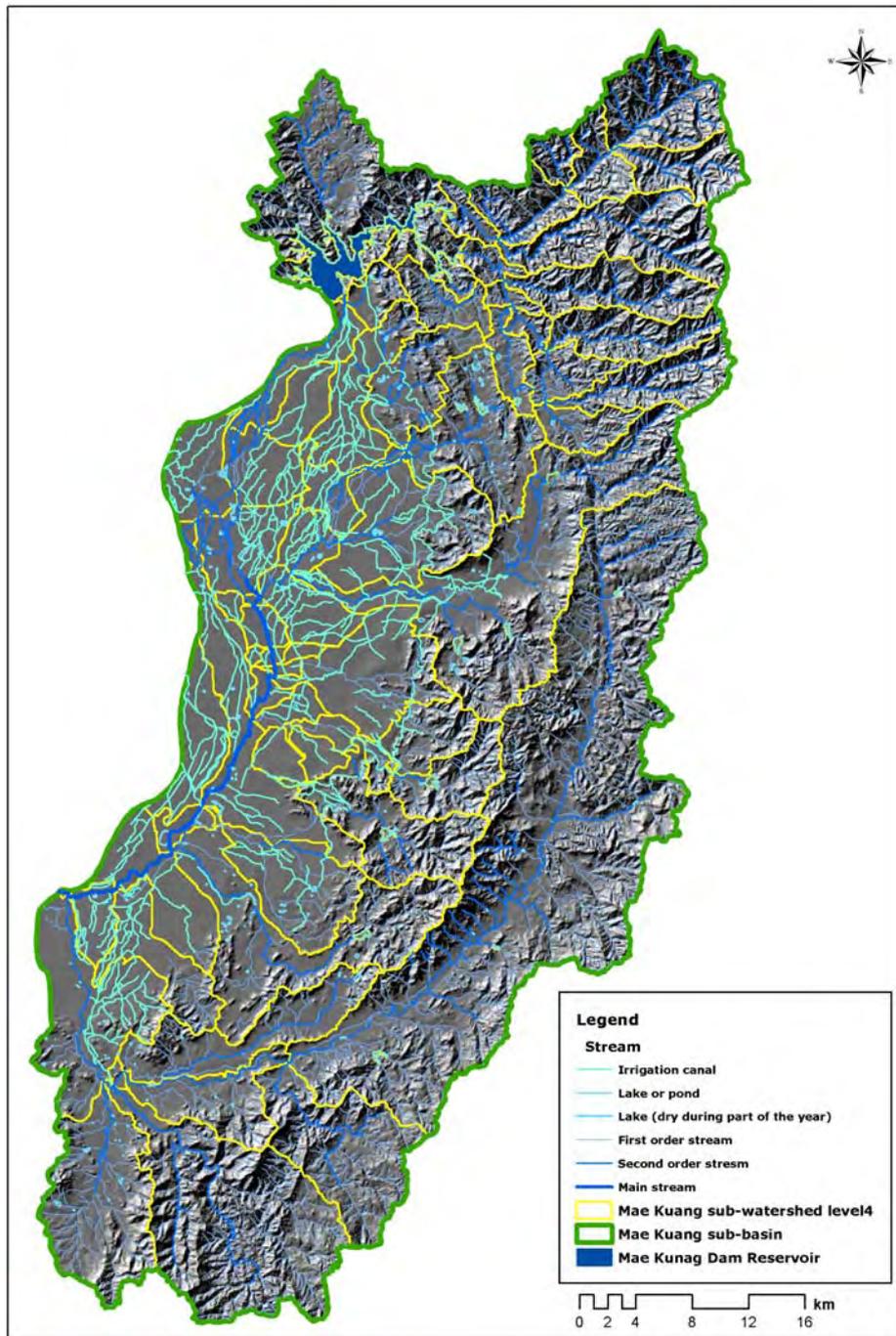
Source: Dr. Methi Ekasingh, CMU Multiple Cropping Center

basins. These maps also include locations of villages and roads. In the Mae Kuang, eight major sub-watersheds are shown, while seven are shown for Ping Part 1. Some of these sub-watersheds contain only a few villages, while others contain fairly large numbers of settlements and complex road networks.

Figures 4-3 and 4-5 take sub-watershed delineations to the next level of disaggregaton, which breaks the sub-basins down into much greater numbers of much more local sub-watersheds. These maps also include water storage reservoirs, streams and irrigation canals. While the system provides for several more levels of disaggregation, these two levels appear to be the most useful for purposes here.

Figure 4-4. Ping Part 1 major sub-watersheds and settlements

Source: Dr. Methi Ekasingh, CMU Multiple Cropping Center
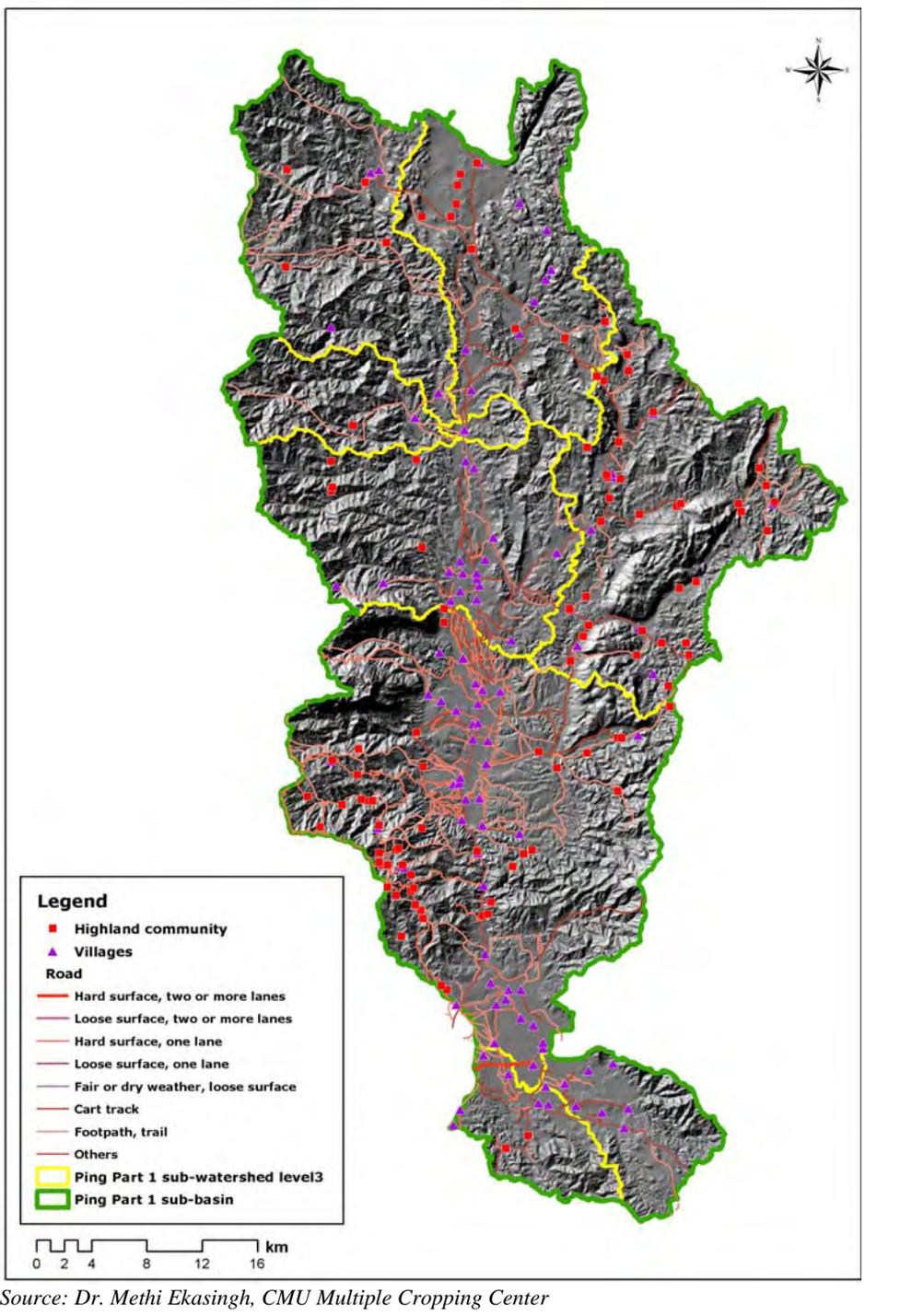
By comparing the two maps for each sub-basin, one can begin to see how sub-watersheds might be distinguished for purposes of management by local sub-watershed management networks. Neither level appears most appropriate for all situations. Rather than its spatial size, probably the most important consideration is the complexity of the sub-watershed unit, both in terms of its biophysical characteristics and its patterns of human social organization. In the more sparsely settled upper sub-watersheds of Ping Part 1, for example, some units may be manageable by local networks at the major sub-watershed level. In Mae Kuang, however, most all major sub-watersheds are quite complex, many in terms of settlement density, and some in terms of canal systems.

These examples can help us see why substantial flexibility (ambiguity) needs to be maintained in defining levels and spatial scales of local sub-watersheds where local groups and networks can es-

Figure 4-5. Ping Part 1 more local sub-watersheds & water resources

Legend

Stream

- Irrigation canal
- Lake or pond
- Lake (dry during part of the year)
- First order stream
- Second order stresm
- Main stream
- Ping Part 1 sub-watershed level4
- Ping Part 1 sub-basin

0 2 4   8   12   16 km
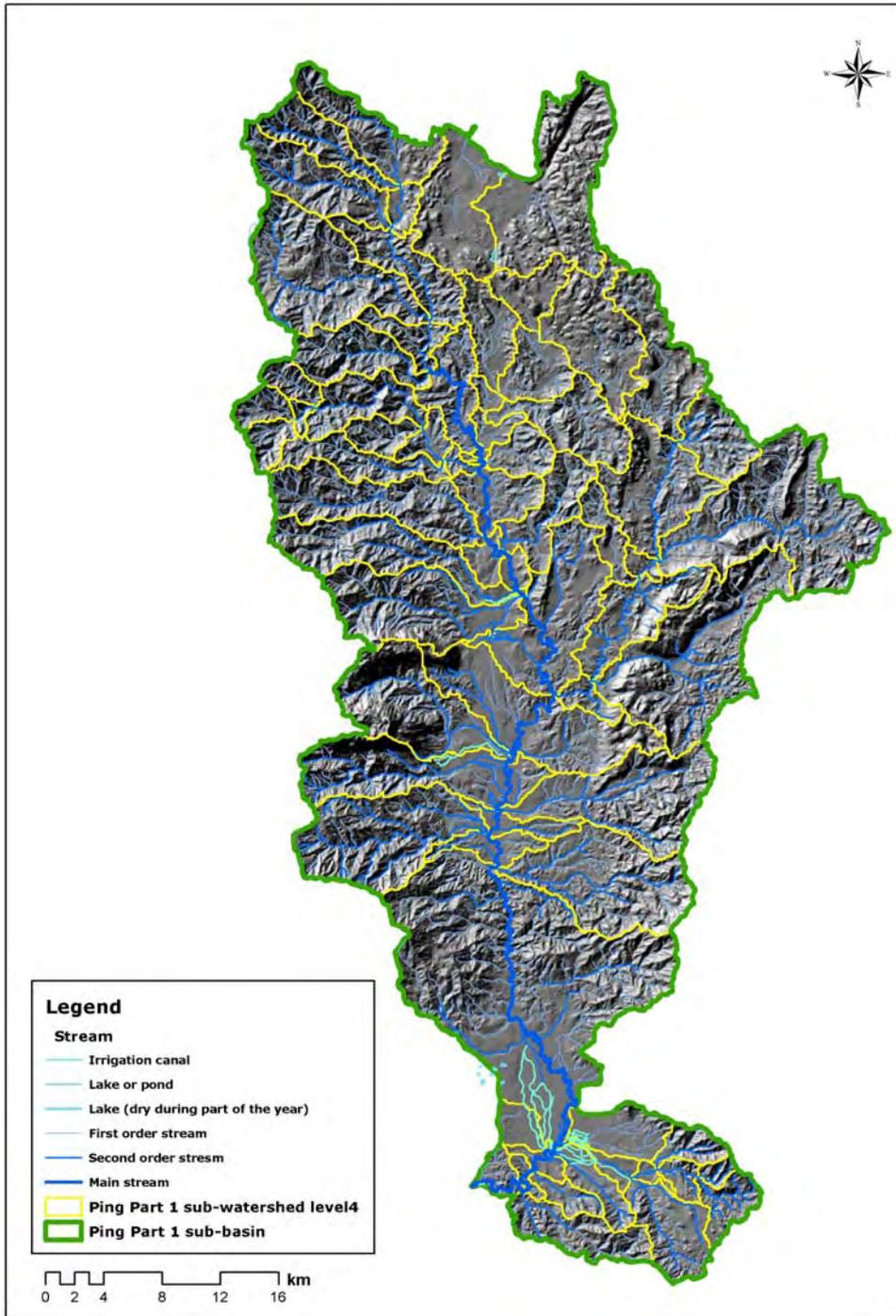
Source: Dr. Methi Ekasingh, CMU Multiple Cropping Center

tablish and maintain effective management. There are thresholds of local management capacity that depend on a wide variety of factors and are affected by characteristics such as kinship, cultural and livelihood diversity, length of settlement, traditional and other existing institutions (including those that are agency-induced), and degree of competition for or conflict over resources, amongst others. Physical scale is only one of these characteristics.

Thus, it should not be surprising that emerging local sub-watershed management networks show considerable diversity in the scales at which they operate. Moreover, if we overlay these maps with the boundaries of local government jurisdictions, forest land categories or other agency jurisdictional boundaries, or other types of spatially defined units, we can also see how complexity can be further increased. These factors can further affect organizational viability at different spatial scales.

We can also see, however, many of the potential benefits of broader networks and alliances among very local sub-watershed management units that can help deal with broader issues, and can also help local units to interface with various types of larger administrative units with whom they need to interact, and who may be able to help provide support for their efforts. One obvious example is the sub-district, (TAO), for example, which appears to be particularly active in providing a framework for local network integration in the Ping Part 1 sub-basin.

At the same time, we should not be surprised to see that local leaders are demonstrating some difficulty in overcoming obstacles to management in the highly complex areas of the Mae Kuang sub-basin. Indeed, the predictable nature of the implications of this complexity helps us question the wisdom of seeking to combine the clearly distinct Mae Tha watershed into a single sub-basin management unit with the already highly complex Mae Kuang watershed.

All these factors point to the need for maintaining 'space' for local communities and networks to take the lead in defining the most "appropriate" units for sub-watershed management within Ping sub-basins. They also help underscore the need for greater collaboration across levels in defining sub-basin administrative units. The reality and importance of these issues have been demonstrated in experience under this project in pilot sub-basins.

2. Establishing sub-basin working groups

Articulation of the process for RSBO development in pilot sub-basins proposed by the author in Part III of this report began with discussion of preliminary sub-basin committees that were under consideration at that time. After further consideration by project leadership, including discussions

and suggestions in the author's interim report, the composition of the committee was revised, and its status was changed to a working group. This helped underscore the preliminary nature of its role under the project.

The final composition of the working groups appointed for each sub-basin is summarized in Figure 4-6. Half or more of the working groups members are from non-governmental groups or constituencies, and about one-third have direct links with agencies under the MoNRE, including the chair and secretary positions. The balance are provincial or local officials.

Directives establishing these working groups were issued near the end of October by ONEP. The authority and duties of the sub-basin working groups, as specified in that

Figure 4-6. Final sub-basin working group composition

	Ping 1	Mae Kuang	Lower Ping
Prov NRE (chair)	1	2	2
Prov ONEP (sec)	1		1
- water working group		1	2
- NR working group	1	1	
Project Consultant	1	1	1
DWR organization			1
DNP organization	1	1	
RFD	1	1	
Provincial office	1	2	2
Provincial irrigation			2
Local officials	2	3	1
Upper/Lower Ping	1	1	1
Local technicians	3	2	2
Peoples representatives	5	4	4
Peoples organizations	2	1	2
NGO	1	1	1
Business	2	2	2
TOTAL	23	24	24
MoNRE	7	8	8
Province / local officials	3	5	5
Non-government	14	12	12
MoNRE	30%	33%	33%
Province / local officials	13%	21%	21%
Non-government	61%	50%	50%

directive, include four activities:

- To formulate a 4-year implementation plan for managing natural resources and the environment in the sub-basin, including a proposed work plan and projects for urgent management during the first year.

- To use public relations, disseminate information, and build understanding to provide people with awareness and understanding of various results or implementation methods that follow from the natural resources and environment implementation plan.

- To coordinate and implement activities together with the (previously existing) Upper (or Lower) Ping Coordination Office for restoration of natural resources and the environment.

- To consider models for establishing an organization to administer natural resource and environmental management in the sub-basin over the long term.

Thus, ONEP leadership decided to establish modified organizational Type 1 working groups as a temporary measure to conduct planning, disseminate information, and build public awareness and understanding, in coordination with the existing Upper/Lower Ping coordination offices. They would also convene considerations of the full range of organizational types discussed in Part III of this report. If accomplished before the end of the project, this would represent completion of the first two of the five phases of RSBO development proposed in Part III of this report (Figure 3-6).

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Given the short period of time then remaining for implementation, the project work plan was modified to include a series of at least three major meetings of these working groups to focus on development of sub-basin action plans, and additional meetings to review experience and consider other organizational models for long-term management.

Due to the intensity of efforts in the three pilot sub-basins during this final period, the author was again faced with the situation of being physically unable to participate fully in all these meetings and activities. Thus, he has employed the strategy of following as many meetings and activities as possible in the Ping Part 1 sub-basin, in order to try to get a clearer sense of how work has progressed. This was supplemented by participation in project-wide meetings, and by reviewing available documentation on activities in the other two pilot sub-basins. As all of this documentation is in the Thai language, this has taken more time and effort than anticipated. Moreover, this strategy is reflected in the information that could be included in remaining sections of this part of the report.

3. Initial vision, goals and strategy

The first round of project working group meetings began with consideration of sub-basin visions, goals and strategies. To get the process moving as quickly as possible, previous vision statements formulated for prior projects were reviewed, along with some additional examples forwarded by Panya Consultants that were derived from various sources, including their discussions with various stakeholders. While not all working group members were able to attend, there was a quorum.

In the Ping part 1 meeting there was considerable brainstorming and discussion of alternative vision statements put forward by working group members themselves. The working group then deferred decision on the vision while they went through discussions of individual goals and objectives. They then took these statements back to discuss with colleagues and constituents before arriving at final decisions at the next working group meeting. Discussions were all very open, serious and mature, and almost everyone volunteered their own points of view and engaged in constructive discussions. In terms of the process, form and operating style, these discussions managed to achieve what had seemed a very distant vision at the Water Forum events.

There appears to have again been considerable diversity among sub-basins, however, in how these processes unfolded. Reports of the first Mae Kuang working group meeting indicate a substantial amount of discomfort among working group members, many of whom seem to have felt a need to take these issues for consultation with their colleagues and constituents before they were willing to enter into substantive discussions and/or debate. The Lower Ping report, on the other hand, indicates that this working group quickly adopted very slightly modified versions of examples presented to them and concluded the entire meeting by noon.

Of course there are tendencies to formulate vision statements that are either short, and perhaps somewhat poetic, but often very ambiguous "feel-good" statements, or a statement that is so long and rambling that no one can remember it. Since Ping part 1 discussions tried to be careful about including all key elements, while still keeping it short and hopefully somewhat motivational, these discussions were actually making an important contribution to mapping out the scope of the organization's mandate without explicitly trying to do so. At the other extreme, organization in the Lower Ping appears to be proceeding based on similar previous efforts it already completed under leadership of the Department of Water Resources, with assistance from Kasetsart University.

4. Project local staff and capacity building

Immediately after sub-basin working groups were established, ONEP and Panya collaborated with working group leaders to select six "local facilitators" from each sub-basin to work directly with the project. Fifteen "community trainers" from each sub-basin were subsequently selected to further assist with project activities at more local levels.

The project is (quickly) implementing several types of capacity building components, which focus on different target groups within pilot sub-basins. Two of these target groups (local facilitators and community trainers) are people selected to participate directly in helping facilitate implementation activities under the project. Other capacity building activities observed by the author are being integrated into project activities. For those participating directly in the project, there were two training events that were central to helping strengthen their capacity to work under the project:

(a) *Local facilitator[37] training*

Training for the six local facilitators from each pilot sub-basin was held during 9-13 November 2005 in Tak province. Training was composed of six major modules, plus field trips. The author was allowed to comment on and offer suggestions for training based on draft outlines of most of the main modules.[38] Various of the subsequent adjustments and further articulation of training materials responded to some of the questions or suggestions raised. The final modules employed were:

Communications Skills[39] Module

This training consisted of four sub-modules on (1) mass relations techniques, (2) basic public relations, (3) knowledge dissemination techniques, and (4) experience with mass relations and public relations in watershed management. Written materials prepared for these sub-modules indicate that:

- The first sub-module was developed and taught by a military expert lecturer in mass relations and communications. It includes some perspectives that are somewhat different than might be found in many western academic, activist, or social organizer circles, and includes a section on conflict resolution. Only a list of sub-topics is available in written form, however, and the author sees no indication that something more lasting or widely useable will be produced un-

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[37] วิทยากรลุ่มน้ำสาขา

[38] See appendix b for the content of the author's comments.

[39] (1) เทคนิคด้านมวลชนสัมพันธ์, (2) หลักการประชาสัมพันธ์, (3) เทคนิคการถ่ายทอดความรู้, (4) ประสบการณ์ด้านมวลชนสัมพันธ์และการประชาสัมพันธ์ใน การจัดการลุ่มน้ำ

der the project. These materials are interesting not only for their content, but also for the point of view they represent, which is widespread among various important stakeholder groups.

- The second and third sub-modules have a more conventional base in communication theory and social psychology, which is touched on very briefly in the introduction. Much of the main focus of written materials is on techniques for helping gain acceptance of local audiences, and use of tools such as pin boards, flipcharts, posters, leaflets and folders. As in the first sub-module, there is also attention to public speaking arts. In the thin booklet on this module, there is no evidence of reference to ideas based on knowledge dissemination theory per se.

- The author has not received any written or presentation materials related to the fourth sub-module.

From the author's point of view, it would have been interesting if these types of presentations could have been complemented by presentation of some views, approaches, and techniques employed by people who are somewhat more on the activist community organizer side of the spectrum. This might have added some useful additional techniques or tools, as well as a more complete view of the paradigms used by different stakeholder groups.

Natural Resources[40] *Module*

This appears to be a very central module of the training program, which includes three important sub-modules on (1) natural resource processes and management in watersheds, (2) community participation in watershed management, and (3) management tools. The substantial written and presentation materials prepared for these sub-modules by Dr. Monthon indicate that:

- The first sub-module is notable for its efforts to present a broad view of biophysical processes and related watershed issues in as straightforward and simple a manner as possible, and the accompanying presentation uses a substantial amount of graphic visualizations. One of its techniques is to focus on the point that watershed management is really all about management of resources within a watershed.[41] This allows inclusion of many forms of human activity and issues, which are generalized into urban, agricultural and forest ecosystems within the watershed, which then provides a basis of examining interactions among them, with particular focus on water resources. The author's only very minor point is that the distinction between agricultural and forest ecosystems should allow for landscapes that are intermediate between the two (or have mixtures of both) – like the ones found in most Ping River sub-basins.

- The second sub-module demonstrates just how far thinking has changed in various parts of the forester's world, as it articulates an understanding of types and levels of participation, as well as a potential trajectory of change in community-state relationships in Thailand. While the overall focus is on conservation, the issues and principles have wider relevance.

