

Chapter 11

Towards the Future

These Training Materials, and the LBMI report they are built on, have discussed the major issues facing lake basin management and the range of options that might be considered to address these issues. They have also discussed the unique biophysical characteristics (long retention times, complex dynamics, and integrating nature) that make sustainable use and management of lake basin resource values a more complex environmental and natural resource management challenge.

Notwithstanding the unique resource values and character of lakes as a major feature in a river basin, these materials have not focused solely on the problems of lake water bodies. Instead, they try to show how the lake water body and its associated resource conservation problems should be seen and addressed in a larger biophysical, ecological and political context in order to select effective, sustainable and integrated strategies and options that can address the causes of those problems. The focus has therefore been on the major challenges-institutional arrangements, policy, knowledge and information, participation, and financing-and the broad range of governance considerations characterized with principles and options that emerge from our recent lake basin management experience.

The 28 LBMI Lake Briefs and the “additional materials” provide ample experience from which to draw lessons. But, it is also important to recognize that in the broader management context of a lake basin, there is much to learn from management efforts of other natural resources. For example, lake basin management has much in common with sustainable management of particular natural resources (land, forests, fisheries, rangelands, wetlands and other environmental values and services), or the sustainable use of multiple resource values within small and even micro-catchments as well as whole river basins. Those who are involved in lake basin management can join networks of these other natural resource managers by many means, but specially through the use of Internet facility.

Nonetheless, the future of lake basin management, both for individual lakes as well as for lakes across the world, will not become sufficiently promising unless the state of existing lake basin management programs is clearly understood.

Reassessing Existing Lake Basin Management Programs

The lessons and experience learned from the 28 LBMI lakes brought forth a comprehensive picture of the global state of lake basin management today. The picture depicted is that among the selected programs, few seem to have succeeded in reversing the trend of lake environment deterioration and the associated degradation in resource values. Many lake basin management programs, however, have advanced far enough to pause and reflect, even though they may be overwhelmed by more roadblocks than they feel they can deal with. For them, the past, ongoing and emerging collective experience in lake basin management does give a great deal of insight in the future course of action that might be usefully undertaken. The lessons obtained suggest that we will have to make sure we understand the problems and issues facing individual programs. Where is the state of the lake today, both biophysically and managerially? What impact has the existing management program in terms of sustainable management of the lake, i.e., development and conservation/remediation of its resource values? Are we moving in the right direction and are we sure we know what that direction ought to be? What do we know now that we didn't know at the beginning? Specifically;

- What is the status of the knowledge base? Is a monitoring system in place that would enable you to measure changes in key indicators? Is the data base sufficient? What are the remaining key gaps? Are information management tools in good enough shape to be deployed effectively?
- Is the capacity building and training program effective? Still targeted on priority skills? Is it inclusive and open to cooperating agencies, community groups, etc.? What mid-course corrections are needed, e.g., are there new skills not considered when you started?
- Has political will and commitment grown, or has it waned? Is sustaining and building this a part of your program and how well is it working? What can you do more of, what should you do less of, and what can you do better?

- Are effective mechanisms in place for effective stakeholder participation? All stakeholders? What has been the change in awareness and understanding of the problems and their linkage to stakeholder activities? What is the perception of stakeholders of the program?
- Are the priority elements of management plan properly implemented? Do we have an adequate management plan, or should it be brought up to date? Are priorities and phasing clear? Are resources sufficient? Have we built the coalitions that would enable the required actions to be implemented? Is coordination adequate? Have either technology options or costs changed, and are these changes reflected in the management plan?

It is comparatively easy to look outward from a program, but much more problematic to look inward with a “collective critical eye”. A program might ask itself if we have a sufficient number of the right kind of skills-answers to this question depend not only on current bottlenecks and constraints that can be reasonably attributed to staff skills, but also on reassessing the organizations mandate and objectives, authority (powers and functions), and its work program. Specific questions to ask may include:

- Can we keep the staff we have or an expanded staff? Some programs are put together initially in an ad hoc manner with staff seconded from different sources for relatively short periods, an approach that can work relatively well in the short run. Has the program reached the point where a more permanent arrangement is going to be needed to sustain the program over the long-term, and what needs to be done to ensure this?
- Do we have an adequate statutory basis to enable us to do what we know must be done in the future? When should these changes be in place?
- What is there about the institutional capacity, beyond staffing, that limits achieving effective implementation and constrains choosing the right option among a range of possible actions? What can be done to remove these constraints?
- Is there a champion(s) to sustain support and activate political will? Is the champion listened to by politicians and senior officials? How can the situation be dealt with without the champion?

Dealing With Roadblocks

There seems to be no end to the range of issues and problems that lake basin management programs face in moving towards their objectives of restoration and sustainable use of lake basin resources. However, the 28 LBMI lake briefs give a clear message that most issues can be overcome by building the knowledge base, effective stakeholder participation, partnerships or collaboration among the concerned

agencies. But there are some really difficult issues that seem almost insurmountable. Among these are:

- Policy conflicts, especially those that arise from long entrenched sector interests, priorities or prerogatives, and that in many cases are inherent in existing laws and regulations;
- Political motives and agendas that run counter to the best interests of sustainable use of a lake basin’s resources;
- Lack of a voice-an unresponsive political system or administration;
- Corruption that encourages the particular behaviors and actions the program is trying to change;
- Jurisdiction boundaries that are creating barriers to effective and coordinated action;
- Lack of money to do something.

These appear to be insurmountable questions to those in charge of management of individual lake basins. However, it is clear also that, as this experience and lesson database expands with the participation of other lake basin management organizations, it can be expected that we find and learn of new and even more innovative ways of dealing with these difficult issues. The emerging messages coming from the 28 LBMI lake briefs suggest, however;

- Be creative and proactive, with advocacy backed by analysis of good data;
- Help to build coalitions and constituencies for change by intensifying efforts to