- The third sub-module focuses on local plans, rules and organization as tools for management. In doing so, it appears that this module is intended to provide the main introduction for local facilitators into the planning processes that would be occurring in very rapid fashion under the project. Examples used in this sub-module focus on development of a pair of plans focused on addressing conservation problems: (1) a conservation plan, and (2) an extension plan. A series of steps is articulated for developing these plans, based on participatory problem identification, collaborative articulation of goals and strategies, development of priorities, assignment of roles and responsibilities, identification of needs for assistance, and aggregation of projects into plans that contribute to addressing priority needs under sub-basin goals and strategies.

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[40] (1) การจัดการทรัพยากรธรรมชาติและสิ่งแวดล้อมในพื้นที่ลุ่มน้ำ, (2) การมีส่วนร่วมของประชาชนในการจัดการลุ่มน้ำ, (3) เครื่องมือในการจัดการ: แผน กฎระเบียบ องค์กร

[41] The author sees this as an important and useful point and refers to it elsewhere in this report.

Mountain Minorities[42] Module

It is very interesting indeed that the Panya team decided to solicit input from IMPECT[43] for this module. IMPECT is one of the early broad-ranging non-governmental network organizations in northern Thailand, and its membership is primarily based on mountain ethnic minority communities. Thus, they are able to articulate points of view that are quite different than what one will hear from either government agencies or mainstream academic institutions. This is reflected in the materials prepared and distributed under the project, which also include some data from a more recent survey of mountain ("highland") communities than was employed in Part II of this report.[44] The author believes even the manner in which these materials are written can make a very useful contribution to improving discussion of issues related to these communities in Ping River sub-basins. One hopes that there will be an opportunity to further develop and expand these types of materials for future use in all Ping River sub-basin where these stakeholder groups are important. Moreover, it is a good sign that strategic network organizations such as this are being invited to participate in Ping River Basin management activities, and the author hopes that such relationships will continue and further expand in the future.

Health[45] Module

This module began with a review of health data from provinces and districts within the three pilot sub-basins, followed by information on several high profile health threats. Health data revealed:

- In Ping part 1, water-borne diarrheal diseases and malaria are of particular importance, as is AIDS and a moderate level of accidents. While pesticide use is reported as high, related reported illnesses are quite low. Although AIDS was the leading cause of death, it has recently fallen below cancer and respiratory failure.

- In Mae Kuang, the highest rates of illness are from respiratory diseases, followed by food poisoning, diarrhea and amoebic dysentery. While pesticide use is reported as high, related reported illnesses are quite low. Leading causes of deaths are cancer and heart disease.

- In the Lower Ping, leading illness is diarrheal diseases, followed by accidents, respiratory disease, food poisoning and Dengue fever. While pesticide use is reported as high, related reported illnesses are quite low. Leading causes of death are heart disease, cancer and respiratory disease.

The health threat section covers basic information on Dengue fever, malaria, avian influenza, AIDS, liver fluke, and foot-and-mouth disease.

While this is an interesting module that is to be commended for developing an approach that began with an assessment of health data in the particular localities where local facilitators will be working, the author feels it would have been good to see a bit more specific information about how sub-basin management activities might be able to help address issues such as diarrheal diseases. It was also a bit disappointing to see no reference to intestinal parasite infestations that the author understands are significant in at least many mountain communities. Regarding pesticide issues, it is interesting to see the low levels of reported illness compared to the high profile of this issue in public discussions and debate, as well as pesticide poisoning data from village reports (Figure 2-45).

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[42] กลุ่มชาติพันธุ์

[43] สมาคมศูนย์รวมการศึกษาและวัฒนธรรม ของชาวไทยภูเขาในประเทศไทย (ศ.ว.ท.)

[44] The author has heard previous reference to this data, but has not yet been able to gain access to the disaggregated database in order to update the analysis in Part II.

[45] สาธารณสุข: สาเหตุของโรค วิธีป้องกันโรค การดูแลสุขภาพร่างกาย

Pollution[46] Module.

Training sessions under this module included four sub-modules on (1) water pollution management, (2) agricultural pollution management, (3) community pollution management, and (4) industrial pollution management. In the printed materials, sub-modules 3 and 4 were combined.

- The first sub-module is focused on water pollution, and its associated written materials are in the form of a training handbook that includes a 5-page general introduction to the environment and causes of pollution. This is followed by brief discussion of the sources, problems and impacts of water pollution, and then by a chapter on approaches for preventing and managing water pollution. The final chapter focuses on methods for monitoring water quality.

- The second sub-module tackles agricultural pollution by beginning with a discussion on how pollution arises in agricultural practices and differences between point and non-point sources. While animal wastes, salts and sediment are mentioned as sources of pollution, the main focus is on use of agricultural chemicals, and especially chemical fertilizers and pesticides. With the exception of sections on how make compost and liquid organic fertilizers, and how to take soil and plant samples for analysis by experts, the bulk of the remaining materials focus on types of alternative practices that can reduce or eliminate chemical use, including criteria used by groups promoting different approaches. The written materials also include summary descriptions of how 36 herbs can be used for pest control based on local knowledge techniques.

- The third sub-module on community pollution is split into two sections on wastewater pollution and solid waste disposal. The very brief wastewater section lists estimates of wastewater generation, types of pollutants in wastewater and some of their impacts, simple and technical indicators of water quality, titles of relevant laws, and a few paragraphs on types of treatment at household and community levels. The also brief solid waste section lists regional waste generation estimates, definitions of major types of waste, some potential impacts, titles of related laws, and a few paragraphs on types of management at household and community levels.

- The final sub-module on industrial pollution is based on a short but concise summary of industrial pollution sources and types, their environmental impacts, a list of titles of relevant laws, indicators and standards of relevant water quality parameters, and a few paragraphs on "clean technologies" and waste treatment methods.

Local Knowledge & Local Organization[47] Module

This module, which was organized and presented by Dr. Pornchai Preechapanya, began with an introduction to local knowledge and it relationships with scientific knowledge, followed by techniques for eliciting local knowledge in the context of local watershed landscapes. Examples included local knowledge related to perceptions of how trees affect water absorption and release, and how plants help capture water, reduce soil erosion, and cycle nutrients, as well as biological indicators of weather patterns, water quality, and predictors of floods and landslides. He also discussed perceived ecological functions of cattle and buffalo grazing in forests. A second section of this module focused on relevance and roles of institutional rules from national to local levels, as well as the organizational units of government agencies, local communities, local governments, and non-governmental organizations, including discussion of the roles of local networks and *prachakhom*. The module ends with discussion of roles for local organizations in monitoring watershed functions and environmental quality, including use of both local knowledge and simple science-based tools.

Written materials distributed under this module include materials published in association with ICRAF on folk knowledge about agroforestry systems used in watershed areas [Preechapanya 2001], local institution roles in natural resource governance, and annotated artistic renderings of watershed landscapes. Much of this work has been conducted in collaboration with local communi-

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[46] (1) การจัดการมลพิษทางน้ำ, (2) การจัดการมลพิษทางการเกษตร, (3) การจัดการมลพิษจากชุมชน, (4) การจัดการมลพิษจากอุตสาหกรรม

[47] ภูมิปัญญาท้องถิ่นและองค์กรท้องถิ่น

ties in the Mae Chaem sub-basin and the Ping part 1 sub-basin, with supplementary information from a range of other locations [Preechapanya 2005]. Presentations also draw on findings from Dr. Pornchai's other research on local knowledge-based biological indicators of environmental quality, as well as on materials published by the Green World Foundation on biological indicators of water quality. Although he has now left his position as head of the DNP's northern watershed research center, Dr. Pornchai will continue his contributions to this type of work as deputy director of the Queen Sirikit Botannical Garden, which is based in the Ping's Mae Rim sub-basin.

(b) Training of community trainers[48]

Fifteen community trainers from each sub-basin were selected during the third week of November, and a training session was held for them during 28-30 November in Chiang Mai. The focus of training was largely on simplified elements under the natural resources and pollution modules in the facilitator training. A common venue in Chiang Mai also allowed for both joint and separate sessions, as well as a degree of interaction among community trainers from different sub-basins. This has allowed, for example, initiation of discussions between Ping Part 1 and Mae Kuang groups about various upstream-downstream relationships between them, as well as commonalities and differences in the problems and approaches.

While the main project task of community trainers will be to conduct field trips *cum* study tours for large groups of stakeholders (estimated at 150 persons each) in each sub-basin, their training is also presumed to have spin-off and residual effects in helping to build capacity in pilot sub-basins.

(c) Other project capacity building activities

Additional project capacity building efforts can be seen in sub-basin workshops where articulations of vision statements, goals and objectives have been developed to set the framework for assessing proposed projects and assigning priorities to them. During these processes, Panya staff have sought to provide a degree of mentoring as they work through the tasks and associated issues, although the very tight time frame for these activities has been an important limitation.

Further efforts have been made in regard to articulation of criteria and indicators for monitoring of both projects and environmental conditions in pilot sub-basins. Various resource persons have been pulled into the process, and at least some of their contributions can definitely be seen as helping strengthen the capacity building process. Again, while interest was strong in the Ping Part 1 working group, for example, time constraints limited this to a first installment on what should be a much longer-term and in-depth process.

5. Project 'toolkit' materials

It is the author's understanding that the training materials discussed in the previous section are being developed into more complete and publishable formats as the primary components of the 'toolkits' specified as an output of this project. Since the author's input and comments on specific components of those materials are mentioned in the previous section, and were the subject of a project memo[49] during their development, those comments need not be repeated here. Rather, this section focuses of a few additional components, and some overall observations regarding the categories of toolkits envisioned in the project terms of reference.

(a) Technical toolkits for forest conservation, community forestry, biodiversity, waste re-use and re-cycling, water and soil conservation, organic farming, etc.

Technical toolkits appear to have received the greatest emphasis under the project thus far. Training documents (and hopefully associated presentations) on natural resource management, pollution,

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[48] วิทยากรชุมชน

[49] See appendix b for the substance of those comments.

and health modules of the facilitator training program appear to fall into this category. The materials on local knowledge furnished by Dr. Pornchai, which responds to one of the author's suggestions on these materials, will presumably also be part of a technical toolkit.

In addition, the author has been provided with copies of (1) a handbook on soil and water conservation, and (2) a video CD on sustainable agriculture produced by the Department of Land Development. Both of these also appear to be slated for inclusion in technical toolkits. The author notes that his earlier suggestions regarding the soil and water handbook have not yet been addressed, so he assumes they will not be incorporated into those materials. One of the main points of those suggestions was that materials need to assess and address why especially soil conservation types of practices have seen so little adoption despite many years of extension efforts, as well as specific examples of sites where they are working well.

Training materials on water, community and industrial pollution are only slightly longer than brief brochures or what might be called "information sheets" in many western contexts. That is probably fine if they are developed into such formats, but what is clearly missing is information about where interested people or groups can find additional information. Especially items like lists of titles of laws, or paragraphs on types of prevention or mitigation methods are of little use if interested people have no information about how and where they can access further details. Indeed, each of the prevention or mitigation measures could well be the topic of individual extension-type brochures or booklets.

Training materials on natural resources and agricultural pollution have more details and illustrations, and could be further developed into booklets. But again, recommended reading and sources of additional information need to be provided. Mr. Kosul's summary of herbal alternatives to pesticides derived from local knowledge is only the tip of a potentially very interesting iceberg.

Copies of appropriate existing publications from beyond the project, such as those provided by Dr. Pornchai, should also be included in toolkits. Another clear example would be copies of Green Word Foundation publications on methods and tools for 'stream detectives', which could also be included in the 'type 3' toolkits, below. Many other examples are also likely to exist, but unfortunately, there are no known central collections of these types of materials.

> ### (b) Organizational toolkits for roles and responsibilities of communities, alternative dispute resolution mechanisms, consultative processes for budgets and expenditures, credit and savings fund; monitoring of action plan implementation, evaluating intervention results and disclosure.

Project training materials that appear to fit in this category include the sub-modules of the natural resource training related to community participation and 'management tools' (*i.e.* plans, rules and organization). It also includes contents of the communications skills module (which the author notes should be expanded to include additional points of view), and the mountain minorities module (which deserves further refinement, expansion and wide dissemination). It could also include the local organization component of Dr. Pornchai's local knowledge and organization module, and associated publications. A community planning handbook previously published by ONEP was used by the project, and should be included as part of this toolkit [ONEP 2004].

Areas that still appear to be missing here (although Panya staff may have materials that the author has not yet seen) include information on expenditure processes, credit and savings funds, and evaluation of intervention results and disclosure. Resource persons who assisted working group discussions on criteria and indicators might be a potential source of materials related to evaluation of intervention results and disclosure.

Regarding sources outside the project, given the large number of initiatives during recent years that have centered on or employed revolving funds, there must be a considerable number of materials

available from various sources. The scope for their potential role in projects we are seeing in emerging plans will be discussed a bit further later in this report. Conflict management is another area where the author believes there must be a range of fairly recent materials from other sources that could be included – or at least suggested as further reading – in project toolkits.

(c) Awareness and education toolkits for use in schools, health centers, community radio networks, village fairs, etc.

There is at least some degree of overlap between materials in the previous two types of toolkits and what could be included in this third type of toolkit. Materials for distribution at activities such as village fairs should presumably be more in the form of attractive brochures or 'information sheets' that include sections on where and how to get more information, as well as items like posters, shirts, etc., that feature specific concepts, points, slogans, etc. Dr. Pornchai's annotated artistic renderings of landscapes are another interesting example. The DLD's video CD is yet another type of attractive format whose time has come.

While some of these types of materials could also be useful for capturing attention in schools, health centers, etc., these types of venues are also likely to have a need for more detailed information written in a language and style appropriate for students or non-specialist audiences. One example of technical materials that have already been employed at a number of schools in the Ping Basin is the 'stream detectives' package of handbooks and materials published by the Green World Foundation in Bangkok, and available at places like Suriwongse Bookstore in Chiang Mai.

Materials for community radio networks is a bit more of a specialized area, and might well include a list of local persons who are knowledgeable and articulate about the sub-basin management efforts and issues. Indeed, interviews or discussions with such people could be conducted and packaged for airing by interested stations in a logical sequence.

Overall, it may also useful to reflect a bit on what does NOT appear to be included in the training materials *cum* 'toolkits' at this point. In addition to the items noted above, a few examples include:

- Information about the more 'full-blown' type of long-term participatory <u>river basin</u> management processes (as opposed to watershed management and project compilations), as discussed in Part III of this report.[50]

- Associated materials focused on <u>building widespread consensus</u> among the full range of stakeholders in river basins or sub-basins regarding the content and implementation approaches of a more holistic long-term management plan.

- Materials with more breadth and depth of discussion about <u>livelihood development</u> and <u>livelihood alternatives</u> that could be realistic viable options for major groups of sub-basin stakeholders.

- Information on more dimensions of <u>urban</u> environmental quality, including many cultural and quality of life dimensions that were championed in the earlier study by CMU [2004].

- Information that addresses <u>flood plain</u>, riverbank, stream <u>channel</u> and <u>canal</u> issues, including impacts of encroachment, infrastructure, and engineering modifications.

- Information on more aspects of and approaches for improving <u>water use efficiency</u> by the range of types of stakeholders present in sub-basins.

- Materials that introduce concepts like alternative <u>future scenarios</u>, which can help sub-basin stakeholders think about and visualize preferred trajectories for future development.

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[50] See especially part III.D.3., above.

- Materials that explain and explore the nature of <u>trade-offs</u> between livelihood and environmental objectives, the <u>distribution of costs and benefits</u> among different stakeholders, and possible <u>compensating measures</u> for those who accrue more costs than benefits.

- Information on concepts and experience related to <u>incentives</u> for more environmentally-friendly behavior, including but not limited to economic and regulatory incentives. (Perhaps more information in this area may come from another component of this project)

- And the author is certain that others can help add many important items to this list that have been overlooked here.

Moreover, all materials need to place a high priority on providing suggestions for further reading and/or contacts where people can gain access to further information.

Discussions here about training materials and toolkits are also closely related to the author's earlier suggestions regarding development of a "knowledge center" for the Ping River Basin, which will be re-visited in the final part of this report.

6. Developing initial action plans

During the period wherein initial sub-basin working groups were considering vision statements, goals and objectives for sub-basin management plans, staff from Panya Consultants were also gathering substantial amounts of information through their 'PRA' techniques in pilot sub-basins. Since by this time there was a general consensus emerging that project planning efforts need to be built on and coordinated with previous sub-basin and local government planning work, the consultant team began gathering lists of relevant projects from these sources. It is the author's understanding that the list was also supplemented with new project ideas that emerged during this process.

Thus, the planning documents that the author has seen thus far consist of long lists of hundreds of small (and a few fairly large) projects, for which budgets and overall responsibilities are assigned, primarily to local governments and/or units of line agencies active in the area. There is not yet any detail provided for any of the projects, or any indication of any linkage relationships among them. Familiarity with proposed projects appears mixed among members of the working group, but further information on many of them can be provided by various members.

Given this vast amount of very indicative information, the Panya team has been working to categorize the long project lists into at least aggregates that can be viewed, summarized, and hopefully assessed by sub-basin working groups. An example is provided in the next section. Now that working groups have articulated their sub-basin vision, goals and objectives, project staff are now working to collate project lists according to the objectives they would aim to help achieve.

At least in the Ping Part 1 sub-basin, there have been various additional project ideas that have emerged as discussions in the working group have evolved, and many appear very relevant and quite interesting. It is not yet clear, however, how many of these can be developed into concreted project proposals in time to be included in the current action planning process.

It is the author's understanding that working groups will now seek to go through those lists, screening them for their appropriateness and contributions to achieving objectives, and ranking them in terms of priorities. They will also be seeking to identify gaps, and to either seek ideas and proposals to fill those gaps, or flag them as needing further consideration in the future.

In this regard, the author has also been encouraging consideration of activities such as studies (perhaps somewhat along the lines of those supported in some areas by the Thailand Research Fund) in topic areas where it is not yet possible to identify specific local actions that could effectively address important issues or needs. Whether this occurs or not remains to be seen.

7. Selecting long-term RSBO organizational structures

An initial round of sub-basin workshops were held at strategic venues within individual sub-basins to present and solicit ideas about experience to date with Ping Basin programs, and to encourage thinking about organizational alternatives for sub-basin management. The five types of organizational alternatives discussed in Part III of this report have provided a centerpiece for suggested alternatives for stakeholders to consider.

The general response to this initiative appears to have been positive in most cases. It has also revealed once again the basically cultural differences among upper and middle sub-basins on one hand, and lower sub-basins on the other. Response has been rather rapid in middle and upper sub-basins that local communities and non-governmental leaders want to have basic "ownership" of sub-basin organizations. While officials and government agencies are seen as valuable and essential partners, they do not want to see agency domination of sub-basin management processes. In the lower sub-basin, however, stakeholders appear quite comfortable with their agency-induced organizational structure, and functions that are in line with ministry mandates. They do appear, however, to show preference for linkages with both MoNRE and MoAC, and to have strong roles for local leaders of agency-induced organizations and networks.

This initial round of workshops was followed by a general workshop for numerous stakeholders from all three sub-basins convened in Chiang Mai on 17 December 2005. After general presentations and discussions in the morning, participants broke into separate groups for each sub-basin during the afternoon. Although the author has not yet seen what the specific outcomes of those considerations have been, discussions with various participants during the workshop indicate that it is not likely that sub-basins will yet be able to provide a definite decision that will allow them to begin implementing any new organizational structure. The overall process, and the lines of thinking underlying it, however, have begun.

C. Results 1: Initial Sub-basin Action Plans

Action plans for each of the individual sub-basins are seen as a major output of this project. Indeed, it appears that at various points and among various stakeholders, the focus on action plans has even tended to be seen almost as an end in itself. And, in the view of a number of local leaders and community members, generating a series of action plan documents has been the primary function of all Ping Basin management programs thus far. Despite sometimes growing skepticism about what will actually be accomplished under these plans, however, there is also recognition that these efforts are aimed at trying to formulate program approaches that are more participatory and integrated, and that aim to help development programs that are more responsive to local needs and quality of life issues for both current and future generations.

At the time this report is being written, sub-basin action plans are still a work in progress. Discussion in previous sections has already described the nature of the processes and activities involved in trying to quickly bring closure to this endeavor. Thus, this section can only try to take a preliminary look at what is likely to be the nature of the action plans, based on progress and trends thus far.

1. Plan components

In order to set a framework for considering the components of the action plan, this section builds on discussions in Part III of this report that propose a list of five major components that need to be included in a long-term RSBO management plan (see Figure 3-9 and accompanying text).

(a) *Articulation of problems, vision, goals and objectives*

Each sub-basin has articulated a vision statement and associated sets of goals and objectives for management in their sub-basin. And efforts are underway to structure their action plans in a manner wherein all proposed projects are explicitly linked with the objectives they will seek to help achieve. Moreover, vision statements reflect perceptions of issues and problems that at least several major stakeholders perceive to exist in the sub-basin, so that the overall structure is intended to be problem-solving in its nature.

In reality, formulation of sub-basin vision statements, goals and objectives have had input from various directions, and especially from previous iterations of this process under earlier Ping Basin programs, or under other agency or local government planning efforts. In some cases, such as Ping Part 1, there was some fairly serious (but very rapid) effort to really consider new formulations. In other cases, such as Lower Ping, they appear comfortable with ones similar to previous efforts. The process in Mae Kuang has been perhaps a bit more contentious and affected by local rivalries.

While previous efforts along these lines have helped sub-basin working groups accomplish these tasks at a pace that may have been more difficult in the absence of such experience, it appears that it may have also influenced perceptions of the scope of the mandate for sub-basin management. This is reflected in the relatively wide range of basic problems that have been identified, and to varying extents included in vision statements. While in some cases there is at least a degree of follow through in goal and objective statements, there also appears to be a progressive narrowing at each level that seems to draw in the conceptual boundaries to be closer to the mandate domains of the key patron government agencies. Although this is not necessarily a problem, it may be worth recognizing, and perhaps reconsidering (and possibly re-validating) after a reasonable period of experience with actual implementation and monitoring.

(b) *Action plans that target improved livelihood, health and environment outcomes*

If the logic of sub-basin vision statements, goals and objectives is sound, and if their scope sufficiently covers livelihood, health and environment issues and needs, then the key remaining element of targeting should be that specific action projects make significant contributions toward achieving objectives, and thus goals.

The long lists of preliminarily proposed projects have gone through an initial sorting into four major categories, in order to provide a reasonable degree of order for initial scanning and consideration by sub-basin working groups. As already noted, after final articulation of sub-basin vision, goal and objective statements, the lists are now being resorted into categories that follow more directly and precisely from stated objectives. Unfortunately, however, the resorted lists were not yet available to the author in time for inclusion in this report.

Thus, in order to help provide a general overview of what was in these initial lists, Figure 4-7 summarizes the list of proposed projects initially presented to the Ping Part 1 sub-basin working group. Columns in this table represent the four initial sorting categories. Again, it is important to emphasize two major points: (1) this list of projects has NOT yet been screened by the working group according to the objectives of the project, and (2) the four categories are being replaced by actual goals and objectives for purposes of resorting and subsequent screening and consideration.

Figure 4-7. Initial classification of projects proposed in Ping Part 1 sub-basin.

[budgets in millions of Baht]		Natural Resources		Environment		Public Health		Livelihoods		Total		
District	*Tambon*	*projects*	*budget*	*projects*	*budget*	*projects*	*budget*	*projects*	*budget*	*projects*	*budget*	
Chiang Dao	Muang Nae	11	7.7	5	1.7	-	-	-	-	16	9.4	*2%*
	Chiang Dao	8	2.4	6	1.9	-	-	-	-	14	4.3	*1%*
	Mae Nae	12	1.1	21	16.6	-	1.3	2	-	35	19.0	*4%*
	Muang Ngay	9	0.7	12	1.1	-	-	-	-	21	1.8	*0%*
	Thung Khao Puang	14	2.6	5	10.7	-	-	-	-	19	13.3	*3%*
	Ping Khong	11	4.2	3	0.3	-	-	-	-	14	4.6	*1%*
Mae Taeng	Mae Taeng	8	9.9	2	3.5	15	4.0	12	9.7	37	27.1	*6%*
	Kid Chang	4	33.6	2	3.5	19	4.9	9	9.2	34	51.1	*11%*
	Saw Lae	5	2.9	12	140.8	-	-	-	-	17	143.8	*30%*
	Mae Haw Phra	15	6.5	10	1.7	-	-	1	0.7	26	9.0	*2%*
	Ban Phao	2	0.1	12	0.9	-	-	-	-	14	1.0	*0%*
	Intakil	5	1.8	2	0.2	-	-	-	-	7	2.0	*0%*
	Sanmahaphon	8	29.3	8	1.1	25	35.1	10	1.8	51	67.3	*14%*
Sansai	Mae Faek	8	0.8	14	1.9	11	0.8	7	2.9	40	6.4	*1%*
Chaiprakhan	Sri Dong Yen	16	3.4	8	1.5	24	3.4	38	9.1	86	17.4	*4%*
	Nong Bua	7	1.9	3	1.0	-	-	-	-	10	2.9	*1%*
Phrao	Nam Phrae	19	15.5	10	6.4	23	3.7	38	12.9	90	38.5	*8%*
	Ban Phong	4	0.2	3	0.4	20	4.3	10	6.5	37	11.5	*2%*
	Sansai	8	3.9	3	0.3	-	-	-	-	11	4.2	*1%*
	Longkok	5	0.2	-	-	14	0.4	6	1.0	25	1.6	*0%*
Vienghaeng	Piang Luang	9	3.6	1	0.8	14	5.8	6	16.4	30	26.5	*6%*
	Muang Haeng	9	1.7	6	3.3	14	1.1	16	4.7	45	10.8	*2%*
	Total:	197	134.0	148	199.6	179	64.8	155	74.9	679	473.4	*100%*
		29%	*28%*	*22%*	*42%*	*26%*	*14%*	*23%*	*16%*	*100%*	*100%*	

Rows in this table list numbers of projects and aggregate values of budgets by districts and *tambons*. This structure follows from the local administrative processes involved in coming up with the projects, as well as the perceived structure of processes that are most likely to be involved in project implementation. While this is likely to be the format for presentation in all sub-basins, in the case of the Ping Part 1 sub-basin it also reflects the particularly strong involvement of TAO governments in leading efforts to provide a focal point and interface with local networks of various sorts and other types of local initiatives that are related to the topics under consideration.

The formulating of action plans in this format adds to proliferation in the number of projects. For example, a single line of training activity of broad relevance across many villages and *tambons* might appear as a single line item in the budget of a central government agency, or even a provincial office. In a context like this, however, it would need to be broken into as many as 22 separate projects in order to be conducted in all *tambons* in the Ping Part 1 sub-basin (and even more in the Mae Kuang). Of course, another factor that adds to project proliferation relates to the apparent preference in some areas for multiple projects of very modest scale, rather than a few big projects. Examples in Figure 4-7 include the 12 natural resources projects totaling 1.1 million baht in Mae Nae, or the same figures for environment projects in Muang Ngay, along with numerous others.

In terms of the columns in the table, while these initial groupings have been somewhat helpful in seeing the general distribution of projects, variation within some categories revealed needs for im-

provements in the categorization system. A more detailed look at the actual projects contained in each category reveals, for example, that some items listed under natural resources could arguably be included under environment or livelihoods, as well as some items under environment that might also be conceived as being under livelihoods. Project resorting based on actual goals and objectives should provide a substantial improvement, but the author has not yet seen the outcome.

We can also see both 'lumpiness' among *tambons*, and very substantial differences in relative allocations across the four categories. Much of the lumpiness in budget allocations is due to a few quite large projects for things like water treatment facilities, solid waste disposal facilities, and even slaughterhouse facilities by a few *tambons*. Whether such items are seen as appropriate for inclusion in the action plan, and what priority is assigned to them in allocating scarce resources will be a decision for sub-basin working groups. In any event, however, the logic underlying such decisions, including their linkage with and contribution to sub-basin objectives, should be clearly stated if they are included in the final action plan. While such lumpiness is an invitation for further scrutiny, such scrutiny might be equally applicable in cases where equal allocation are made across all tambons. These are clearly examples where transparency and accountability should come into play.

Most of the unevenness in allocations across categories is found in the public health and livelihood categories. The author's impression is that this relates to considerable uncertainty about what would be eligible for inclusion, and especially to the shortage of available project proposals that would be doable and acceptable. This situation follows from the absence of these issue areas in previous Ping Basin planning exercises, and especially in the case of livelihoods, to the combination of no single ministry with a corresponding mandate, and uncertainty about what could be done. Judging from discussions in the Ping 1 sub-basin working group, it may be possible to make some improvements in these areas before finalizing the action plan. At the same time, however, it is also recognized that some areas (and perhaps some objectives) will need to be flagged in the action plan as important sub-basin concerns where considerable further effort is necessary in order to identify and design actionable projects that can help address these concerns. If so, one hopes that at least a modest amount of resources might be accessible for conducting such efforts.

In the case of the Mae Kuang sub-basin, a quick look through the many hundreds of projects listed in their preliminary list reveals a range of proposed projects that appears to be an approximation of the full range of programs of related government agencies active in those topic areas, but there is great variation among types of projects proposed for different localities within the sub-basin. At least wide diversity should not be surprising in a sub-basin as complex and diverse as Mae Kuang.

For the many activities in proposed project lists that appear quite similar to the types of programs that have been developed and promoted by government agencies, one is tempted to ask if these types of activities are so promising, why have they not already addressed these problems without the need for sub-basin management organizations? The first response to that question would likely be that they did not succeed because they did not have full participation and support from local communities. And this may well be a valid point. And at the same time, when local communities are put into the position of being asked what support they want to receive from government agencies, one of the most common lines of response will be in terms of what it is that they perceive to be available from government agencies. All this results in a kind of chicken-and-egg syndrome that reinforces the persistence of current lines of activity, and tends to screen out any new lines of analysis or innovation. While this is unfortunate, it is not unusual anywhere in the world.

Another closely related issue is the types of projects that stakeholders perceive are eligible for inclusion in action plans such as those being developed under this project. In most agency, local government and provincial planning processes, there has been a presumption against inclusion of any types of activities that are too exploratory in nature (much of which is due to previous cases of budgetary abuse), accompanied by a bias in favor of activities that are more construction or training oriented. However, the nature of many livelihood-associated problems, for example, still requires a substantial degree of exploration before more specific activities can be developed and articulated. This appears to be one of the problems associated with the shortage of livelihood related activities,

as well as the lack of new ideas and creativity in those that are submitted. The author has repeatedly encouraged inclusion of study or exploratory activities in areas of the action plan where they are appropriate and justifiable (especially in relation to livelihoods and agricultural practices), but the degree to which they will actually appear remains to be seen.

Although these initial sub-basin lists are likely to be substantially modified in the final action plans, they are most likely indicative of at least the order of magnitude of numbers and budgets of projects that will be included. The point here is that these plans are likely to request very substantial amounts of funding to be distributed among a large number of projects. The author's impression is that this is in no small part related to the high-profile statements of national government leaders regarding the high priority they assign to Ping Basin management, and the often very large amounts of resources they cite as evidence of their commitment. Indeed, previous Ping Basin program planning efforts have operated in the same atmosphere, and aggregation of their resulting budgets has also resulted in very large budget requests. One suspects that these tendencies have not been discouraged by patron government agencies, especially where agency leaders view such programs as potential sources of funding to supplement agency programs during an era when more national budgets are being shifted from central line agencies into programs led by local government. Experience thus far, as well as general trends in the public policy arena, however, raise some questions whether anywhere near these levels of funding support will actually become available for these purposes. This possibility makes the processes of justification and priority setting even more important, and again underscores the need for adequate transparency and accountability.

(c) Monitoring indicators and information strategy

Sessions have been held with sub-basin working groups on criteria, indicators and measures for monitoring and assessing progress of sub-basin implementation activities. At least in the case of the Ping part 1 sub-basin where the author has been able to most closely follow project activities, there has been some quite interesting (but very rushed) consideration of monitoring criteria and indicators. Moreover, in addition to monitoring specific project outputs, these discussions have been wide enough in scope to extend to means for monitoring outcomes and impacts, as well as monitoring and analysis that can help identify newly emerging issues and problems. Awareness of the needs for such mechanisms appears to be quite strong across the full range of stakeholders present in the sub-basin working group. While these discussions have been good, it is not yet clear how many concrete proposals can be included in this initial action plan.

Regarding monitoring of project outputs, the author has not yet seen much effort directed toward clarification of the role of sub-basin working groups (or RSBOs) versus local governments and line agencies. It was already mentioned earlier in this report[51] that there has been some considerable divergence in thinking about the role of sub-basin organizations regarding project implementation. From the discussions and action projects emerging from work in sub-basins, there appears to be a quite clear assumption that most project implementation will be conducted under the authority of local governments, and to at least some extent line agencies. Such units have their own regulations and mandates for monitoring project inputs and outputs. What is not yet clear, however, is the degree to which sub-basin organizations will (or should) have some at least collaborative oversight function in monitoring inputs and outputs of projects included in sub-basin plans. And if they are to have such roles, there will clearly need to be mutual understanding and arrangements about how such monitoring activities will be conducted.

At the outcome and impact (and new problem identification) levels, monitoring needs to be more closely linked with criteria and indicators identified for those levels. Again, discussions have begun regarding such criteria and indicators, and the need for sufficient baseline data has been recognized. At least in the Ping Part 1 sub-basin, it is also clear that working group members recognize the need for collaboration in obtaining data from both local and outside sources. Indeed, they have even recognized the potential synergy of linking outside sources such as interpretation of remote

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[51] See especially section III.B.1.b.

sensing data with local understanding that can greatly enhance the quality and depth of such inter-pretations. It is not yet clear, however, whether this type of activity will be reflected as one or more projects under the action plan, whether it will be seen as an operational expense of the sub-basin organization, or whether they will be looking for funding support from the outside partners.

In order to help develop what could become a more coherent overall monitoring strategy, lists of projects and activities contained in the final action plan can be tagged and re-sorted according to their monitoring needs. This would provide aggregations of projects that could help identify the scope of, and potential complementarities within monitoring activities, and facilitate formulation of the most efficient and effective monitoring program and arrangements that are possible.

In terms of a more holistic monitoring and information strategy, the first step would be to combine the monitoring information needs identified above, together with information required by the crite-ria and indicators identified at the objective and goal levels of the sub-basin program. This could produce a package of information requirements that could then be assessed in terms of sources from both within and outside the sub-basin. Whether all this can be completed before the end of the project, however, remains questionable.

Moreover, there are still elements of a full-scale river sub-basin monitoring and information strate-gy[52] (and system) that will clearly be beyond the capabilities of this project to formulate – much less establish, test and conduct. Beyond its information requirements, the monitoring strategy needs to map out how monitoring will be conducted, how findings will be assessed, and how findings will feed back into RSBO learning processes. The information component of this strategy needs to map out what information is needed, how it will be acquired, how it will be managed, and espe-cially how it will be accessed, used and disseminated to provide a basis for learning and public education, as well as for helping achieve transparency and accountability. Needs for information tools, including items such as measurement technologies, spatial information or negotiation support systems also need to be incorporated into this strategy as needs are identified.

(d) Partnership and capacity enhancement strategy

So far, the author has not seen anything that could be described as an overall sub-basin capacity enhancement strategy. It appears clear, however, that a very considerable number of components are likely to be embedded within the action plan. Thus, it certainly would make sense to bring them together into an overall capacity development plan where it would be easier to identify gaps and consider means for providing the support services that would be required.

A first step toward building a more coherent capacity building strategy could again be made by tagging and resorting lists of projects in final action plans according to their training needs and sources. This would provide aggregations of projects that could help identify the scope of, and po-tential complementarities among training activities, and facilitate formulation of the most efficient and effective training program and arrangements that are possible. It would be especially useful in organizing various training assistance requirements from particular sources, and for negotiating and scheduling arrangements with those sources. It could also help identify gaps and additional needs, for which sources could be sought out in a more systematic, rather than ad hoc basis.

To the extent that capacity building needs for RSBO-level operations have been integrated into various projects under the action plan, some of the arrangements required to meet these needs can also be part of the above process. To the extent that they are not yet included, however, or to the extent that they emerge during project implementation, a sub-basin capacity building strategy needs to include responsibilities for people who will endeavor to help obtain appropriate assistance. In-ternational experience underscores the fact that capacity building is most likely to be a quite long-term need in developing RSBOs, and those needs are likely to change and evolve over time.

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[52] See especially section III.D.3.a. in this report

Moreover, as sub-basins begin increasing interaction with each other, and with River Basin and other higher levels in their biophysical and administrative hierarchies, additional interests, needs, and opportunities are likely to emerge, Thus, it may also become useful to consider how to best develop both vertical and horizontal partnership linkages with other organizations and institutions, as discussed at various points in this report. A partnership component for this strategy can begin with facilitating networks and other types of interactions within individual sub-basins, and that experience can be useful in developing partnership linkages with other sub-basins and other types of organizations beyond their sub-basin. Two-way interaction through such channels can help build local capacity, help mobilize expertise and other types of additional capacity and support when needed, and help provide means for local experience to be provided to assist others in their learning processes.

(e) *Financing mechanisms*

The project's terms of reference cite intentions for the project to develop financing mechanisms at two-levels: capital investments through local government budgets, and operational budget through instruments like community savings and credit fund. Discussions of project and activity financing mechanisms as project implementation has unfolded, however, have focused at a different level.

All discussions among ONEP staff, Panya staff, and working group members that the author has witnessed have centered primarily on issues related to alternative channels through which central funds might be provided to finance activities and projects proposed under project action plans. Possible channels under discussion include allocations to line ministries, allocations to provincial funds under the control of the Governor or the Provincial Council, or allocations directly to TAO or *tessaban* local governments.

So far, it appears that most projects being proposed for inclusion in sub-basin action plans assume funding would flow from central sources through local governments (TAO) or regular line agencies (but specified for approved projects). This approach has been strongly reinforced by statements from high level government leaders that major funding from central sources will be directed toward Ping Basin management. There is also still discussion about specific mechanisms through which funds might be delivered to local levels, if and when they are made available and approved at high central government levels. One line of discussion, for example, has related to the implications of a sub-basin organization registering as a legal entity (*nittibukon*), and the degree to which this might facilitate or hinder flows of funds to it from various central sources. Much of this discussion, however, assumes that RSBO's would play major project implementation roles, whereas sub-basin working groups appear to be moving in the direction of RSBO emphasis on planning, coordination and monitoring, with most implementation through local governments or line agencies. The discussion is still relevant, however, in terms of budgets for gap-filling or operational roles for RSBOs.

The implied notion in the terms of reference that these central funds would focus exclusively on capital investment, however, is somewhat confusing. If central funds are only for capital investment, then it is not clear how use of "community savings and credit funds" could be justified for most of the types of non-capital investment activities being proposed under these action plans. Many of the projects in initial lists, for example, involve various types of training activities. Most would agree that it would be more than a bit ironic if local communities were expected to pay for forest or water conservation training programs from their community savings or revolving funds so that other members of society could benefit from their activities. Perhaps, however, thinking behind the terms of reference sees such training or capacity building activities as investment in human capital. And in a similar vein, planting trees in national forest lands could be seen as investment in natural capital. If so, then that would be fine, but it would still be difficult to see how, at least at this stage of their evolution, regular operating expenses of sub-basin management organizations could be financed from savings funds (whether at household, group or community level), unless the RSBO operations are able to help generate funds that create those savings.

Most potential sources of truly local funds (*i.e.* not just central funds flowing to local governments) are seen as possibly coming from local government sources through local taxes (in those jurisdictions where significant amounts of local tax can be collected), or at least in principle from local user fees or license fees, or from other types of income generating or cost recovery activities.

Perhaps the most obvious possibility for local financing of operating expenses would be in cost recovery for new or improved services that would be provided as a result of government capital investments in facilities such as reliable water supply, wastewater treatment, trash disposal, or even the slaughterhouse being requested by a *tambon* in the Ping Part 1 sub-basin. In these cases, the main source of operating expense cost recovery might be from user fees. Since many of these types of services and facilities are currently operated at village, *tambon* or *tessaban* level, it is not yet clear that there would be a direct management role for sub-basin organizations. They might, however, help facilitate acquisition or upgrading of such services and facilities, which would then be operated and provide cost recovery at the village or local government level. Whether a sub-basin organization would be able to obtain any operating expenses from such activities, however, remains to be seen.

It might also be possible that there could be cost recovery for services that would clearly decrease payments, taxes or penalties that would otherwise be incurred. It is even conceivable that there might be some form of cost recovery for various activities taken in one part of the sub-basin (or larger river basin) for which the primary beneficiaries are located further downstream or elsewhere, but for which a mechanism such as user fees might be established. International examples of this primarily focus on downstream municipal water supplies or local parks with entrance fees.

Another type of possibility for local financing of activities might be from funds that are generated through fines, penalties or taxes on behavior that violates rules and regulations established through or in association with sub-basin organizations. Since at this point at least, RSBOs do not have official legal authority to levy such fines, penalties or taxes, procedures would again appear to require local government collaboration and authority. It is conceivable, however, that agreement might be reached wherein such revenues collected from designated types of violations or taxes might go into a special community fund earmarked for certain types of activities conducted by the RSBO. While arrangements of this type may be conceivable, social costs of negotiations and establishment are likely to be high, and particular attention would need to be paid to assure transparency and accountability in their operations. Such arrangements are far more common at a village level, where they can be organized and conducted in a less formal manner than is likely to be possible at a sub-basin level. It is not clear, however, whether these types of funds would fall under the category of "community savings and credit funds" cited in the terms of reference.

Indeed, it would seem that the only potentially logical role for financing from "community savings and credit funds" would be more in terms of micro-capital investments (including human capital) at household or group level that would generate an ability to repay the investment, or that would create benefits that would justify allocation of resources for repayment. It is much more difficult to see how these types of sources could be used to finance "operational budgets" of sub-basin natural resource, environment, or public health programs.

It might be appropriate at this point in the discussion to take a look at what exists at village level in terms of "community savings and credit funds". Thus, if one accepts village leadership reports as reasonable at least at a rough estimate level, then Figure 4-8 provides rough estimates from 2003 of households receiving funds through membership in local groups, sources of household producer credit, and villages with rice or cattle/buffalo banks for each of the three pilot sub-basins.

These types of savings groups and government capitalized community revolving funds are supposed to be use for producer credit. And together with the BAAC, and to a lesser extent cooperatives, they appear to be the primary sources of producer credit for local communities. Even in terms of households receiving any types of funds through groups of which they are a member,

those funds are supposed to be used for either liveli-
hood development or for education – either of
which is seen as an investment that will be able to
generate additional income.

Where, then, are these "community savings and
credit funds" that are being viewed as potential
sources of "operational expenses" for sub-basin
organization programs and projects? Stories of
"mis-use" of government revolving funds for re-
payment of other debts or for purchase of household
goods or luxury items is already a matter of very
substantial discussion in the mass media and public
policy arena, and speculation about default on
payments in at least the newer types of government
revolving funds is widespread.   Thus, it is very
difficult to see how the chemistry of activity in this
area could be compatible with sources of
"operational expenses" for sub-basin programs.

In short, the most clearly justifiable uses for
"community savings and credit funds" appear to be
associated with activities that could help improve

Figure 4-8. Sub-basin group funds and credit sources, 2003			
	Lower Ping	Mae Kuang	Ping Part 1
Local groups	*percent of households*		
members	81	91	84
also received funds	55	40	37
also agric group	36	43	29
also agric coop	25	33	26
Producer credit	*percent of households*		
Prod savings group	31	24	12
Cooperative	11	18	7
BAAC	38	26	17
Commercial bank	5	2	4
Private lendor	7	1	1
Gov't revolving fund	66	53	61
other sources	1	1	2
In-kind "banks"	*percent of villages*		
Rice	12	11	27
Cattle/buffalo	4	11	11

Source: Figures 2-20 and 2-17

the earning capacities of individuals or households. Activities associated with clearly viable liveli-
hood alternatives to current activities, however, appear at least at this point to be among the weak-
est components of these plans.

This discussion helps remind us that a financing strategy is another important, and often fairly
complex component of a full-scale long-term river sub-basin management plan. International ex-
perience suggests long term organizational viability and sustainability are indeed enhanced by an
appropriate mix of funding support from central and local sources. Supplementary funding on ei-
ther an operational or project basis from private business or private or parastatal non-profit sources
can also be important, as can donations from private, public or membership sources. Moreover,
some RSBOs establish separate units for managing income producing services and facilities, such
as hydroelectric power generation or water supply or treatment. At least in some cases, such units
can help subsidize other operations and projects that benefit the general public or disadvantaged
groups.

But these are all complex issues that require careful consideration and often extensive negotiations
and consensus building. They cannot be established in a 3 to 4 month period. Thus, exploration
and development of a full sub-basin financing strategy again remains beyond the scope of this cur-
rent project.

(f) Implementation arrangements[53]

The degree of internal ambiguity that is still present in project action plans, together with the exter-
nal ambiguity in prospects for support for any of these plans to actually be implemented, seems to
preclude at this point articulation of very specific details of overall action plan implementation ar-
rangements.

A considerable amount of the internal ambiguity arises from the large number of projects and the
lack of detail provided on each. At one level, however, this ambiguity may be less than it appears
to an 'outsider', because local understandings may implicitly follow from the assignment of re-
sponsibility for individual projects. For example, if the unit responsible for the project is a TAO, it

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[53] การแปลงแผนไปสู่การปฏิบัติ

appears to be assumed that implementation arrangements will proceed using the normal procedures that they employ. The main sources of remaining ambiguity at this level, then, relate to approval processes for projects contained in the action plan, and how funds will be channeled to the TAO for approved projects under their responsibility. Projects for which line agencies would be responsible would be in a similar situation, and there also appears to be the assumption that implementation would need to follow their standard agency practices.

There has been some local concern that has been voiced, however, that in either of these types of situations, funds flowing to either local governments or line agencies for approved projects contained in action plans need to be clearly earmarked for use only in connection with and under the terms of those projects. The details of how this could be achieved and monitored, however, have not yet been part of discussions in which the author has participated.

For some of the same reasons, ambiguity becomes more apparent at the level of overall action plan implementation and monitoring. At this level, the author is not aware of any discussions among the working group that have, for example, assigned responsibilities for assisting, managing, or monitoring overall implementation plan arrangements. It is very possible, of course, that such assignments could be made during the finalization stages of action plan preparation. On the other hand, the current directives from which the sub-basin working groups derive their authority do not include responsibilities that extend beyond preparation of the plan, facilitation of local discussion and understanding, and consideration of organizational arrangements for a long-term RSBO. In this context, it appears that plans are for the follow-on long-term RSBO to assume responsibilities related to project implementation, monitoring, coordination and support during implementation and further development of sub-basin action plans. But these organizations do not yet exist.

If consideration of RSBO structures reaches enough closure by the end of the project that sub-basins can move ahead in establishing their long-term RSBO, then moves could be taken to bring much more clarity to many of the sources of internal ambiguity. If modest levels of funding support could be made available to allow it, they could, for example, move to establish their sub-basin assembly and secretariat, and form appropriate working groups or sub-committees that could focus on bringing much greater clarity to many of these implementation issues and questions.

At the level of external processes, however, there is if anything even greater ambiguity regarding sources of funds, plan and project approval processes, channels through which funding and/or other forms of support would flow, any additional requirements or limitations associated with those channels, and the myriad of other specific questions that will arise if and when support is obtained and implementation is able to proceed. Some of these questions have already been raised in project discussions, but clear answers were not given because of the uncertainty that exists at all levels. Not surprisingly, this has contributed to skepticism among communities and local leaders within sub-basins, as well as among staff in government line agencies. This skepticism, in turn, discourages investing a great deal of further effort in working out detailed implementation arrangements for projects and activities that may not even happen.

2. Comparison with results of previous sub-basin planning

Efforts to compare project planning processes and action plan outputs with recent previous planning activities in the Ping Basin are, once again, severely constrained by the fact that this report is being written without having the final project action plans in hand. Thus, this section will seek to help establish a baseline for these comparisons by looking at action plan summaries of the most recent round of sub-basin planning conducted under the leadership of DWR and DNP. A few comparative observations can then be made, based largely on process observations and the preliminary project lists discussed in previous sections.

Since there were some significant differences in the planning processes conducted by DWR and DNP, as well as in the format of their summary reports on resulting action plans, discussion needs

to be separated for portions of the Ping Basin that were under the jurisdiction of each of these agencies.

(a) Lower pilot sub-basin

Plans for sub-basins in the Lower Ping were formulated under the leadership of the Department of Water Resources (DWP), and results have been collated and summarized in the recent second progress report[54] by the Kasetsart University led team involved with these efforts. The nature and findings of the participatory processes employed in formulating these plans are also included in that report. Discussion of problem identification, however, must have been mainly in their first report which has not been made available to the author.

In order to help portray the overall nature of the plans and how they vary across the various sub-basins involved, Figure 4-9 presents the basic structure of the types of components in the plans, and

Figure 4-9. Projects under DWP-led plans for Lower Ping sub-basins				Nakhon Sawan	Kamphaeng-phet	Tak
Natural Resources Activities	water	agriculture	storage	13	108	107
			canals	152	372	186
		domestic water supply	piped systems	9	34	26
			monitor quality	-	4	2
			deep wells	-	7	-
		flood preparations	drainage	1	57	4
			pumps	3	9	-
		management	conservation	2	10	3
	forest	conservation	plant replacement forest	9	45	34
			plant economic forest	-	2	5
			fire control	-	10	3
		participation	management	-	22	11
	soil	dangerous agriculture	reduce chemicals	12	23	7
			organic practices	22	36	6
		soil care	soil convervation	-	2	1
			cover crops	2	11	1
			soil quality	1	29	5
			conserve resource	-	4	-
		land use control	land use	1	3	1
			land tenure	1	1	1
Management Admin	participation	extension	motivation	7	58	18
			information	3	19	4
	org capacity	groups and networks	activities	4	35	12
			networking	6	28	11
		social rules	use in mgmt	1	2	7
Pollution	prevent & mitigate	trash	local org	19	70	19
			system	5	19	10
		water pollution	industry	1	6	1
			community-hh	4	9	1
		air pollution	transport	-	19	-
			industry	2	2	2
			agriculture	2	3	1
	participation	local org particpation	trash	4	13	2
			wastewater	1	1	-
			dust	1	2	-
			monitoring	3	11	3
		econ mechanisms	resource mgmt	-	-	-
Human envrionment	conserve	culture	extension	2	6	6
			participation	8	12	8
	consv-develop	tourism	care of tourist attractions	6	22	9
	develop	community roads	improve/build	17	32	3
	environment	care & development	local landscapes	7	13	10
			extension	-	6	2
			env sanitation system	-	2	1

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[54] KU 2005

the number of projects under each of those components in areas under each of the three provinces involved. The structure of this figure was determined by the type of data available in the progress report, which was such that summarizing data on budget levels was not feasible in time to be included in this report.

The overall structure of this plan includes four major components covering (1) natural resource activities, including water, forest and soil centered actions; (2) pollution related activities, (3) human environment activities, and (4) management administration activities. Thus, there are no specific components regarding public health or livelihood development. Closer examination indicates there are, however, some sub-components that are similar to some of the areas of activity that are emerging under public health and livelihood elements of the current project. Domestic water quality, environmental sanitation, and pesticide use, for example, have all been linked with public health. The current project is likely to further expand the domain of public health considerations. There are very few components within the DWR plan, however, that relate to livelihood development in a reasonably direct manner, with the possible exception of efforts to conserve and develop tourist attractions. It is also interesting to note that in the initial project workshop in the Lower Ping, efforts to identify and explore problems related to livelihoods (and to a bit lesser extent public health) were able to generate very little interest among workshop participants.

In terms of the number of specific projects under each component, two-thirds of the projects involve natural resource activities, and more than half (52 percent) of all projects are for water resource related activities. About 13 percent are pollution related projects, while 9 percent are directed toward improving the overall human environment. The remaining 11 percent are for management administration projects aimed at strengthening participation and local organizational capacities.

Thus, the overall picture is one of very strong emphasis on agricultural water supply. Secondary emphasis is split among reducing agricultural chemical use, replanting some forest areas, trash disposal, road construction, and some attention to tourism, local landscapes and cultural activities, and non-agricultural pollution. Although the author has not yet been able to see the preliminary project lists for the Lower Ping under the current project, it will be very interesting to see the degree to which they differ from what is contained in this plan.

In terms of local organization for managing and implementing project activities in Lower Ping sub-basins, there is very strong emphasis on local natural resource and environment protection volunteer groups, and networks among these groups. About 11 percent of all projects are related to building capacity of these groups, and strengthening public participation through extension services provided through them. Thirty-six groups, of about 50 to 100 volunteer trainees in each, have already received training in association with this program, and a number of specific projects are aimed at further building their capacity. These are clearly in the category of agency induced local organizations closely linked with MoNRE and its implementing agencies. Units responsible for implementing projects are primarily TAO (or *tessaban*) and line agencies in MoNRE or MoAC. From what has been seen thus far, one suspects that management and implementation arrangements that will be proposed under this project will not diverge very far from this pattern.

(b) Middle and upper pilot sub-basins

Plans that cover middle and upper sub-basins of the Ping River Basin have been developed under the leadership of DNP. Summary booklets are available at the individual sub-basin level,[55] and an overall summary has been published and distributed at an "Upper Ping" workshop held during implementation of this project.[56] The flow of the following discussion relates to their report structure.

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[55] For pilot sub-basins, see Mae Kuang Working Group 2005 and Mae Ping Part 1 Working Group 2005
[56] Upper Ping Coordination Office 2005.

Summary reports prepared by DNP include considerable emphasis on problem identification. And, their lists of locally-identified problems and needs appear to be not very different from those being identified under the current project. While the list of agency concerns about deterioration and needs for forest and soil conservation are very prominent, along with some water management and quality issues, there is also substantial emphasis on problems related to lack of land use security in upland areas, low prices for agricultural products, high input prices, lack of alternative crops and occupations, rising rural debt, erosion of traditional practices, beliefs and values, unfair treatment by middlemen, and negative impacts of activities of 'influential' persons.

Action plans developed in response to these problems and needs have been aggregated into five broad categories, as follows:

- Natural resource restoration. These projects are aimed at restoring forest cover and quality in areas that are defined as having been "encroached" and/or deteriorated. It includes (1) projects for planting forests by local communities, state agencies, and private organizations, (2) projects to increase soil moisture to facilitate forest restoration, including weirs, check-dams, etc., (3) projects to protect areas for natural forest regeneration, (4) projects to improve forest boundaries to prevent encroachment, (5) projects to convert "excess" forest fallows into permanent forest using "incentives".

- Forest resource use administration. These projects are based on recognizing the reality of communities located in forest lands, and seek to establish collaborative working relationships in managing forest resources. It includes (1) projects to establish local "intermediary organizations" to administer local forest resource use, and develop their skills and capacities, (2) projects to establish local standards and agreements on forest use, and volunteers to monitor and enforce local rules, (3) projects to employ local cultural practices and rituals to strengthen management, (4) projects to provide recognition incentives for local communities to protect their forest.

- Land use administration. These projects are aimed at establishing clear land use boundaries to reduce conflict and encourage better long-term management in line with "expert" recommendations. It includes (1) projects to establish local baseline land use maps and forest boundaries, (2) projects to establish computer facilities for recording and showing land use data, making local land use models, and training in how to use them, (2) projects to resolve land use conflicts by establishing "intermediary organizations" to administer networks at sub-basin and local sub-watershed levels, convene appropriate local forums, seminars and public hearings, disseminate information, and monitor land use, (3) projects to reduce soil erosion using vegetative strips, tree inter-planting, special measures in high risk areas, and (4) projects to train and educate farmers and local leaders on "technically proper" land use, and to provide incentives for adoption through awards and investment funds.

- Address drought and hazards. These projects are aimed at reducing impact of dry season water shortages and rainy season landslides. It includes (1) projects to conserve and reduce dry season water use, (2) projects to store or improve access to domestic water during dry season, (3) projects to map areas at high risk of natural hazards, and implement special measures there, (4) projects for sub-basin early warning systems and response training, (5) projects to construct shallow wells, deep wells, water storage structures.

- Community environment quality. These projects are aimed primarily at reducing environmental pollution. It includes (1) projects to establish community systems for managing trash and garbage, including reuse and biogas regeneration, (2) projects to better manage and reduce use of agricultural chemicals, (3) projects to monitor water quality, (4) projects to substitute natural materials for plastics.

In terms of resource allocations among these five categories, Figure 4-10 presents overall budget totals for all the projects included in plans for the Ping Part 1 and Mae Kuang sub-basins.

Figure 4-10. Total budgets of DNP-led plans for upper and middle pilot sub-basins.

Component Plan	Ping Part 1	Mae Kuang	Ping Part 1	Mae Kuang
	millions of Baht		*percent of budget*	
Natural Resource Restoration	73	1,229	31	39
Forest Resource Use Admin	34	155	14	5
Land Use Administration	36	57	15	2
Address Drought & Hazards	64	500	27	16
Community Environment Quality	31	1,229	13	39
Total budget:	239	3,170	100	100

In terms of relative resource allocations, both plans allocate 30 to 40 percent of their budgets to restoring natural forest resources, in line with the central mandates of the DNP. Plans for the Ping Part 1 sub-basin allocated a similar proportion of resources to the overall area of reducing conflict by clarifying land use boundaries, making arrangements for community roles in managing forest resources, and promoting more "technically proper" land use practices, whereas in the Mae Kuang only 7 percent of budgets are allocated to such activity. Budgets for efforts to address drought and natural hazard problems show a similar difference in allocation patterns, with Ping Part 1 allocating 27 percent, while Mae Kuang allocates a more modest 16 percent. On the other hand, the more densely settled and urbanized Mae Kuang sub-basin allocates nearly 40 percent of its budget to community environmental quality, while Ping Part 1 allocates only 13 percent to this purpose. Thus, relative allocation patterns do seem to be associated with different sub-basin characteristics.

One cannot ignore, however, the enormous difference in terms of the absolute value of budgets for each of these sub-basins. With the total budget level in Mae Kuang more that 13 times the size of Mae Ping Part 1, even parts of their plan receiving the smallest proportion of budget allocation are very substantially greater in absolute value than their counterparts in the Ping Part 1. The Mae Kuang is larger, both in terms of area (1.4 times as big) and people (3.6 times as great), it is very complex, and it faces particularly difficult problems in terms of issues related to human settlements and dry season water availability. Even so, however, differences of this magnitude are very interesting, at least.

While it is still more difficult to anticipate the content of project plans for these sub-basins than for plans in the Lower Ping, it would not be surprising to see some fairly similar overall patterns of differences in resource allocation. Since these sub-basins appear to have taken the public health and livelihood development components of the current project's mandate more seriously, however, it may be possible there could be greater proportions of resources allocated into these lines of activity. In the preliminary lists from Ping Part 1 (Figure 4-7), for example, nearly half of the projects and 30 percent of the total budget was associated with these two new categories, with activities proposed in about one-half of the *tambons* in the sub-basin. Given the short period of time they have had to develop ideas in these areas, however, it may also be useful to assess how many proposed projects have simply been shifted from one category to another. Moreover, while one also anticipates many more projects and a much larger aggregate budget in Mae Kuang, it will be very interesting to see if a similar ratio emerges between budgets proposed for these two sub-basins.

Another difference that seems to appear during initial review of DNP plans relates to the ambiguity in the role of overall sub-basin organizations under the DNP-led plans. This is particularly reflected in the proliferation of 'intermediary organizations' (*ongkan klang*) that are envisioned in their work plans, each of which would deal with a specific sub-topic under conservation of forest, soil or water resources. On the other hand, there are sets of activities under 'administration' (*borihan*) lines of activity that would provide support for sub-basin meeting venues, network support and sub-basin management operating expenses that have not yet been as clearly articulated in plans under this project (although discussions indicate an intention to do so).

Thus, this difference may not be as great as it seems if these 'intermediary organizations' are viewed as equivalent to working groups or sub-committees that would be established under sub-basin management organizations to deal with specific issues, as discussed in Part 3 of this report.

Another possible difference deals with scope of the sub-basin management mandate. DNP staff have been quite clear in their articulation of their approach as being limited primarily to the domain of issues for which their parent ministry (MoNRE) has a mandate. While they have made efforts to push the limits of that mandate in a few areas, such as public health, there are clearly major areas, such as livelihoods and debt, where they have admittedly limited the scope of projects that they could consider.

As one example, the only livelihood-oriented projects appear to revolve largely around a vague notion of extension support for non-agricultural work, with a few examples noted from a predictable short list of handicrafts, along with support for developing ecotourism and organic agriculture. The remaining problems and needs identified by villagers remain unaddressed.

It remains to be seen, however, how far action plans under the current project will push beyond the territory already charted by DNP organized efforts. So far, the author has heard discussion of a range of local problems that is quite similar to those that appear to have resulted from DNP problem identification exercises. While discussion of ideas about what to do about them has been growing during this project, identification of actionable projects appears to have made much less progress, so that the final project action plan may still be similarly limited in scope.

3. Comparison with stated vision, goals & strategy

Again, since plans being formulated under this project have not yet been finalized, it is not yet possible for the author to make a reasonable overall assessment of how well these plans will match with the visions, goals and strategies that have been articulated by sub-basin working groups.

In the Ping Part 1 sub-basin where the author has been able to most closely follow the processes leading to these plans, proposed projects are being classified so that they can be listed under sub-basin goals and objectives identified by the working group. While those listings have not yet been made available, it is clear that there are some objectives under which specific projects have not yet been proposed. Sub-basin working group members have stated their intention to check with their constituents to see if there are any proposals that have been developed that could fit into these categories. It has been agreed, however, that if such proposals are not yet available, those topics should be identified as priority areas for further work on problem analysis and project development. There are also discussions about whether modest amounts of funds might be requested to support such efforts. How such funds may be identified in the action plan, however, remains to be seen. Indeed, this is one example of activities that the author has repeatedly suggested for consideration by sub-basin working groups and the project, which would be aimed at study, analysis and project development in topic areas where immediate specific project-type activities by local communities, groups or agencies are not yet obvious.

To the extent that processes in the Ping Part 1 sub-basin are indicative of how parallel work is progressing in other sub-basins, working groups have made quite impressive progress considering the very short period of time available for them to conduct this work. They appear to understand the concepts involved in constructing a problem-solving logical framework for program development and project screening and selection, and their discussions leading to their vision, goal and objective statements were well-reasoned, maturely discussed and debated, and carefully considered. It will be very interesting to see how the final list of projects is constructed, and how well logical linkages are able to link these project with achieving their objectives. One suspects that one of their greatest constraints in this process will be the time available. This is unfortunate.

But even if we assume the most optimistic outcome for project action plans, if we are honest with ourselves, we will admit that there are very high probabilities that various projects and activities are not likely to contribute much toward achieving the stated goals. Some may be "pet projects" or "party line" projects insisted on by powerful or otherwise influential key stakeholders. Others may

be accepted based on currently accepted conventional wisdom that will later prove to be unfounded. This is normal during initial stages of a complex process such as this. The real challenge lies in how participatory processes can be used to weed out such activities over time as their faulty properties become evident, and replace them with efforts that are more effective and efficient.

In the context of the bigger picture, then, we also need to realize that whatever the quality of reasoning that working groups are able to incorporate into their action plans under this project, the real test of how well their actions match their vision, goals and objectives will come from how they are able to learn from implementation experience, and adjust their actions to more effectively achieve their objectives as conditions, needs and desires continue to evolve over time. This is a process that becomes central during the three remaining phases of RSBO development.

At the core of this process is what this report has referred to as a learning process, which is closely linked with effective monitoring (of conditions, as well as project outputs), information management and accessibility, participation, consensus building, transparency and accountability. While it looks as though the project will almost be able to complete the first two phases of RSBO development, the real tests and measures of what they have, and will be able to achieve are yet to come. And very importantly, plan documents that are outputs of this project are not the end of the story. There is still time to improve programs and correct shortcomings and errors as part of the learning processes that need to underlie further RSBO development.

D. Results 2: Initial Lessons from Pilot Project Experience

This section seeks to take a step back from the details of the current status of project planning outputs, in order to take at least a brief and preliminary look at what have been some of the lessons we have learned from implementation activities under this project. It is difficult to suggest or request that local communities engage in problem solving oriented learning processes if we are not able to do the same.

1. Not starting with a clean slate

It should be quite obvious by now that one of the prominent lessons from experience under this project is that no future projects related to river basin or sub-basin (or local sub-watershed) management should ever assume their project will start with a "clean slate". Thus, project design cannot employ only linear logical processes based on theoretical considerations.

Yes, it might have been nice if this project could have had more time "in the field", and could have begun in an environment where thinking about sub-basin management could have emerged from "blue sky" brainstorming about the possibilities, and a logical participatory process of where it should be headed, what it should look like, and what it should do. But that was not in the cards. In fact, the social landscape was littered with preconceptions about sub-basin programs, previous iterations of sub-basin planning processes, probably vastly over-optimistic promises from government leaders, and many large piles of rivalries and sub-cultural baggage affecting views and relationships within and among most major stakeholder groups. Particularly in retrospect, it is not clear why this should have been a surprise.

In any event, after its long period of hesitation, the project has sought to adapt itself to these realities. In doing so, it had to build social bridges with agencies and leaders associated with previous (and actually still on-going) sub-basin planning processes, which largely involved fence-mending negotiations among agencies within the same ministry. And in doing so, it needed to recognize currently existing plans – despite whatever flaws may be perceived in them – must be incorporated as one of the initial building blocks upon which the project could seek to add value and further development.

The project has also seen how local participation needs to be included at all levels of program and project development, even including, for example, the process of sub-basin delineation. The problems arising in Mae Kuang serve as a clear example of what could have largely been avoided if central agencies had explored what was already happening before such decisions were made.

And perhaps even more importantly in the long run, the project had to recognize the central importance of local initiatives (some of which were agency induced) already taking place within pilot (and other) sub-basins. These groups, networks (at various levels), and local government initiatives have proved to be the essential building block components of sub-basin organization, as well as very valuable resources for activities such as capacity building (as in the case of IMPECT).

Moreover, the sub-basin level has indeed demonstrated its very great potential for becoming a key venue for developing the interface between top-down and bottom-up processes. But it has also become clear that this process must become much more interactive (in the multi-directional sense of this term) if it is to be truly effective and viable.

2. The multiple dimensions of diversity in pilot sub-basins

Various aspects of project implementation have further underscored both the presence and importance of diversity among and within Ping River sub-basins.

The project developed early hypotheses that there is substantial variation among sub-basins in various types of characteristics and conditions that prevail, as reflected in the analyses of secondary data presented in earlier sections of this report. These clearly include differences among biophysical, economic, and ethnic characteristics, amongst others. And, such differences were indeed found among the three pilot sub-basins. Moreover, configurations of key sub-basin issues and stakeholders are closely related to these characteristics.

- In the Ping part 1 case representing upper sub-basins, the largely mountainous terrain is associated with large areas of protected forest and substantial ethnic minority communities, resulting in important forest land and forest cover/condition issues, and associated issues of livelihoods dependent on upland cropping practices perceived by other stakeholders as being at "inappropriate" locations and using "inappropriate" amounts of agricultural chemicals.

- In the Mae Kuang case representing middle sub-basins, forest land and forest cover and condition issues are also prominent in mountainous areas, but only a relatively small number of Northern Thai and Karen communities are located there. While other ethnic minorities also exist, they have already been induced to resettle into communities near more urbanized areas, so that problems they face are now more associated with their status as marginalized poor communities in the urban fringe. Existence of a substantial reservoir and links with water supply for Chiang Mai City and its suburbs, combines with substantial reliance on pumping of groundwater in terms of water supply issues, while intensive settlement along the main river channel adds issues associated with main channel flooding. In addition to intensive water-consuming lowland crops and orchards, complexity also includes sets of powerful stakeholders associated with industry and large recreational facilities, as well as wealthy investors buying land for speculation purposes, and part-time peri-urban farmers.

- In the Lower Ping case representing lower sub-basins, there are three quite distinct biophysical areas. Steeply sloping mountainous areas cover a quite small portion of the sub-basin. They are almost completely under protected area status, and there are very few communities resident within those boundaries. At the other end of the spectrum, a relatively minor portion of the sub-basin is in lowland areas through which the main channel of the Ping River flows. This land is mostly in paddy, or within areas where urban centers and industrial investment are expanding. A third quite large portion of the sub-basin is in relatively gently sloping upland areas that are officially reserved forest land. Virtually all of this area has been converted to upland cropping of cassava, sugarcane and maize, and is populated by a large number of dispersed villages that are primarily ethnic Thai, mixed with a few minority communities. Not

surprisingly under previous and current forest land policies, this has been a prime target for programs such as land reform.

But diversity has also extended further into social and cultural dimensions than were discussed during pre-implementation analyses. While we had some notion that there was a likely difference among sub-basins in the current type and level of local organization that could provide building blocks for sub-basin organization, it was only through closer work with the three pilot sub-basins that further clarity was brought to life.

- In the Ping part 1 sub-basin, local governments (TAO) have been providing a quite strong focus for local organization, including local networks of both agency-induced and locally-initiated types, and they reflected the very substantial progress that has been made regarding local organization in that sub-basin. While differences of opinion exist, it is clear that they had already made very substantial progress in moving discussion toward open and more analytical approaches that seek to achieve mutual understanding among stakeholders. They are also aware of the local stakeholder groups who have not yet joined these processes, and appear willing and eager to encourage their participation. This includes groups ranging from some wealthy investors, to some remaining ethnic minority communities.

- In the Lower Ping, it appears to be agency-induced local organizations that have been the main focus for local organization, and the more central role of the patron agency in networks among local units also appears to be much more clear. Given the apparent general acceptance of this approach, many of the main issues have centered on roles and coordination among agencies, especially in the context of a somewhat broader mandate than previous efforts. Not surprisingly, they also appear to have relatively little experience in working with industrial stakeholders, who are seen as particularly important in terms of water and pollution issues.

- In the somewhat more intense and complex conditions of Mae Kuang, the situation appears to be more mixed. While there is clearly some strong local leadership and initiative, some of them are quite closely allied with particular agencies and their interests. Moreover, previous organization had been evolving in parallel lines in the Mae Kuang and Mae Tha watersheds, and both were becoming quite strong. Thus, when they were combined into a single sub-basin under this project, various tensions and rivalries among leadership factions began to emerge. These tensions were reinforced by the existing division of the (consolidated) Mae Kuang sub-basin into areas under the jurisdiction of Chiang Mai and Lamphun provinces. These factors have further complicated work on what was already a very complex set of stakeholders and conditions covering most of the eastern side of Chiang Mai Valley.

Another quite distinct, but related difference emerged in general perceptions about the most appropriate balance between local initiative and agency leadership that was desirable among the majority of local stakeholders. Evidence from pilot sub-basins indicates that differences here may center on the earlier Lower Ping – Upper Ping delineations in the Ping River Basin. This difference is perhaps most clearly reflected in project efforts to facilitate articulation by sub-basin stakeholders of the type of sub-basin organization that they would prefer. Organizational alternatives on the table during these discussions are largely those that were presented in Part III of this report. In this case, both the Ping part 1 and Mae Kuang sub-basins quite quickly articulated their desire to have an organization that is primarily based on local leadership and initiative. While government agencies are welcome as participants and advisors, it is preferred that they play a reduced role in terms of leadership in the sub-basin organization. They also recognize, however, that agencies may need to phase down their role somewhat gradually as local organization further builds its capacity. In the Lower Ping, however, there still appears to be acceptance of a quite strong leadership role for major government agencies (mainly MoNRE, but also MoAC), although perhaps with somewhat more emphasis on interaction through their local agency-induced leaders and networks.

Given the data and assessments presented in earlier sections of this report, these results should not be very surprising. It has been these types of diversity, however, that fed many types of problems for government agency programs that have long sought to apply uniform approaches, policies, and

regulations across all areas of the country. Relatively recent programs to support much stronger roles for local government – especially at sub-district and provincial levels – has been the primary approach of national efforts to try to evolve means for moving toward more localized forms of governance that can better address issues affected by these types of diversity. Experience under this project appears to be validating the need for sub-basin organizations that can operate under similar general principles of subsidiarity, and within a framework that allows sufficient flexibility for localization. It should also be noted that districts have played a quite low profile role, focusing mainly on their convening, coordination and information function, in line with trends of change in national governance systems.

3. Need for appropriately-timed multi-dimensional collaborative processes

Experience under this project appears to be reflecting international experience that development of truly collaborative processes requires consistency and persistence, and thus takes time. It also appears to reinforce notions that initiatives and support are most effective and efficient when they are coordinated and various components are appropriately timed. Many of the lessons learned in this regard have been through various problems that the project has encountered.

One dimension of these problems has related to the sequential manner in which the project was conceived and implemented. While the manner in which project plans were laid out in the original document were quite logical, they seem to have retained several key top-down preliminary elements that ignored other lines of activity that were also underway.

One of the first ways in which these issues were reflected was in the delineation of sub-basins for the project. As has already been discussed in the first part of this section, this process reflected a lack of collaboration both with other agencies, and with local stakeholders. While this issue had its greatest impact for this project in the Mae Kuang sub-basin, impacts can also be anticipated elsewhere. Because of the author's links with the Mae Chaem sub-basin, for example, it is also clear that lack of any efforts to collaborate with local leaders at this early stage resulted in a problem there as well. This time, however, the early top-down decision was to separate the large watershed into two sub-basins. The delineation was apparently based on the presence of an agency gauging station. Meanwhile, more than 20 local networks in the Mae Chaem watershed had been working to build watershed-wide organizational linkages to support development of a single sub-basin organization. The top-down decision thus undermined local efforts that should have been applauded and supported by the agencies and the Cabinet resolution that were involved.

A second dimension of these problems relates to the more than one year delay that occurred between approval and actual initiation of project "field" activities, which has also already been mentioned in previous sections of this report. If this delay did not occur, implementation of this project would have been in parallel with – and very possibly in collaboration with – sub-basin planning programs led by DNP/DWR. The delay, however, resulted in initial tensions between this project and the already on-going sub-basin planning efforts under DNP & DWR, as well as very substantial confusion within local sub-basins, both of which should have been avoidable. Although these issues were eventually resolved fairly well under the project, it was an additional drag on project implementation that helped to further shorten the amount of time available to work with stakeholders and local communities on activities at the core of the project concept.

A program like this does not center on 'field work' that can be done in a few months of intensive activity. Development of a participatory management program for the Ping River Basin involves millions of people, some of whom live in cities of significant size, and most of whom are dispersed in thousands of villages. It is their participation – as reflected in their everyday decisions – that is critical to the success of these efforts. While people in the lower sub-basins may be more willing and able to adapt themselves to normal central agency style programs and operations, people in middle and upper sub-basins appear to demonstrate a clear desire for local ownership and leadership in these programs. In order for this to happen, local leadership and processes within sub-

basins must be taken more seriously, and they must have the time necessary for processes to be conducted in an appropriate manner.

A third dimension of these problems, which relates to both of the previous two, was the lack of co-ordination in timing of high-level pronouncements of massive financial resources to be invested in Ping River Basin management programs. During the period that project initiation was delayed, high-profile announcements were made of government intentions to invest massive financial re-sources into Ping Basin programs. While this helped get people's attention regarding the potential importance of these programs, it also helped divert thinking about how to develop long-term col-laborative problem-solving institutions into more of an effort to quickly capture as many financial resources as possible. Although many of the most inflated promises have since begun to fade, the project also suffered a bit from the way in which various people interpreted implications of World Bank involvement. Repeated efforts were necessary in order to explain the nature of the Bank's involvement in this project, in order to dispel ideas that massive funds would be made available from this source. In principle at least, it would have been far more desirable for the program to seek to market and establish itself as a multi-level collaborative approach for developing long-term sub-basin management institutions. Effective collaborative efforts could have then been further encouraged by reasonable but consistent funding of at least their most promising activities. At this point there appears to be some concern that by the time the series of planning exercises have been completed, funding will no longer be a priority of the government.

In short, achievement of a vision that includes organizations capable of multi-level and multi-sectoral collaboration, needs to be implemented through a process that in itself demonstrates col-laboration – and associated coordination – at all key levels. The fact that there have been very sub-stantial problems in this regard at multiple levels is quite obvious to all stakeholders. Moreover, this has done little to help build motivation and optimism in the long-term importance and viability of sub-basin management organizations.

4. Mandates, management plans, consensus building & time horizons

Continuing on the collaboration theme – which is at the core of the project concept – we now turn more explicitly to project efforts directed at developing collaborative processes within pilot sub-basins. In this regard, the project should be able to learn from both its progress and its problems.

The last three to four months of project implementation are likely to prove noteworthy for their intensity and resourcefulness in terms of trying to complete a complex collaborative process at multiple locations in such a short period of time. And it appears that the outcome of these efforts will (hopefully) provide at least an initial picture of a basically reasonable approach that at least almost completes the first two of the five stages of RSBO development proposed in Part III of this report. Indeed, if one considers the amount of time involved, project efforts are likely to appear quite admirable.

Relative to the picture painted in the funding approval document, however, this is a much more preliminary outcome than originally envisioned. While delays in project implementation rendered the original goals unachievable, it can also be argued that even the time horizons outlined in the approval document were extremely optimistic for a project that sought to build fully tested and functional organizations and fully articulated collaborative sub-basin management plans. Our re-view of international experience indicates virtually no examples where this took less that two to three years (and more often considerably longer), even in more developed societies where strong local communities have high capacities.

A number of questions remain about the scope of mandates for sub-basin organizations. Although they have been able to articulate a substantial range of problems and underlying forces that drive them in the context of their sub-basins, most still encounter difficulty in developing programs and plans that address the full range of issues they have identified. And in plans that are developed, the content is usually closely related to central concerns of the patron agency overseeing the planning

process. Indeed, in sub-basins where planning has been under the leadership of DWR, water resource development projects are dominant, while forest resource projects dominate plans developed under leadership from DNP. And under this ONEP-led project, explicit expansion into the areas of public health and livelihood development is being promoted. On one hand, this can be seen as evidence of agency-driven agendas. But on the other hand, it also reflects efforts by MoNRE to try to better match agency leadership with the dominant perceptions, issues and needs in different parts of the Ping Basin, as well as to bring in broader visions from agencies like ONEP. Moreover, one can also choose to focus on the fact that agencies are making – no matter how tentative – efforts to reach beyond their previous domain boundaries. Both DWP and DNP have their own traditions and perceptions of watershed management, which is reflected in the nature of their work. But both are beginning to learn that this type of work involves – as Dr. Monthon puts it in his training materials – "management of resources in a watershed", which is much more that just "watershed management". Is the glass half empty, or is it half full? Although much remains to be done, very considerable progress is being made.

In any event, project experience seems to underscore the necessity of moving on, beyond the stage of yet another iteration of planning without implementation ("plan-*ning*" is a popular play on words to describe this condition). Experience under this project has helped underscore the fact that further learning needs to be much more experience-based and empirical, in order to maintain and expand interest and participation, further build consensus, and begin putting into place, testing and refining remaining components of a river sub-basin management system that are not yet fully established and functional. Moreover, even the eventually more definitive conceptual and operational boundaries for sub-basin management in the context of the Ping River Basin cannot be determined without more experience derived from actual implementation, combined with feedback on real-world impacts and changing conditions provided by an effective monitoring system, in the context of increasingly participatory learning processes that can guide further refinement and adaptation.

Another dimension of the mandate issue relates to the central question of the degree to which sub-basin organizations are likely to become implementing organizations. From what the author has seen thus far, it does not appear likely at this point that RSBOs will play a very central role in implementing major projects proposed under these action plans. Indeed, sub-basin working group discussions related to this topic that the author has been able to observe all seem to implicitly accept the line of argument that implementation of major projects seen as duplicating lines of activity already under the jurisdiction of local governments or line agencies would simply result in much more tension, confusion and conflict. Thus, although discussions have not been very explicit in this regard, there appears to be a fairly general acceptance of roles for RSBOs in analysis, planning and monitoring – and in organizing and implementing gap-filling activities. The question of whether RSBOs should implement projects that would normally be implemented by other stakeholders, however, does not really appear to be open to discussion.

In short, experience of this project has underscored the importance – particularly in the context of actual conditions in the Ping River Basin – of doing the best that can be done to build on existing local initiatives and planning process, and then moving on to further development and refinement in the context of the next stages of RSBO development. At the same time, however, experience has helped point out how unfinished sub-basin management processes are after the first two phases of the development process. This reinforces calls for continuing support – which changes its nature as processes continue to build and evolve – without which sub-basin management organizations stand little chance of achieving the lofty goals that have been set for them by stakeholders at local, national, and even international levels.

5. Capacity building, assistance and support

Continuing, but evolving needs for capacity building, assistance and support for sub-basin development have been identified by international experience as very critical for the long-term development, viability and sustainability of river basin and sub-basin organizations. And experience under this project only serves to reinforce this point.

General awareness of natural resource concerns and environmental issues appears to already be quite high, even in relatively remote parts of sub-basins. Much of this is no doubt associated with the quite extensive training efforts that have been made, as reflected in village reported data from 2003 presented in Figure 2-22. While data such as these provide little or no insight into the quality or effectiveness of such training, it is at least clear that substantial training efforts have been underway for some time and have involved a considerable number of people in Ping sub-basins. Indeed, project activities have, at least to the author's knowledge, revealed no real lack of general awareness. As data in Figure 2-21 point out, most villages also have people they consider local specialists in topics highly relevant to these efforts, who have skills and knowledge derived from various combinations of local and outside sources. Thus, it appears that the time has come for training activities that are aimed much more at practical methods and tools that can help support local efforts to identify, develop, plan, implement and monitor specific problem-solving activities.

At the same time, there are also needs for enhancing various types of capacities involved with developing, refining, managing, and further adapting participatory processes, organization and activity at both the sub-basin and more local building-block levels. At least some of these needs are expected to be reflected in various projects under final action plans. While much of the support required will be in the form of access to information and tools, and various forms of relatively conventional training, there is likely to also be needs for additional forms of engagement that may involve at least periodic involvement with mentoring processes.

The majority of training activities under this project have focused on information and skills that are seen as potentially useful in those elements of sub-basin management processes directly related to articulating and prioritizing initial sub-basin plans. This emphasis logically follows from the time available and the portion of the overall sub-basin management and development processes that is occurring during the "field" presence of the project. Specific training activities have focused on sub-basin local facilitators and community trainers, while some (very rushed) additional efforts have been made to work with sub-basin working groups in ways that are more similar to a mentoring approach. Examples of the latter began in sub-basin workshops where articulations of vision statements, goals and objectives were developed to set the framework for assessing proposed projects and assigning priorities to them. Further efforts have been made in regard to articulation of criteria and indicators for monitoring of both projects and environmental conditions in pilot sub-basins. Various resource persons have been pulled into the process, and at least some of their contributions can definitely be seen as helping strengthen the capacity building process.

Information 'toolkits' being developed under this project primarily follow from training provided for the project's local facilitators. Considerable efforts were made to make materials as well-rounded, and yet concise as possible, and there are some interesting innovations involved, including the range of people and ideas that were drawn into the process. If these materials are developed into interesting and attractive formats, they should make some useful contributions to the information available for sub-basin development programs.

Yet in the larger scheme of things, much more is needed than some information packages developed during a few months of intensive effort. A few ideas about some of the more obvious subject area gaps have already been mentioned.[57] But beyond this, approaches for capacity building assistance and support need to be developed that can be more interactive and tailored to meet needs of localized groups and organizations in the context of the diversity of circumstance found in Ping sub-basins. Moreover, they need to move beyond textbook and lecture style training into the realm of mentoring processes and interactive assistance that can foster independent local analysis and creativity which is able to draw on a wide range of local and outside information.

And especially in relation to the important area of livelihood development and its interface with environmental issues, efforts need to foster development of local entrepreneurship that can identify

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[57] See section IV.B.5.

and realize viable creative responses to the world of today, and especially tomorrow, where often ephemeral opportunities come and go within the context of socially imposed constraints and ethically motivated responsibilities. As this represents what is no doubt an incredibly ambitious and open-ended process, it is also meant to demonstrate that real capacity building has a vision that merges into social learning processes that are at the heart of human society, culture and change. Efforts to integrate human analysis and action under frameworks such as river basin management should not shy away from their potentially important role in these processes.

6. Financing mechanisms

Most key issues related to financing mechanisms and related propositions in the project terms of reference to mobilize "community savings and credit funds" to support sub-basin "operational budgets" have already been discussed under the 'Results 1' section, above. The main lessons that can be drawn from preliminary assessments include

- High-profile promises by government leaders that there would be massive infusion of central government funds into Ping Basin programs diverted discussion from truly local funding sources into discussions of channels through which central funds could flow to local levels.

- Local funding sources that did not originate from central sources, might include funds derived from local taxes, license fees, fines or user fees, cost recovery mechanisms, or revenue from income generating activities.

- Since only local (or higher level) government is authorized to levy taxes, license fees, or fines, it would only be possible to mobilize such sources to support operational funds in collaboration with local governments. Such arrangements are likely to be very difficult to negotiate.

- Cost recovery through user fees might be an option, particularly for operational funds associated with centrally-funded investments in facilities such as reliable water supply, wastewater treatment, trash disposal, or similar types of projects contained in final sub-basin action plans.

- Existing (or likely) community savings and credit funds are primarily intended and used for producer credit purposes. Thus, the only logical use for funds from "community savings and credit funds" would appear to be for micro-investments in livelihood activities, or possibly education or skill upgrading, that would have reasonable prospects for generating additional income that could be used to repay these savings or revolving funds, rather than for sub-basin program "operational funds".

- Long-term consistency of central support is likely to be more important overall than the magnitude of support during any particular period.

Since relatively finalized versions of sub-basin plans under this project are still not yet available, it has not been possible to engage in more systematic deliberations about alternative funding mechanisms for various elements of these plans. Once plans and project lists become available, they could be flagged and sorted by categories that would reflect different potential types of funding sources. In is almost inconceivable, however, that this could be completed, much less discussed and negotiated, before the end of the project.

In terms of RSBO operational budgets (as opposed to budgets for projects under the action plan), working groups and sub-basin leaders are clearly still expecting central funding support. Indeed, no other viable options appear to be immediately available at this point.

Thus, one important lesson here is that these types of issues – along with various others discussed in previous sections – can only be assessed, explored, and negotiated after detailed plans, projects and activities have been developed to the point that an initial funding needs assessment of the sub-basin program can be conducted. This once again underscores the need to focus on sub-basin plans as the beginning of the process, and not as the end product that can be delivered at the last moment.

Summary of Suggestions and Recommendations in Part IV:

1. Spatial assessments of local sub-watershed configurations conducted in combination with natural resource, demographic & other data can help anticipate & understand organizational issues within sub-basins, as discussed in section IV.B.1., including needs for collaboration in defining official sub-basin boundaries, and for maintaining 'space' for local communities & networks to take the lead in defining the most 'appropriate' units for sub-watershed level management within sub-basins.

2. Suggestions regarding local facilitator training materials include:

   - <u>Communications skills module</u>. It would have been interesting if these presentations could be complemented by views, approaches, & techniques employed by people more on the activist community organizer side of the spectrum. This might add some useful techniques or tools, & a more complete view of paradigms used by different stakeholder groups. While these skills are useful for facilitators & local leaders, earlier suggestions included emphasis on how to facilitate participation, dialogue, trade-off analysis, & negotiations, including use of systematically acquired data & information.

   - <u>Natural resources module</u>. (a) In the natural resources processes & management sub-module, distinctions between agricultural & forest ecosystems should allow for landscapes intermediate between the two (or have mixtures of both) – as found in most Ping River sub-basins. (b) Focus of the community participation module is on conservation, but the issues & principles have wider relevance. (c) The management tools sub-module appears to provide the main introduction into planning processes of the project. Earlier concerns & recommendations (appendix b) were largely addressed.

   - <u>Mountain minorities module</u>. It is good that IMPECT provided help with this module, as they can articulate points of view quite different from government agencies or academic institutions. Materials like these can help improve discussion of issues related to mountain minority communities, & they should be further developed & expanded for future use in all sub-basins where these stakeholder groups are important. It is a good to have strategic network organizations like this participate in basin management activities, & such strategic partner relationships should further expand in the future.

   - <u>Health module</u>. While this module should be commended for an approach that began with assessment of health data in pilot sub-basins, it would by good to see more specific information on how sub-basin management might help address issues like diarrheal diseases, as well as intestinal parasite infestations that are significant in at least many mountain communities. Since use of pesticides was stressed as an issue, it would be useful to have an explanation why associated reported illness was very low, and somewhat in contrast to village reports (Figure 2-45).

   - <u>Pollution module</u>. Sub-module materials are quite informative, but other than agricultural pollution, they are very brief with no information about how & where further information or details can be accessed. The agricultural pollution sub-module includes an interesting introduction to herbal alternatives to pesticides that should be further developed. Earlier recommendations regarding these modules are in appendix b.

   - <u>Local knowledge & local organization module</u>. This useful module was added by drawing in a well-known researcher on local knowledge, who provided materials from published sources. This helped address earlier suggestions that more on local knowledge & experience could help balance emphasis on theoretical "scientific" knowledge, and provide information useful in 'front line' discussions, & often debate, about relationships between theoretical 'scientific' knowledge & local knowledge & experience.

3. Packaging and development of training materials for <u>technical toolkits</u> should consider:

    - Earlier suggestions on the soil and water handbook that are not yet addressed include a need to assess and address why especially soil conservation types of practices have seen so little adoption despite many years of extension efforts, as well as specific example of sites where they are working well.

    - Since training materials on water, community & industrial pollution are very brief, they might be developed into brief brochures or "information sheets". But they still need information about where interested people or groups can find additional information. Lists of titles of laws, or paragraphs on prevention or mitigation methods are of little use without information about where to access further details. Each prevention or mitigation measure could be the topic of individual extension-type brochures or booklets.

    - Training materials on natural resources and agricultural pollution have more details and illustrations, and could be further developed into booklets. But again, recommended reading and sources of additional information need to be provided.

    - Appropriate existing publications from beyond the project, such as those on local knowledge, should be included in toolkits. Another example would be Green Word Foundation publications on methods and tools for 'stream detectives', which could also be included in awareness & education toolkits. Many other examples are likely to exist, but there are no known central collections of these types of materials.

4. Development of training materials for <u>organizational toolkits</u> should consider:

    - Project materials that may fit in this category include natural resource sub-modules on community participation and 'management tools' (i.e. plans, rules and organization), contents of the communications skills module (which should be expanded to include more points of view), and the mountain minorities module (which should be further refined and expanded). It could also include the local organization component of Dr. Pornchai's local knowledge and organization module, and associated publications.

    - Areas apparently missing at this point include information on expenditure processes, credit & savings funds, and evaluation of intervention results & disclosure. Resource persons who assisted working group discussions on criteria and indicators might be a potential source of materials related to evaluation of intervention results & disclosure.

    - Given the many recent initiatives employing revolving funds, there should be materials available from various sources. Recent materials on conflict management should also be available from other sources for inclusion or suggested as further reading.

5. Packaging & development of materials for <u>awareness & education toolkits</u> should consider:

    - Materials for distribution at activities such as village fairs should be more in the form of attractive brochures or 'information sheets' that include sections on where & how to get more information, as well as items like posters, shirts, *etc.*, that feature specific concepts, points, slogans, *etc*. Dr. Pornchai's annotated artistic renderings of landscapes, & the DLD video CD are examples of potentially attractive formats.

    - While some of these types of materials could be useful for capturing attention in schools, health centers, etc., these venues are also likely to need more detailed information in a style appropriate for students or non-specialist audiences. One example of technical materials already employed at various Ping Basin schools is the 'stream detectives' package of handbooks and materials published by Green World Foundation.

    - Materials for community radio networks are more specialized, & might include lists of local persons knowledgeable & articulate on sub-basin management efforts & issues. Interviews with such people could be conducted & packaged in a logical sequence.

6. It may be useful to reflect on what is NOT included in training materials *cum* 'toolkits' at this point. In addition to the items noted above, a few examples include:

    *   Information on more fully developed long-term participatory <u>river basin</u> management processes (as opposed to watershed management & project compilations), as in Part III.

    *   Materials on <u>building widespread consensus</u> among stakeholders in river basins or sub-basins regarding the content and approaches of a holistic long-term management plan.

    *   Materials with more breadth and depth of discussion about <u>livelihood development</u> and <u>livelihood alternatives</u> that could be realistic viable options for sub-basin stakeholders.

    *   Information on more dimensions of <u>urban</u> environmental quality, including many cultural & quality of life dimensions championed in the earlier study by CMU [2004].

    *   Information that addresses <u>flood plain</u>, riverbank, stream <u>channel</u> and <u>canal</u> issues, including impacts of encroachment, infrastructure, and engineering modifications.

    *   Information on more aspects of and approaches for improving <u>water use efficiency</u> by the range of types of stakeholders present in sub-basins.

    *   Materials that introduce concepts like alternative <u>future scenarios</u>, which can help sub-basin stakeholders think about & visualize trajectories for future development.

    *   Materials to explain & explore <u>trade-offs</u> among livelihood & environmental objectives, <u>distribution of costs & benefits</u> among stakeholders, & <u>compensating measures</u>.

    *   Information related to <u>incentives</u> for more environmentally-friendly behavior, including but not limited to economic and regulatory incentives.

    *   All toolkit materials need to place high priority on providing suggestions for further reading & contacts where people can gain access to further information, and on how information needs relate to recommendations on development of a "knowledge center".

7. Although final action plans for pilot sub-basins were not yet available for this report, some suggestions regarding their general content are based on preliminary information:

    *   A relatively wide range of basic problems have been identified, and to varying extents included in vision statements. While there is at least a degree of follow through in goal and objective statements, there appears to be a progressive narrowing at each level that draws conceptual boundaries closer to key patron government agency domains. It may be worth reconsidering this issue after a period of experience with implementation.

    *   Much 'lumpiness' in preliminary allocations among tambons is due to a few large projects for water treatment facilities, solid waste disposal facilities, & even slaughterhouse facilities. Whether such items are seen as appropriate, and the priority assigned to them are decisions for sub-basin working groups, but the logic underlying such decisions should be clearly stated. Further scrutiny may be needed for unusual lumpiness, or where allocations are equal across tambons. Transparency & accountability are key.

    *   Inclusion of study or exploratory activities in areas of the action plan where they are appropriate & justifiable (especially regarding livelihoods) are strongly recommended.

    *   As general trends in the public policy arena suggest funding levels may be less than promised, justification, priority setting, transparency & accountability are crucial.

8. Sub-basin monitoring & information plans should consider:

    *   Although agencies & local governments have their own regulations & mandates for monitoring project inputs & outputs, sub-basin organizations should at least collaborate in monitoring inputs & outputs of projects in sub-basin plans. There will need to be mutual understanding & arrangements about how such activities will be conducted.

- Final action plan project & activity lists can be tagged and re-sorted according to their monitoring needs. This can help identify the scope of, & potential complementarities within monitoring activities, and facilitate formulation of the most efficient and effective monitoring program & arrangements possible. For a more holistic monitoring & information strategy, monitoring needs could be combined with information required for goal & objective level criteria & indicators into a package of information requirements that could be assessed in terms of sources within and outside the sub-basin.

9. Sub-basin capacity building & partnership plans should consider:

   - Since numerous capacity building components will likely be embedded in action plans, they should be brought together into an overall capacity building plan. Final project lists can be tagged & resorted according to their training needs & sources. This could help identify the scope of, and potential complementarities among training activities, and formulation of the most efficient and effective training programs & arrangements possible. It will be especially useful in organizing, negotiating & scheduling assistance from particular sources, and systematic identification of gaps and additional needs.

   - If RSBO operational capacity building needs have been integrated into projects, arrangements required to meet these needs can also be part of the above process. If they are not yet included or emerge later, the capacity building strategy needs to include responsibilities for obtaining appropriate assistance. International experience indicates capacity building is a long-term need that will change & evolve over time.

   - Since awareness is fairly high & local specialists are present in most sub-basins, training activities should emphasize practical methods & tools to support local efforts to identify, develop, plan, implement & monitor specific problem-solving activities. Emphasis should also be given to developing, refining, managing, & adapting participatory processes at both the sub-basin & more local levels. While support will require access to information, tools, & relatively conventional training, needs for mentoring processes are also likely.

   - Thus, beyond project toolkit information packages, more interactive & tailored support will be needed, including mentoring processes and interactive assistance that can foster independent local analysis & creativity drawing on both local & outside information.

   - Especially regarding relationships between livelihood development and environmental issues, efforts need to foster local entrepreneurship that can identify and realize viable and creative responses to changing opportunities and constraints.

   - As sub-basins interact more with each other, and with other levels, more interests, needs, and opportunities are likely to emerge. Thus, they should consider how to best develop vertical and horizontal partnership linkages with other organizations and institutions. A partnership strategy can begin with facilitating networks & interactions within sub-basins, and that experience can help in developing partnership linkages with other sub-basins and organizations beyond their sub-basin. Two-way interaction can help build local capacity, mobilize expertise & other types of support, and provide local experience to assist others.

10. Additional suggestions based on project experience include:

    - Future projects related to river basin or sub-basin (or local sub-watershed) management should accept that they will not start with a "clean slate", so that project design cannot use only linear logical processes based on theoretical considerations. Local participation needs to be included at all levels of program and project development, even including processes like sub-basin delineation. Currently existing plans – despite whatever flaws they may have – must become one of the initial building blocks upon which projects can seek to add value and further development. Local initiatives (some of which were agency induced) already taking place within sub-basins are of key impor-

tance, and these groups, networks, and local government initiatives are essential building block components of sub-basin organization. The sub-basin level has demonstrated its great potential for becoming a key venue for developing the interface between top-down and bottom-up processes, but this process must become much more interactive if it is to be truly effective and viable.

- There is important variation among sub-basins in biophysical, economic, ethnic, & other characteristics. Configurations of sub-basin issues & stakeholders are closely related to these characteristics. Diversity in social & cultural dimensions is also reflected in the types & levels of local organization available as building blocks for sub-basin organization. Ping Basin programs should learn from this experience to better anticipate sub-basin needs in designing & building RSBO support services & facilities.

- This project & international experience confirm that development of truly collaborative processes requires consistency & persistence, and thus takes time. While project delays made some original goals unachievable, even time horizons in the approval document were too short to achieve fully tested & functional organizations & fully articulated collaborative sub-basin management plans. At least 2 to 3 years (usually more) are needed even in societies where strong local communities have high capacities

- Further Ping Basin efforts must move beyond the stage of yet another round of planning without implementation ("plan-*ning*"). Further learning needs to be much more experience-based and empirical, in order to maintain and expand interest and participation, further build consensus, and begin putting into place, testing and refining remaining components of a river sub-basin management system that are not yet fully established and functional. Efforts need to do the best they can to build on existing local initiatives and planning process, and then move on to further development and refinement in the context of the next stages of RSBO development. We can now see more clearly how unfinished sub-basin management processes are after the first two phases of the development process. Even further refinements of operational mandates for RSBOs need more experience derived from actual implementation, along with feedback on real-world impacts and changing conditions provided by an effective monitoring system, in the context of increasingly participatory learning processes to guide further refinement and adaptation. Without continuing support – which changes its nature as processes continue to build and evolve – sub-basin management organizations stand little chance of achieving the lofty goals that have been set for them by stakeholders at local, national, and even international levels.

- Initiatives and support are most effective and efficient when they are coordinated and various components are appropriately timed.

11. Suggestions and comments related to financing mechanisms include:

- A financing strategy is an important and often fairly complex component of a full-scale long-term river sub-basin management plan. International experience suggests long term organizational viability and sustainability are enhanced by a mix of funding support from central and local sources.

- Issues related to financing mechanisms can only be assessed, explored, and negotiated after detailed plans, projects and activities are developed to the point that an initial funding needs assessment can be conducted. This underscores the need to focus on sub-basin plans as the beginning of the process and not as an end product delivered at the last moment. Once plans become available, they could be flagged and sorted by categories that would reflect different potential types of funding sources.

- High-profile promises by government leaders of massive central government funding for Ping Basin programs diverted discussion from truly local funding sources into discussions of channels through which central funds could flow to local levels.

- Local funding sources that do not originate from central sources might include funds derived from local taxes, license fees, fines or user fees, cost recovery mechanisms, or revenue from income generating activities.

  o Since only government units are authorized to levy taxes, license fees, or fines, it would only be possible to mobilize such sources in collaboration with local governments. Revenues from designated types of violations or taxes might go into a community fund earmarked for certain types of activities managed by the RSBO.

  o Cost recovery through user fees may be an option for operational funds associated with centrally-funded investments in facilities like reliable water supply, wastewater treatment, trash disposal, or similar types of projects in sub-basin action plans.

- Existing community savings & credit funds are primarily intended & used for producer credit purposes. The logical use for such funds appears to be for micro-investments in livelihood activities, or perhaps education or skill upgrading with real prospects for generating additional income that could be used to repay savings or revolving funds.

- For RSBO operational budgets (as opposed to budgets for projects under action plans), working groups & sub-basin leaders are clearly still expecting central funding support. No other viable options appear to be immediately available at this point. In any event, central support will remain important, and its long-term consistency has been shown to be more important overall than the magnitude of support during any particular period.

- In other countries, supplementary funding for either operations or projects from private business or private or parastatal non-profit sources can also be important, as can donations from private, public or membership sources. Some even establish separate units for managing income producing services and facilities, such as power generation or water supply or treatment, which sometimes help subsidize operations and projects that benefit the general public or disadvantaged groups.

- Many of these issues are complex and require careful consideration, and often extensive negotiations and consensus building. They cannot be established in a 3 to 4 month period. Thus, exploration and development of a full sub-basin financing strategy appears to remain beyond the scope of this current project.

12. Final action plans for pilot sub-basins under this project should be compared with sub-basin plans developed under previous planning efforts led by DNP and DWR. This can help assess how much conditions, processes and actors under this project have affected "bottom line" views about what should be done at this point. This report seeks to help facilitate his process by providing some baseline summaries of those plans, and an example assessment of preliminary proposals for the Ping Part 1 sub-basin. (see section III.C.2.)

V. Recommended Agenda for Further RSBO Development

This brief final part builds on findings and other materials in previous parts of the report in seeking to articulate a few key items that are recommended for integration into the agenda for further RSBO development in the Ping River Basin.

1. Accepting reality & diversity: basin-wide step-wise improvement approach

Experience with the three pilot sub-basins has demonstrated a substantial range in views and ideas about sub-basin management. And when this is combined with the survey of sub-basin diversity presented in the earlier sections of this report, it becomes quite obvious that we should expect even more diversity as management efforts presumably intensify in more sub-basins of the Ping River Basin. This diversity should be embraced and viewed more as a strength than a weakness, perhaps viewing it as somewhat of an analog to contrasts between monocultures versus biologically and genetically more complex natural ecosystems.

While sub-basin plans are an important tool for helping to translate ideas into concrete actions, and to allocate the resources necessary to support those actions, it is also clear that sub-basin plans should not be seen as an end in themselves. If the objectives set forth in the goal of a project like this one are to really be realized, sub-basin management organizations should perhaps be viewed as being somewhat like a social organism. This means that focus needs to be placed on the processes through which the organizations come to life, function, maintain themselves, and learn to respond and adapt effectively to the changing environment in which they live.

Accordingly, recommendations here focus on an appropriate general framework within which expansion of support for development of sub-basin organizations will operate. Key themes of this framework include

- Minimum imposed uniformity. If the framework for developing sub-basin organizations is to accept and incorporate diversity, it needs to provide the 'space' for adaptation and acceptance of differences among localities. Thus, the longstanding quest for uniformity in local programs and structures needs to be relaxed. Mandates, organizational structures, approaches to representation, implementation arrangements, and the myriad of other details of organizational characteristics and functional organization should be allowed to vary according to the diverse range of circumstances, perceptions, and initiatives found among Ping sub-basins.

- Focus on processes enabling effective localization. In order to help bring more coherence to efforts to weave diverse organizations into a functioning system at broader scales, and to provide systematic and meaningful support, program focus needs to be placed more on processes than on the specific patterns of individual outcomes. It is this type of focus on processes compatible with localization and diverse outcomes, for example, that has led to the articulation of the five phases of RSBO development found in Part III of this report.

- Accepting current plans as a starting point. Existing plans include those prepared under leadership of DWP and DNP, as well as existing plans of provincial and local governments, and any plans made by semi-formal or informal organizations or networks. As explained in regard to the first phase of RSBO development, and very much reinforced by experience under this project, the time has come to accept initial sub-basin plans that have already been developed – warts and all – as the starting point for transition from "plan-*ning*" into the next phase of more experience-based and empirical learning processes. The marginal value added by further efforts to improve plans and planning before any implementation begins is already approaching zero. Variation in the initial characteristics and quality of plans needs to be seen as another manifestation of the diversity that exists among Ping sub-basins.

- Interactive support for gradually improving organizations, plans, and implementation. A central feature of the paradigm shift that is required at this point is to set aside the quest for perfect plans, and focus instead on how sub-basin organizations can best move ahead in a manner wherein they are continuously seeking to make incremental improvements based on their learning from experience and access to a growing body of local and science-based knowledge, as well as through broader and deeper participation and growing consensus. If this view is a guiding principle, then approaches for developing more appropriate support systems to help facilitate incremental improvement of this diverse set of efforts will be able to emerge.

In short, the five phase process for developing river sub-basin management organizations in the Ping Basin is recommended as a guiding framework for helping to focus further programs and support efforts on the fundamental processes of RSBO development. By placing greater focus on these basic processes, these efforts should be able to deal more effectively and efficiently in providing support for sub-basin organizations that reflect a diverse range of conditions and starting points.

2. Dealing with complexity: mandates, roles, plans and funding

While an orientation toward processes and empirical learning can help sub-basin development programs to accept and integrate diversity, it can also help guide both local initiatives and outside assistance in efforts to disentangle and more effectively address some of the more complex issues they face. Some examples include:

- Mandates. Conceptual and operational boundaries that are established in identifying and articulating RSBO mandates need to be able to evolve over time and adapt to changing conditions and perceived needs. Boundaries of the previous round of sub-basin planning were closely related to mandates of patron agencies. Those agencies have, however, encouraged wider thinking about issues and problems, which has helped identify important additional issues that need serious attention. And in response to these problems, agencies have at least sought to begin expanding the range of activities into at least the realm of mandates of other agencies within their ministry (or former ministry in the case of MoAC).

  During the project, we have seen further growth and openness in discussions about the nature of many of the underlying issues and forces driving processes that have led to many conditions now seen as environmental and related public health problems. Some of these problems can be at least largely addressed by some quite direct local actions that can be organized and implemented under discrete local projects. Various such projects appear to be included in plans being formulated under this project. Other problems, however, are clearly not so easily addressed, and are thus likely to form a smaller and generally weaker part of the plans. One of the areas where this is most clear is in the many issues that relate to technologies being employed in cash income generating components of local livelihood systems.

  Moreover, sub-basins appear to be diverging somewhat in their approaches to dealing with such complex issues. Some want to further explore what they might do, while others want to externalize such issues for treatment by others. Either approach should be seen as acceptable, and subject to change over time. The "best approach" for a given locality will be derived from learning processes that carefully consider – and periodically reconsider – their vision, goals and objectives, in light of their perceptions, motivations and capabilities.

- Roles. There are several aspects of stakeholder roles in RSBO development and sub-basin management that relate to complexity issues. First, are the issues associated with the basic orientation of an RSBO in relationship to major roles in project and activity implementation. Some higher level agency officials think sub-basins should play a major implementation role, while working groups in all three pilot sub-basins perceive the role of an RSBO to be primarily in the realm of analysis, planning, coordination and monitoring. Again, there are really no right or wrong answers, other than what will be the most viable and effective approach that can actually be conducted by sub-basin stakeholder groups.

A second aspect relates to the roles of government agencies. Initial planning and organization activities at the sub-basin level have clearly been conducted under the patronage of government agencies. Some sub-basins are quite comfortable with that, although they may want to shift a bit more emphasis to leaders of agency-induced local groups and networks. Given the close relationships between them, that should presumably pose no problem. Other sub-basins, however, want to have more local 'ownership' of RSBOs, and see government agencies as playing key support roles. Thus, government agencies need to be encouraged to be flexible in this regard, and responsive to decisions by RSBOs regarding the nature of their role. It appears that there will be even less scope in the future for imposing national level views arbitrarily. Rather, they will need to be negotiated, and government agencies will be key representatives of national interests at the negotiating table. Moreover, RSBOs can also be seen as a forum for negotiations between agencies with histories of problematic relationships – such as DNP and RFD (and even ALRO), or DWP and RID, for example – which may actually help bring about some of the coordination and even collaboration that has been promised for so long, but never realized. Thus, there is no reason for agency officials to feel slighted if they are not chairing all the proceedings. Rather, they should feel fortunate to have an opportunity to work at the forefront of efforts exploring the frontiers of resource governance in Thailand.

Other aspects relate to roles of TAO, *tessaban*, *prachakhom*, private business, NGOs, and other stakeholder groups within Ping sub-basins, as well as the horizontal and vertical linkages, partnerships and alliances in which they are embedded or seek to establish. There is clearly divergence in how local social chemistries are interacting and exploring locally appropriate configurations. Localization employing learning process oriented approaches is very well suited to helping explore these complex issues and chart a suitable and self-correcting course in such situations.

- Plans. If we have already accepted current plans as a starting point, RSBOs need to employ learning approaches as the complexities of real-world implementation and impacts move to the center stage of their work. In order to help achieve a learning approach, various additional tools are likely to be needed, which can include annual reviews of progress, rolling plans that are updated based on the learning achieved during each year, and public access to information derived from all these efforts. Moreover, effective monitoring systems are so important they are treated separately in the next recommendation.

- Funding. Although many have envisioned massive flows of central government funds to finance a huge range of activities in sub-basins, reality is likely to be much more complex, and much less generous. We have already begun exploring some of the dimensions of this complexity in previous sections of this report. Moreover, scarcity of funds is likely to provide more incentive for closer coordinating relationships with regular local development planning processes at TAO, *tessaban*, and provincial levels. It is also likely to foster more creativity in finding ways to mobilize other sources of local or non-governmental funding, as well as mechanisms such as cost recovery, community funds, or revolving funds for activities where they are appropriate and potentially viable. Furthermore, it is worth noting here that international experience indicates that multiple sources of funding that include local to national level sources are associated with river basin organizations that are demonstrating highest levels of satisfaction among stakeholders, and that are showing the most promise for long-term viability and sustainability. While this might suggest that more modest levels of funding could be a "blessing in disguise", development of such multi-source, multi-level funding arrangements are likely to be very complex, and subject to change over time. Thus, learning-oriented processes would again appear most appropriate.

As this brief indicative list shows, the potential returns to investments that support development of learning-oriented approaches are high, with impacts that can help address complex issues associated with many important aspects of sub-basin organization development.

3. Building a solid foundation: collaborative monitoring & learning systems

The organizations and plans that have been developed under this project reflect in many ways the ideas and theories of various stakeholders, and particularly those forwarded by various government line agencies. But in order to move to the next stage of making an effective management organization become a reality, it is clearly necessary to move to a much more evidence-based learning approach to assessing impact of the various types of activity to be conducted under the plans that are being proposed. Some of these activities are likely to have the type of impact that their proponents have promised. Various others, however, are very likely to fall short of those goals, either because they are not really effective, practical or viable, or because they may be necessary but insufficient to address the full range of forces driving the problem. In any event, there is a very clear need to be able to assess their impacts in a transparent and effective manner, so that all stakeholders can see and accept the assessments required to establish and implement a learning process.

Monitoring is an essential feedback component of a learning system. One important step toward developing approaches for effective monitoring systems is being taken through projects such as the one now being implemented by CMU researchers under support by ONEP.[58] It is important to make a thorough review of the range of currently available and potential biophysical criteria, indicators and measures of key dimensions of environmental quality in the Ping River Basin. And, it is very important to strengthen support for efforts that can help to both establish a strong set of baseline data on current conditions, and to begin much more systematic efforts to monitor continuing change in those conditions. Far too little effort has been allocated to these lines of activity in the past, which has contributed to the lack of awareness of how conditions are (or are not) changing, as well as to often misdirected and unnecessarily divisive debate about both trends and causation underlying perceived problems.

In articulating and establishing criteria, indicators and measures of environmental conditions, it is also clearly necessary to place much more emphasis on direct involvement of local communities in the monitoring processes. Three types of reasons why this is particularly important relate to trust, to detailed familiarity, and to capacity building. In terms of trust, there have been a considerable number of cases where outside government agencies or advocacy-oriented academics or non-governmental groups have claimed to have expert knowledge that backed their efforts to dictate to local communities what they should do or not do. Having no access to the details of that knowledge or to means to either verify or contradict the findings and the conclusions drawn from it, communities have generally been faced with either accepting the outside experts by faith, or with rejecting the experts and their findings as suspect and politically motivated. In any event, use of expert findings in this manner have placed local communities at a very large disadvantage in any negotiations regarding restrictions that experts or agencies want to place on their behavior.

Regarding detailed familiarity, various types of information are simply not accessible through standard sensors or sampling processes. Remote sensing, for example, can identify the 'footprint' of landscape change – but it offers little direct information about why, how, or by whom. Information on important elements such as complex livelihood strategies, dependency relationships, accumulating debts, and local rivalries and conflicts can be even more difficult to assess from the outside. While well conducted local questionnaires or PRA techniques can provide more information, they can also miss many things compared to knowledge by people who are continuously engaged in a given society and ecosystem, and very often have even inherited insights from generations of others who have done the same. There are many areas with great scope for interactions, comparisons and cross-checks. Moreover, all parties need to remember that arrogance that follows from blind faith in one's own chosen set of ideas and tools has led many people astray and even amok.

In terms of capacity building, direct community participation in monitoring processes can also help a much wider range of stakeholders to understand much more clearly what is being measured and how it is done. In doing so, it helps build credibility among all stakeholders in the monitoring

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[58] See CMU 2005

process. And, perhaps most importantly where disputes are present or likely to arise, it provides tools that can be employed by all sides to individually or jointly measure impacts of activities around which dispute revolves, and can thus facilitate negotiation and conflict management.

And whenever it is possible, perhaps the most ideal approach is to seek a complementary balance among types of monitoring techniques, including interaction, and even collaboration where it is appropriate. In the pilot sub-basins, we have seen a very substantial openness to use of monitoring technologies that are beyond the ability of local communities to employ by themselves. Obvious examples include interpretation of remote sensing data, as well as laboratory analyses of toxic substances in water or elsewhere in the environment. At the same time, however, people also want to have access to at least visualizations of such data so that they can see how their understanding may correspond or diverge from its findings. Many also see important complementarities where local knowledge and community monitoring can substantially improve interpretations of data such as remote sensing, or add a far larger number of monitoring data points that can help everyone better understand local diversity and variability. Thus, there is considerable potential for synergies in building knowledge and understanding, as well as effects that can foster consensus building. In order to achieve this, however, information access and transparency will be critical.

4. Accessing tools & experience: a river basin knowledge & support center

In addition to improved monitoring approaches, much more concerted efforts need to be directed toward support systems that can more effectively address additional information and capacity building needs driven by local initiative and learning processes. The information 'toolkits' being developed under this project are fine, but they are insufficient to address needs that clearly exist.

In recognition of these needs, the author proposed in an earlier project report three types of RSBO support functions that need to be developed at the Ping Basin level, which were presented again in Part III of this report.[59] Needs identified and views expressed by local leaders and resource persons in pilot sub-basins during the final months of intensive implementation activity under this project very strongly and consistently confirm the three types of needs included in that proposal.

Since no action in this direction appears to have been taken thus far, it is strongly recommended here that if efforts to encourage and promote sub-basin management organizations are to continue and expand, urgent consideration needs to be given to establishing a ***Ping River Basin Knowledge and Support Center***. It would be comprised of three key components that focus on areas of activity such as (but not necessarily limited to) the following:

- Information Center. This center would build on thinking that specified 'toolkits' as an output of this project, but would take these efforts to another level. The information center would (1) serve as a library and clearinghouse for access to a wide range of relevant Thai language training and extension materials and publications that exist in a variety of forms (including 'toolkits' from all relevant projects), but are not systematically collected into libraries or other accessible central locations; (2) serve as a contact center that could help link groups, organizations, agencies and individual resource persons who could help provide or exchange information on experience and tools through training, demonstrations, cross-visits, study tours, or a range of additional formats; (3) serve as a center for developing appropriate forms and formats of informational and training materials that can help meet needs of the range of stakeholders and interest groups in Ping sub-basins; (4) serve as a center for coordinating two-way translation and adaptation of relevant information, to facilitate international exchange and communication in minority languages.

- Responsive technical support teams. This component of the operation would focus on mobilizing human and informational resources that could help guide and mentor RSBO-related groups in an interactive manner, with emphasis on on-site efforts. These efforts could build

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[59] See section III.D.3.d.

on the information center's resource person database to help match needs and resources, and schedule interaction. Emphasis would be on topics where systematic on-site assistance is difficult to obtain from existing groups, organizations or institutions that could be linked through the information center. In addition to various technical and operational issues and processes, topics might also extend into areas such as improving representation, selection processes and accountability in sub-basin assemblies, facilitating constructive interaction and negotiation among stakeholders, building a broad-based consensus, approaches for improving equity and participation by poor or disadvantaged groups, how to interpret monitoring data and build it into the learning process, or how to manage information to provide wide access, transparency, and public education. Response persons or small teams could include interested volunteers, students and/or staff from the considerable range of academic, private business, government agency, and civil society organizations located in the Ping Basin that could be seen as potential partner institutions.

- RBO data and analytical support system. This component would focus on more sophisticated tools and technologies to provide support for RBO and RSBO programs and activities. Spatial information systems, analytical modeling, instrumented water quality and flow monitoring, and other types of databases and analytical tools are strong candidates. Interest in and needs for these types of linkages have already emerged during project discussions of monitoring criteria and indicators in project sub-basins, as well as in frequently expressed frustrations with lack of access, and contradictions in data from different sources. Examples of highly relevant on-going work include the provincial decision support system that Dr. Methi Ekasingh's group has developed at CMU (a few small examples of output were seen earlier in this report), ONEP supported work at CMU on monitoring criteria and indicators led by Dr. Wasant Jompakdee, the forest resource-oriented spatial information system being developed and applied by Mr. Wittaya at the DNP's watershed office next door to CMU, all of which have already been cited in this report, as well as a substantial range of others.

Indeed, the center would depend heavily on partnerships with relevant institutions, organizations, and groups already based and active in the Ping Basin. It would not seek to dominate information flows, or to create a new high-overhead bureaucratic institution trying to compete with existing activities. Rather, it would place emphasis on serving as a focal point, a convenor, and a channel for information assembly, synthesis, translation into widely accessible forms, and dissemination that would complement existing activities by increasing their potential coverage and impact. Its most likely location would be at a regional institution such as a major university, but it must maintain very strong linkages with government agencies, civil society organizations and networks, interested private businesses, and other major stakeholders. Linkage of its operational base with provincial ONEP offices might be an attractive option, especially during its development phase. In any event, it must place strong emphasis on openness and equal access to information and services.

5. Refining the policy environment: coordinated long-term commitment, support, & incentives

Experience both internationally and in Thailand confirms the importance of high level support and an 'enabling' policy environment for the emergence, viability, relevance and sustainability of meso-scale initiatives like river basin and sub-basin management organizations. Experience under this project only serves to further confirm this need.

In this regard, however, it is clarity and consistency that are needed far more than high profile but ephemeral promises of massive financial resource infusions. The project has seen quite clearly how poorly timed examples of the latter can create as many or more problems than benefits. It has also seen substantial discouragement and skepticism that planned projects will ever be implemented. In this kind of environment, it is increasingly difficult to mobilize serious efforts to invest time, energy and creative thought into long-term visions, innovations and institutions.

Thus, there is a very urgent need at this point for a clear policy statement of long-term commitment to building fully operational and effective RSBOs in the Ping River Basin (and other river basins, if that is the intention). Without this, the prospects for further progress are not very bright. It is important to note, however, that this statement should not be about huge amounts of money to be distributed among sub-basins. The most critical point is the commitment to an important role for these organizations in helping to direct and assess activities at whatever scale are possible according to resource availabilities. This commitment is also very important as a policy signal to the government agencies involved with this effort that their efforts thus far have not been in vain, and that they will be expected to continue moving in the directions implied by these efforts. They need to understand that this has not been just another temporary diversion from the "old ways" of doing things, and that people who perform well in these types of programs are likely to be recognized by the upwardly-accountable system in which their career paths are embedded.

As preparations are made to expand support for RSBO development to other sub-basins, consideration needs to be given to how MoNRE will seek to coordinate its efforts. In doing so, it should consider a role for ONEP and its provincial counterpart offices in this process because: (a) is presumed links with policy and planning processes in MoNRE, and (b) its lack of 'field' implementation units means it must collaborate with other agencies and organizations. Thus, it appears quite well placed to act as coordinator and facilitator, where it could work closely with provinces, DWP, DNP, Upper & Lower Ping leaders, existing networks, and relevant NGOs, business leaders and academics. Close relations with the Ping Basin Knowledge and Support Center are recommended. A clear mandate for all MoNRE agencies to work with the new RSBOs will be required.

Regarding funding, the most important thing that is needed is assurances that at least a modest level of core operating expenses will be made available over a term that is at least long enough to include all five phases of the river sub-basin development process as discussed in this report. If availability of such funding needs to be contingent on meeting some reasonable standard of performance, and the criteria and indicators for meeting the standard are made public information, that would be fine. But processes cannot proceed in a coherent manner if there continues to be so little predictability present in the system as we see at this point.

Moreover, the whole area of developing incentives for the quality of both RSBO processes and sub-basin management impacts, also deserves serious consideration and emphasis. The same is true for efforts to identify and develop incentive approaches that can be employed by RSBOs to encourage improved behavior within their sub-basins. While some basic ideas have already been included in, for example, various activities under DNP-led sub-basin plans, much more serious effort needs to be devoted to these issues, and such efforts need to be conducted in close collaboration with stakeholder members of Ping sub-basins. Mechanisms such as sliding scale matching funds and a considerable range of other techniques are among the possibilities. Such incentives should extend into areas such as creative efforts to mobilize appropriate local sources of funding, to creativity and progress in integrating sub-basin management with local development planning processes, to innovative approaches to working with private business, and to creative and effective means for addressing important livelihood issues. One hopes that additional insights into some of these issues, at least in terms of how they relate to pollution issues, will emerge from the separate consultancy on economic incentives that is being conducted in association with this project.

6. Developing means to assure equity & accountability

Experience in project pilot sub-basins has further underscored the importance of power relationships among stakeholders, and efforts by some stakeholders to seek dominance over others. While this is normal in all societies, it also creates needs in participatory institutions such as RSBOs for mechanisms that can help assure there is as much equity and accountability as possible.

Thus, four lines of activity are recommended for particular emphasis and additional effort:

- Constructive balanced organizational process monitoring. At least during the first three stages of the RSBO development process, there is a need for monitoring mechanisms that include a balance between local and outside elements. The objective of this type of monitoring is to help assure that all major stakeholders have adequate representation that is accountable to their constituencies, and that distributions of costs and benefits associated with sub-basin management are including sufficient attention to equity issues. Outside input into such monitoring processes might be managed through the Ping Basin Knowledge and Support Center.

- Transparent information. Access to information, including the means by which it has been derived, is a critical element for assuring equity and accountability, and a frequently identified problem among sub-basin leaders and stakeholder groups. Studies and other information gathering commissioned by government agencies that could be very useful in sub-basin management are still frequently inaccessible, even by other government agencies – despite a constitution that assures equal access. And a parallel problem is often encountered regarding access to information at local levels. There is a need for very substantial improvement in information access at all levels if institutions such as RSBOs are to stand any chance of realizing their stated objectives.

- Channels for redress of grievances. Majority rule is a basic tenet of democratic institutions. But in most societies it is accompanied by recognition of the basic rights of minorities. During the development and implementation of sub-basin management plans, cases are likely to arise where some stakeholders feel their basic rights are being violated by various activities, even if those activities are backed by a majority of other stakeholders. One hopes that RSBO processes will be able to identify and effectively address such concerns. But the larger system needs to also consider contingencies where this may not happen. Thus, just as there is now an administrative court where people can seek redress from being unfairly treated by government administrative systems, efforts should be made to devise suitable channels for redress of legitimate grievances by stakeholders that are unjustly treated by RSBOs.

- Accountability to constituents. While experience under this project demonstrates that very substantial progress is being made in many places, instances have occurred where people have complained that leaders who claim to represent views of various stakeholders are not really doing so. Thus, it appears that there are still needs for some particular attention to mechanisms for insuring that representatives are held accountable to their constituencies. Some examples of such mechanisms were already introduced in Part III of this report, such as requirements for selection and reselection at fixed intervals (terms), or even recall mechanisms where abuse of power or gross misrepresentation can be demonstrated. Indeed, selection process themselves are an important issue, which is complicated by preferences among different groups for voting or consensus approaches. There need not be a single standardized approach for all stakeholder groups. But the bottom line is whether members of any given group feel their representatives are being held accountable for their actions.

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Perhaps the most important recommendation to be made by this report is that ONEP, MoNRE and its constituent agencies, the highest levels of government, and especially the people of the Ping River Basin continue their very promising efforts to seek creative and innovative approaches for improving resource governance at this potentially very important sub-basin level.

It is an honor to have been able to play this very small role in one little corner of this process.

Summary of Suggestions and Recommendations in Part V:

1. A general framework for expansion of support for development of river sub-basin organizations (RSBOs) throughout the Ping Basin should include at least four important themes:

    *   Minimum imposed uniformity. This is needed to provide 'space' for adaptation and acceptance of differences among localities in circumstances, perceptions, needs and initiatives.

    *   Focus on processes enabling effective localization can help bring coherence to these efforts, as in the five phases of RSBO development found in Part III of this report.

    *   Accepting current plans as a starting point. This can help efforts move beyond "plan-*ning*" into the next phases of more experience-based and empirical learning processes.

    *   Interactive support for gradually improving organizations, plans, and implementation needs a paradigm shift to RSBOs that are continuously making incremental improvements based on learning from experience, growing local and science-based knowledge, broader and deeper participation, and growing consensus.

2. An orientation toward processes & empirical learning can help guide efforts to disentangle and address complex issues such as:

    *   Mandates. Since problem identification is now broader than action projects, experimental learning & partnerships can help explore ways to address remaining problems..

    *   Roles. Careful experimentation can help further refine views about implementation, leadership, representation, other stakeholder roles, linkages, partnerships & alliances.

    *   Plans. Planning processes need to include annual progress reviews, rolling plans, and public access to information, combined with effective monitoring systems.

    *   Funding. More modest levels than anticipated in initial plans may provide incentives for creativity in mobilizing different types of central, local or non-governmental funds.

3. Since balanced and effective monitoring systems are critically important for transparent evidence-based learning, they need to include:

    *   Review of available and potential biophysical criteria, indicators & measures of environmental quality, establishment of strong baseline data on current conditions, & more systematic monitoring of change in those conditions. This can help address poor understanding of how conditions are (or are not) changing, and often misdirected & unnecessarily divisive debate about both trends & causation underlying perceived problems.

    *   Much more emphasis on direct involvement of local communities in monitoring processes, in order to (a) build understanding & trust in monitoring information; (b) expand types of information used in analysis, interpretations, comparisons & cross-checks; and (c) build credibility that can help facilitate negotiation & conflict management.

    *   Efforts to seek a complementary balance among monitoring techniques, including appropriate levels of interaction & collaboration, in order to foster synergies & consensus building. Information access & transparency will be critical for these efforts.

4. Urgent efforts should be made to establish a ***Ping River Basin Knowledge & Support Center*** at the river basin level, with three types of services to support sub-basin level work:

    *   Information center. Services would include (a) a library & clearinghouse for access to relevant training & extension materials & publications in a variety of forms; (2) a contact center to link groups, organizations, agencies & resource persons who can provide

or exchange information on experience & tools; (3) a center for developing forms of materials appropriate for the range of stakeholders; (4) a center for coordinating translation & adaptation of information for international exchange & minority languages.

- <u>Responsive technical support teams</u>. Services would focus on helping guide & mentor RSBO-related groups, especially on topics where systematic on-site assistance is difficult to obtain. Topics might include technical & operational issues & processes, representation, accountability, stakeholder interaction & negotiations, building consensus, improving equity & participation, using monitoring data in learning processes, managing information to provide wide access, transparency, & public education, *etc.*.

- <u>RBO data & analytical support system</u>. Services would focus on sophisticated tools to support RBO & RSBO programs & activities, such as spatial information systems, analytical modeling, instrumented monitoring, & other types of databases & analytical tools. This would build on ongoing work at CMU, DNP & elsewhere.

The center would depend on partnerships with institutions & groups in the Ping Basin, and serve as a focal point, convenor, & channel for information synthesis & dissemination to complement existing activities and increase their coverage & impact.

5. High level support and an 'enabling' policy environment are needed, including coordinated long-term commitment, support and incentives.

- Clarity & consistency are needed more than high profile temporary promises of massive funding.

- A clear policy statement of long-term commitment to building fully operational & effective RSBOs that would play an important role in helping direct & assess activities according to resource availabilities is needed to reduce uncertainty & as a policy signal to government agencies to continue moving in the directions implied by these efforts.

- ONEP and its provincial counterpart offices are well placed to help coordinate and facilitate support for collaborative processes to expand support of RSBO development.

- A reasonable level of core operating expenses for all five phases of the RSBO development process is necessary. Funding could be contingent on standard of performance, if assessment processes are transparent and fair.

- Serious attention to incentives for improved quality of RSBO processes & sub-basin management impacts, and for RSBO use in encouraging improved behavior within sub-basins, should be a priority consideration..

6. Given realities of power relationships among stakeholders, mechanisms are needed to assure as much equity & accountability in RSBO development & operations as possible:

- <u>Constructive balanced organizational process monitoring</u> that includes balance between local & outside elements, would help assure stakeholders have adequate & accountable representation, & that distributions of costs & benefits include attention to equity.

- <u>Transparent information</u>. Access to information, & the means by which is derived, is critical for assuring equity & accountability. It is now seen by many groups as a problem.

- <u>Channels for redress of grievances</u>. Efforts should be made to devise suitable channels for redress of legitimate grievances by stakeholders if they are unjustly treated by RSBOs.

- <u>Accountability to constituents</u>. Mechanisms such as fixed terms &/or other measures are needed to help insure that representative are accountable to their constituencies.

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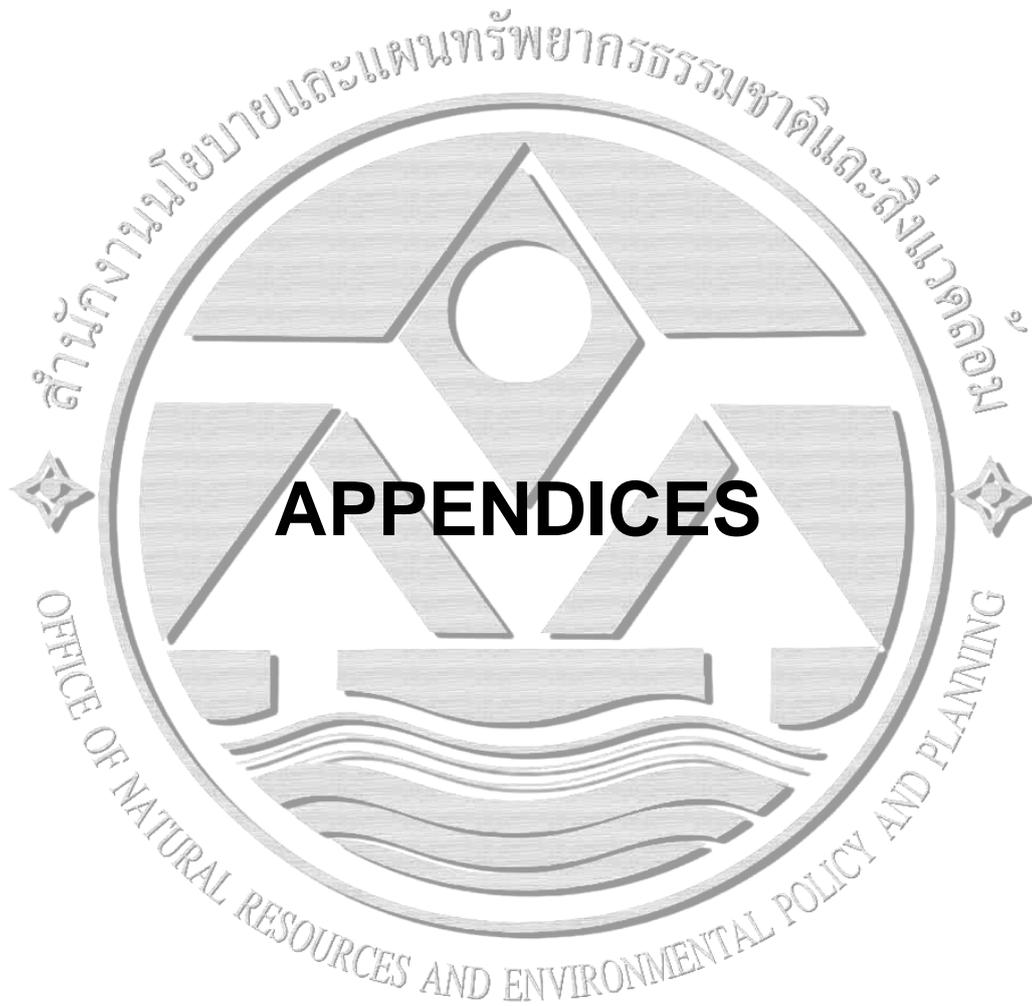
APPENDICES

Appendices

a. Terms of Reference

The Ministry of Natural Resources and Environment (MoNRE) has received a grant from ASEM Trust Fund in cooperation with the World Bank for a technical assistance team to help improve environmental quality in the Ping River Basin. The team will contribute to achieving enhanced livelihood and health outcomes for the communities in the basin, and to replicating the team's experience (especially the management model) to other river basins in the country. The main development objective of this TA team will be achieved by:

- Developing a participatory "micro-watershed" (sub-basin) management model that provides access to all stakeholders (communities, local government agencies and private sector enterprises) in the decision making process and demonstrating its implementation.
- Enhancing capacity of stakeholders, especially community groups and local government, to participate in the planning, implementation and monitoring of interventions.
- Strengthening regulatory and incentive mechanism to modify behavior of watershed users.
- Developing a result framework to monitor environment, health and livelihood outcomes.

Regarding these objectives, MoNRE has assigned the office of the Natural Resources and Environmental Policy and Planning (ONEP) to take a major role under this grant in arranging activities associated with participatory watershed management for Ping River Basin Project. In order to fulfill project objectives, four components of activities, have been designed as follows:

- Component 1: Participatory "micro-watershed" (sub-basin) management
- Component 2: Enhancing capacity of community groups in the 3 "micro-watersheds"
- Component 3: Strengthening the regulatory and incentive structure for improved behavior of users in the three "micro-watersheds" (sub-basins)
- Component 4: Project coordination, results measurement and dissemination

Part of the grant proceeds is applied to a contract under this TOR for an Expert (Watershed Management). Dr. David E. Thomas, senior policy analyst of the World Agroforestry Centre, has been contracted to provide these services.

Objectives

The Watershed Management Expert will work with ONEP and the selected consulting firm on Component 1. The objective is to develop a participatory "micro-watershed" (sub-basin) management model that provides access to all stakeholders (communities, local government agencies and private sector enterprises) in the decision making process, and to demonstrate its implementation. The specific poverty-related objective of this component is to enable the testing of a watershed-level institutional model that will provide sustainable and equitable access to the use of water and ecological resources by stakeholders, including poor communities. The Ping River Basin watershed is comprised of twenty "micro-watersheds" (sub-basins). The project will target three "micro-watersheds" (sub-basins) in the upper, middle and lower sections of the basin, and results and findings will be applied to the remaining ones.

Scope of Services

The Watershed Management Expert shall report to the Director of the Natural Resources and Environmental Management Coordination Division of ONEP, who serves as Project Manager and shall carry out the following duties:

- To provide guidance and advice to ONEP and the selected consulting firm/individual in conducting a rapid survey of the entire watershed to assess the health, livelihood and environmental status. The assessment will assist in selecting the three priority "micro-watersheds" (sub-basins) out of the twenty "micro-watersheds" (sub-basins) in the Ping River Basin for a more detailed stock-staking exercise.

- To develop practical criteria (including a participatory selection process) for selecting the three priority "micro-watersheds" (sub-basins) out of the 20 in the Ping River Basin to serve as pilot "models" of watershed management for further implementation, and work with ONEP and other stakeholders in the selection process.

- Together with other stakeholders, develop a participatory micro-watershed management model based on existing literature and local wisdom, knowledge, and experience in Thailand.

- To participate in field visits as requested by ONEP.

- To develop an action plan which should include but not be limited to the following processes:
    (i)   Targeting of actions for improved livelihood, health and environment outcomes
    (ii) Developing monitoring indicators
    (iii) Developing a financing mechanism at 2 levels: capital investments through local government budgets, and operational budget through instruments like community savings and credit fund
    (iv) Outlining implementation arrangements in which participatory processes will be embedded
    (v)   Preparing a capacity enhancement strategy

- To provide guidance and advice to ONEP and the selected consulting firm in developing relevant operational processes in the form of guidance notes, which shall cover the Technical, Organizational and Educational toolkits for the local communities along the Ping River Basin which shall cover the following:
    (i)   Technical toolkits for forest conservation, community forestry, biodiversity, waste reuse and re-cycling, water conservation, soil conservation, organic farming, etc.
    (ii) Organizational toolkits for roles and responsibilities of communities, alternative dispute resolution mechanisms, consultative processes for budgets and expenditures, credit and savings fund; monitoring of action plan implementation, evaluating intervention results and disclosure.
    (iii) Awareness and education toolkits for use in schools, health centers, community radio networks, village fairs, etc.

Expected Outputs

- An ***Inception report*** (10 copies) shall be provided to ONEP by an agreed upon deadline. A report outline shall be approved by ONEP. The inception report shall include the identification of the practical criteria (including a participatory selection process) in selecting the three priority micro-watersheds. ONEP should provide comment and suggestion on the report within two weeks after receiving the report.

- An ***Interim report*** (10 copies) shall be provided to ONEP by an agreed upon deadline. A report outline shall be approved by ONEP. The interim report shall include the participatory micro-watershed management model. ONEP should provide comment and suggestion on the report within three weeks after receiving it.

- The ***Final report*** (20 copies) shall be provided to ONEP by an agreed upon deadline. A report outline shall be approved by ONEP. The final report shall integrate the inception and interim reports with the action plan to implement the participatory micro-watershed management model. ONEP should provide comment and suggestion on the report within three weeks after receiving it.

- All reports shall be written in English.

Implementation Arrangement

The Watershed management Expert will work closely with ONEP, the selected consulting firm /individual, project coordinator, and other stakeholders. The Expert will report directly to the Project Manager. Only office space (in Bangkok and Chiang Mai) and telephone/fax will be provided.

b. Comments on project processes and 'toolkit' training materials

Comments on project draft organization and training material outlines, October 2005.

1) **ONEP Directives to establish initial sub-basin NRE management planning working groups -** แต่งตั้งคณะทำงานเฉพาะกิจจัดทำแผนปฏิบัติการจัดการทรัพยากรธรรมชาติและสิ่งแวดล้อม พื้นที่ลุ่มน้ำสาขา

This appears to be an interesting compromise for initial planning organization. It seems to be clear that this is an *ad hoc* (temporary) sub-basin working group with a mandate (a) to conduct initial planning processes, with particular emphasis on urgent activities for the first year of implementation, (b) to encourage and facilitate public discussion and understanding in sub-basins, (c) to coordinate and join with existing Upper/Lower Ping organizations, and (d) to manage consideration of arrangements to establish a long-term management organization (RSBO) appropriate for their sub-basin.

MoNRE role. Given this definition of the working group's mandate, it seems reasonable for ONEP to issue the directive, and for provincial NRE officers to chair the working group*. And given the need for the Ministry to move in a more coordinated direction toward defining a single set of committees and organizations for Ping Basin initiatives, it is very appropriate that representatives of DWR and DNP-led planning processes are brought into the planning processes under this project. Considering the extensive land use rights issues in Upper Ping sub-basins, the presence of RFD in those sub-basins also appears appropriate. Moreover, staff from the ONEP provincial office also provide secretariat support, along with ONEP's project consultants.

*Note: In the draft directive for Mae Kuang, I believe that either the chair or deputy (most likely the deputy) should probably be from Chiang Mai Province – both are listed as being from Lamphun, but this may be a typographical error.

Province role. Provincial administrations are represented in all sub-basin working groups, along with government officials representing local administrations. In the case of the Lower Ping, provincial irrigation offices are specified. The most obvious difference from various previous lines of thought is the absence of specific representation by districts, and especially TAO. Thus, one question might be how TAO points of view and perspectives will enter into the process.

Non-governmental role. It appears to me that non-governmental representation is distributed among: (a) sub-basin representatives at the Upper/Lower Ping level; (b) local technical specialists (นักวิชาการท้องถิ่น); (c) representatives of the general public (ภาคประชาชน); (d) people's organization representatives (องค์กรประชาชน); (e) NGO representatives (องค์กรพัฒนาเอกชน); and (f) representatives of business and industry. The balance among these groups varies somewhat among the three pilot sub-basins, and appears to represent efforts to 'localize' representation according to differing conditions. I expect that some observers are likely to question why there is only one NGO representative position in each of the working groups. Thus, I would hope that the individual selected is someone with good relationships in the broader NGO community and its various networks, so that at least procedures and processes are seen as open and transparent as possible to their scrutiny, comments and suggestions through the selected person. Similarly, I hope the business representatives are able to communicate and network effectively with the range of business interests present in, and impacting on, the sub-basin – the specific additional representative from industry in Lamphun seems to be a good idea. Moreover, I hope that representatives of the general public are seen as appropriate by as many social sub-groups and factions in the sub-basin as possible, and that the working groups will make special efforts to see that all their work is transparent and accessible to the range of public groups and interests in the sub-basin – as part of component (b) of their mandate, above. The issues raised earlier by Ajan Avorn are relevant here.

Overall balance. As I interpret the directives, it appears that staff from various components of MoNRE (ONEP, DWR, DNP, RFD, consultant) will compose about one-third of the working group members, including the chair, deputy chair and secretariat. Provincial & local government officials will make up about 20 percent in Mae Kuang & Lower Ping, but only about 13 percent in Ping Part 1. Combined non-governmental representation (see above) will be about half of the working groups in Mae Kuang and Lower Ping, and 60 percent in Ping Part 1. Given the nature of the mandate for these working groups and the need to balance many factors, this overall balance appears reasonable for efforts to develop multi-level collaborative relationships. While various groups or interests might complain about their relative representation, we must hope that the individuals selected to represent each interest group will be able to communicate effectively in both directions (and that there is sufficient time to do so), thereby making the process as open and transparent as possible.

2) Working group meetings for implementation planning - แผนการจัดประชุมคณะทำงานเฉพาะกิจ จัดทำแผนปฏิบัติการจัดการทรัพยากรธรรมชาติและสิ่งแวดล้อม ในพื้นที่ลุ่มน้ำสาขานำร่อง

The core of the project process is composed of a series of 3 rounds of meetings scheduled for each sub-basin working group, and one final broader sub-basin workshop. According to the dates on the draft schedule (which are now under revision), the process sequence would be:

a) *First round of sub-basin working group meetings*. These meetings will focus on explaining establishment of the working groups and project processes, consideration of sub-basin visions, strategies and criteria, how to consolidate plans and set priorities, and how to summarize work plans and projects under a draft implementation plan. Alternative models for long-term sub-basin management organizations will also be introduced.

b) *Second round of sub-basin working group meetings*. The second meeting will focus on consideration of draft sub-basin management implementation plans, and on consideration of structural aspects of establishing a long-term sub-basin management organization.

c) *Final sub-basin workshop*: As I understand it, this workshop would be open to broader participation of people in the sub-basin (as in the first project workshop held in each sub-basin), in order to propose the full project implementation plan and build broader understanding of components plans aimed at first year projects, medium-term plans, and long-term plans, including explanation of budgets. The workshop would seek commitments by units responsible for plans and projects, and would propose elements for incorporation into TAO 3-year development plans.

d) *Third round of sub-basin working group meetings*. This final sub-basin-level meeting will focus on finalizing sub-basin management implementation plans, and on implementing the establishment of long-term sub-basin management organizations.

It is not altogether clear to me about the logical sequence between meetings c) and d). In the sequence as presented, it appears that the sub-basin level workshop would be an effort to build broader understanding and input, and seek public commitments to the plan before it is finalized and submitted by the working group. If this is the sequence intended, it might also make sense to discuss selection of a structural model for the long-term sub-basin management organization at this workshop.

However, if the reverse order is intended (the third working group meeting is held before the final workshop), then I assume that the final sub-basin workshop would serve as a forum where the working group's final product is presented to wider sub-basin groups and interests. In this case, it might make sense to seek ratification at this workshop for both the plan and the arrangements selected by the working group for a long-term sub-basin management organization. In this case, problems might arise that could be difficult to resolve if there should be significant dissent on elements of the plan or the RSBO.

In any event, it appears that the timetable will be tight and quite ambitious. One would hope that the intervals between working group meetings will be sufficient for discussions within and/or among various sub-groups and interests within the sub-basin. This could help strengthen their ability to provide input, as well as their confidence in "buying into" the initial plan and long-term organizational arrangements. My own opinion is that it should also be made clear that the long-term sub-basin management organization (RSBO) will be able to adjust and improve medium and long-term plans as part of its efforts to develop, articulate and build broad public consensus on an overall long-term river sub-basin management plan (as suggested in more detail in my interim report, pages 66-70).

3) **Training to strengthen community potential in watersheds** - การเสริมสร้างศักยภาพชุมชนในพื้นที่ลุ่มน้ำ

In order to strengthen local capacity to implement the project process and launch longer-term sub-basin management processes, a hierarchical set of 3 levels of training are scheduled to be conducted under the project:

a) <u>Local facilitator training</u> - การฝึกอบรมวิทยากรลุ่มน้ำสาขา (Local Facilitators)

This training for the 6 facilitators from each sub-watershed is to consist of:

- Three days of "regular" lecture training on (1) public relations, (2) NRE management, (3) pollution management, (4) public health (see comments on outlines under 4.abce., below)

- One day of "special" lectures on
  (5) Government conservation agency mandates and watershed management – ภารกิจของสำนักบริหารพื้นที่อนุรักษ์ 14 และการจัดการลุ่มน้ำ (no outline available)
  (6) "New age" agriculture – การเกษตรยุคใหม่ (no outline available)
  (7) Ethnic groups – กลุ่มชาติพันธุ์ (see comments on outline under 4.f., below)

- Field study tours: "new plan" forest village (หมู่บ้านป่าไม้แผนใหม่) and a cattle raising farm (การเลี้ยงโค "พันธุ์ตาก" ณ ฟาร์มโค)

According to the dates in the draft schedule (which is now under revision) this training is scheduled to take place after the second working group meeting, at about the same time as the final workshop. It would seem logical, however, that this training should come earlier within the project implementation process. But given the tight schedule, there may be other constraints on how soon it could be organized and conducted.

There are a lot of lectures here, and participants are not university students. I recognize, however, that people listed as responsible for these training components have very substantial experience as educators, and at least several have supported youth training programs related to NRE that have reached beyond regular academic contexts. Thus, I hope that these "lecture" sessions will include substantial periods of discussion that can help localize the context of more theoretical elements, that there can be some opportunity for local input, feedback and questions from participants (which can serve as an example for facilitators), that as many practical tools for measuring actual properties and impacts can be presented as possible, and that there are numerous specific, concrete and practical examples.

Subject-wise, livelihood issues appear to be limited to the presentation on "new age" agriculture and the study trips to a government-supported forest village project and a cattle raising farm. I am not sure if the cattle raising enterprise is a local or government-induced initiative, but it would be very beneficial if some positive examples of promising locally-initiated livelihood improvement (and/or other NRE management) activities could be incorporated into the program.

In addition, there appears to be a heavy emphasis on theoretical "scientific" knowledge here, and very little about local knowledge and experience. The balance intended may be better than it appears, however, within individual subject topics that are identified by academic labels. I

suspect that facilitators will be at the 'front line' of discussions, and often debate, about relationships between theoretical 'scientific' knowledge and local knowledge and experience. Thus, it would be good to help them be able to facilitate dialogues between these two realms of knowledge as effectively as possible.

It will also be important to keep in mind that emphasis should be on information these facilitators will be able to use in working with community trainers and community people who will need to employ techniques that rely on lectures as little as possible. I note with interest the approach outlined for the public health section, which appears to be developed around actual health problems that have been identified within the individual sub-basins.

b) <u>Community trainer training</u> - การฝึกอบรมวิทยากรชุมชน (Community Trainers)

This training will consist of three days of lectures on (1) NRE management; (2) pollution management. Any other activities are not specified. Local facilitators will presumably be available to assist community trainers in these and additional topic areas.

Dates in the draft schedule (which is now being revised) indicate it is to take place at about the same time as the final sub-basin working group meetings.

c) <u>Community training</u> - การฝึกอบรมตัวแทนชุมชน (Community Members)

This consists of two days of study tours and field lectures for 150 people in each sub-basin. Dates in the draft schedule (now undergoing revision) indicate this training will be held after project implementation planning processes have all been completed. It will be a challenge to manage this large-scale effort as effectively and creatively as possible.

Overall, the logic for how these training sessions match with the implementation planning process of the project is not very clear to me. I appreciate, however, that the very tight time schedule may well be an issue, and it could be dominating some of the considerations here.

I hope that these training sessions can also be opportunities for two-way communication that can help identify different levels of information that people within the sub-basin either already have or feel it will be important to acquire. This will be extremely important from a perspective that is a bit longer term that this particular project. Moreover, it could help feed into longer term efforts to identify and/or develop longer term information and support services for sub-basin development (at both sub-basin and river basin levels), as also discussed in more detail in my interim report (pages 42, 50-51, 68-70).

4) **Training material outlines -**

The draft outlines provide further insight about what is being planned for the training processes under the project:

a) ***Public relations & knowledge transfer techniques*** *– เอกสารประกอบการฝึกอบรม เทคนิคด้าน*

มวลชนสัมพันธ์ หลักการประชาสัมพันธ์ และเทคนิคการถ่ายทอดความรู้

This appears to be a useful contribution that includes a range of potentially valuable information about concepts, ideas and techniques. The outline of information to be presented is divided into two parts. The first part seems to draw on social psychology and collective action principles, and then turns to techniques for eliciting information and managing conflicts. The second part emphasizes communication arts in managing news and in public speaking. While these are all skills that are useful for facilitators and local leaders, I hope there will be special emphasis on how to facilitate things like participation, dialogue, trade-off analysis, and negotiations, including use of systematically acquired data and information. The term "public relations" (ประชาสัมพันธ์) has been used too often for advertising, propaganda and information 'spin' purposes where form has been far stronger than substance, and motives are often cynical and self-serving. Real leaders in Thai culture are often not oratorical or debate champions, and the

need for multi-directional communication is one of the fundamental reasons driving the need for RSBOs. Moreover, listening is often at least as important as convincing others.

b) ***NRE management*** *– เอกสารประกอบการบรรยาย การจัดการทรัพยากรธรรมชาติและสิ่งแวดล้อม*

This appears to be a major component that potentially includes a wide range of material on water, forest and land use principles and issues, in addition to participatory planning, monitoring and evaluation approaches and techniques. Some of these subjects have provided the theoretical basis for most of the constraints that are placed on land use and land use rights, much of the upstream-downstream conflict among communities and interest groups in society, and a wide range of forceful and authoritarian lectures, programs and orders in the past. Moreover, the language of conservationists has developed 'jargon' terms that treat many people with disdain and mock their cultural practices – some of which have been successfully employed for centuries. Thus, there are numerous sensitivities here, and some have ethic and cultural overtones. If we want to try to overcome problems through local collaboration and initiative, there is a need to de-politicize some of the jargon, rhetoric and authoritarianism that has been built into many writings and presentations on these topics (some of which has been passed on from Western sources), so that facilitators will be able to communicate more effectively.

Fortunately, the individuals listed as responsible for this training are aware of most all of these issues, and have very considerable experience in discussing these topics with a wide range of audiences. Thus, it will be very interesting to see how these training materials are developed, and possibly how they might be further developed and refined in the future (see comment at the end of this section).

It will also be interesting to see (1) how local knowledge and experience can be interfaced with the often more generalized theoretical knowledge; (2) what practical techniques and criteria for measuring and monitoring actual impacts are presented, and perhaps approaches for managing and using monitoring and negotiation support information; and (3) participant response, ability to absorb the information, and suggestions for future improvements. Moreover, it would be good to help facilitators to stimulate and manage discussions about why past programs have failed to improve management of natural resources and the environment, and ways in which the issues and problems involved can be better addressed in the future.

c) ***Pollution management*** *- การจัดการมลพิษ*

Materials on pollution management are divided into four separate modules:

i) <u>Water pollution</u> *– เอกสารประกอบการฝึกอบรม การจัดการมลพิษ (มลพิษทางน้ำ)*

Topics listed under the outline for this module seem to have very substantial overlap with elements of the other modules on pollution management. In order to reduce confusion, I suggest that this module focus primarily on topics such as (1) an overview of pollution in sub-basins that introduces the three component types that are the subject of other modules; (2) practical methods and tools for measuring forms of water pollution; (3) where and how to get assistance with water pollution problems and measurements. Monitoring tools could even include the bio-indicator and additional 'stream detective' tools for which the Green World Foundation has published very good Thai language materials. Suggestions for systematic approaches for monitoring and managing and using the data that is generated would also be very helpful.

ii) <u>Industry pollution</u> *– เอกสารประกอบการบรรยาย การจัดการมลพิษอุตสาหกรรม*

The outline is too brief to give an indication of what level of information will be presented here. Assuming that information on "clean technology" currently listed under the outline for module i) is largely directed to small to large scale enterprise and industry, it would seem more appropriate to discuss it within the context of this module. Moreover, monitoring of industrial pollution does not appear in the outline, but hopefully it will be included somewhere here. As past experience in many places indicates, without effective, practical

and accessible means for monitoring, pollution can lead to initially unnoticed irreparable damage, as well as to fears that generate unfounded anxiety or even panic.

iii) Community pollution – เอกสารประกอบการฝึกอบรม การจัดการมลพิษชุมชน

Some of the material currently listed under module i) on how to best use and conserve water associated with daily domestic life (bathing, laundry, etc.), as well as basic sanitation issues would seem to be more appropriately presented as part of this module.

I am also curious about how much will be said about *coliform* bacteria and practical ways in which communities can deal with this problem, including ways to monitor, identify and measure the nature of the problem, if present, in their communities. Intestinal parasites are another issue in various types of villages. Both of these issues clearly link with public health – so that there should be some coordination among these training components.

iv) Agriculture pollution - การจัดการมลพิษการเกษตร

While this outline is brief, it appears reasonably complete in its basic components, and I have already had several discussions about some of these issues with the person responsible. One important issue is practical approaches for sampling and monitoring chemical pollution from agriculture. While there may be some 'clue-like' indicators (such as eutrification), developing an effective means for monitoring pesticides and herbicides remains a major challenge – so far, a lot is being said based on very sparse and incomplete data. A second issue is practical and viable alternatives for use of agricultural chemicals. While organic agriculture and local knowledge are included in this outline, there are not likely to be any "quick fixes" that eliminate such chemicals, until better knowledge, tools and viable alternatives are developed on both the producer and consumer ends of the production chain.

d) *Handbook for soil & water conservation* - คู่มือการอนุรักษ์ดินและน้ำ

Since it is not specified where this handbook would be used in the training programs, I assume it is meant to be a general purpose reference toolkit component for local facilitators and/or community trainers. Its subject matter presumably relates to various of the other subject areas.

There have been numerous versions of elements of these materials, and some (such as those published by the Green World Foundation) have high quality presentations for local general audiences. I hope authors will draw from these sources and list them as suggested materials for further reading. In terms of what this handbook could add:

- It would be good if the handbook could include a realistic and practical discussion of why measures promoted in the past have not been adopted, how these issues can be addressed, and hopefully examples of where and why proposed approaches have worked.

- There is nothing listed in the outline about measurement and monitoring of key indicators of actual conditions and change over time. Since it will be a very important aspect of RSBO efforts to improve sub-basin management, I hope information on tools that can be used by both local communities and outside "experts" are included in the handbook.

e) *Public health* – การอบรมวิทยากรลุ่มน้ำสาขา (ด้านสาธารณสุข)

This very brief outline is quite interesting in the approach to be used in this training. By beginning with the actual public health problems encountered in the pilot sub-basins, it immediately becomes relevant and concrete for local residents. With their attention gained in this manner, discussions of each of the relevant problems – including hot topics like AIDS and bird flu – should be more effective. It would be good for the project to learn more about the sources of data used in this analysis, and for the presentation to also help identify ways to improve local monitoring and identification of public health problems. Moreover, I hope there can be some coordination between these public health issues and the public health implications of issues covered under the various pollution modules.

f) **Highland minority groups & ethnic knowledge in NRE management** - เอกสารบรรยาย พิเศษ เรื่อง กลุ่มชาติพันธุ์บนพื้นที่สูงและภูมิปัญญาชนเผ่าในการจัดการทรัพยากรธรรมชาติและสิ่งแวดล้อม

First, I think this is an interesting outline, that serves as an example of how progress is being made in trying to address some of the difficult and often contentious issues that are inherent in aspects of this topic. Thus, the following comments are made from a constructive point of view, and in the context of the continuous flow of information from Southern Thailand that shows what can happen when relationships go bad. The outline is divided into 5 components:

- <u>Highland ethnic groups in Thailand</u>, What version of history will be used here? Will there be provision for helping facilitators to encourage discussion, questions, or articulation of alternative views on historical developments? Similar questions arise regarding traditional livelihoods of the various groups and the types of transitions they are passing through.

- <u>Highland policy and community development implementation directions</u>. It will be a good contribution to have a clear explanation of the reasoning behind official highland development policies, and presumably their local manifestations. In this context, it is also good to have discussion of the impacts of highland development on NRE. What appears to be missing, however, is the impacts of NRE policies (as well as citizenship and other policies) on local livelihoods and opportunities of mountain minority communities. It may also be useful to note that in the context of these policies 'highlands' refers to everything above 500 or 600 m.a.s.l., whereas other views distinguish a middle or midlands zone, with highlands located above 900 or 1,000 m.a.s.l. – reflecting different ecological, ethnic and historical development patterns. Policies have often used only a small part of knowledge that is already available from various sources.

- <u>Community processes in solving highland community problems</u>. Ideas about restoration of local knowledge and community culture are indeed appropriate, as are methods for strengthening community organizations and networks for both NRE and other purposes. It will be interesting to see how these materials develop. Hopefully, they will include examples and contacts with communities where promising efforts are underway. A range of local views on these topics will be at least as interesting as official views.

- <u>Structural factors with impact on community participation in NRE management</u>. Discussion of the national constitution and the proposed community forestry law are clearly relevant here. While international treaties are also relevant, it should be clear that declaration of protected area status at a particular location is a matter of national public policy (wherein local communities have historically had very little or no voice). Presumably, discussion of legal provisions and pressures will include issues and problems related to their impacts, and recognition of at least some types of injustices they have caused.

- <u>Hopes for the future</u>. These appear to be very well intentioned, and even noble directions for efforts that are badly needed and long overdue. Topics include legal adjustments needed for participatory NRE management employing local knowledge and traditions, and greater equity in resource utilization, as well as establishment of a participatory partnership strategy for improved NRE management. I look forward to the details that will be presented here to help facilitators to develop this type of approach.

Terminology note: While I am the first to recognize my own limitations in understanding the subtleties of the Thai language, I do feel I should ask what are the implications of distinctions between 'tribal' communities (ชุมชนชนเผ่า) versus 'local' communities (ชุมชนท้องถิ่น)? Does this mean that only ethnic Thai can form local communities, or that Thai communities are somehow not 'tribal'? If there is some technical distinction here, I wonder how many people understand it? Why not use mountain versus lowland communities, or minority group versus majority group communities? I often try to put myself in the place of others to think about how I would feel if people referred to me or the group to which I belonged with terms such as these [Indeed, some of my Cherokee relatives have been in similar situations, and I know how they felt about it]. Part of the collaboration process for effective sub-basin management will require at least a

degree of 'reconciliation' that needs to include more attention to politically-charged, ill-informed, or even just simply inconsiderate terminology that has been widely used in the past. While references to traditional agroecosystem management strategies or spiritual beliefs are where such terms are often most obvious, many more subtle types of references also need to be addressed.

g) Overall Comments on training materials.

These materials look quite promising, and they should make a useful contribution to the types of materials that need to be collected by the type of Ping RBO Knowledge Center proposed in my interim report (page 69-70). Indeed, after these materials are developed and tested under this project, it may be useful for ONEP to consider how they can be further refined and published for broader access and distribution. This could perhaps be done in partnership with an organization experienced in producing high quality publications for this type of audience – such as the Green World Foundation, for example.

It would be good for all authors to provide lists of materials for further reading and study. They might also provide ONEP with a list of known references they identify as they develop these materials. This list could be another input into development of the Ping RBO Knowledge Center, which I hope ONEP will consider as a high priority.

5) **Plans for establishing RSBOs** - แผนการการจัดตั้งองค์กรระดับลุ่มน้ำสาขาในพื้นที่ลุ่มน้ำนำร่อง

This draft outline contains three sections.

- องค์กรที่ได้รับการสนับสนุนจากหน่วยงานภาครัฐ This first section summarizes the various already existing relevant government induced, recognized or supported organizations related to pilot sub-basins. Out of curiosity, I asked a Thai colleague at CMU who was not already familiar with these issues to read this outline. As a result, I believe that there needs to be some effort put into developing an approach for presenting this material in a manner that can be clearly understood by a general audience. My colleague suggests that perhaps some simple diagrams, maps and timeline charts could help a great deal. This is a very confusing topic for many people, and it would be very helpful to clarify the nature of, and relationships among these groups.

- แนวทางในการจัดตั้งองค์กรลุ่มน้ำ This second section outlines a process for considering and selecting an organizational model for a long-term RSBO appropriate for conditions and experience in each pilot sub-basin. As this process is very similar to what I proposed in my interim report, I am pleased with the overall process outlined here. The short descriptive titles for the 5 models I proposed appear to be quite in line with their English language equivalents, and I hope that subsequent more complete descriptions of each alternative model will be equally well articulated in Thai. There are at least three items that I think may be particularly important that do not yet appear in this outline (but may already be included in considerations under existing headings):

  a) consideration of methods for selection of representative members of the RSBO (and the length of their terms, and perhaps recall procedures);

  b) provision for establishing key working groups under the RSBO – especially for sub-basin data and information, and for public participation and awareness; and

  c) beginning efforts to build an effective monitoring system.

  These are all discussed in more detail in my interim report, and I will be happy to discuss them informally with anyone in the project wishing to do so.

- แผนการดำเนินงาน This final section is a brief preliminary list of dates for accomplishing the activities contained in the outline. These dates are currently under revision. As with the other components of the project process, the time schedule is very tight. Nevertheless, if

these tasks can be accomplished with reasonable quality (open, inclusive, based on clear understanding, etc.) before the end of the project, it should be quite an achievement. As I said in my interim report, the feasibility of establishing a long-term RSBO by the end of the project will probably depend on the degree of unity and consensus present in each sub-basin. I remain optimistic about possibilities in Ping Part 1 and Lower Ping sub-basins, but still feel some concern about resolving some of the complex issues in Mae Kuang, including some of the ones raised earlier by Ajan Avorn.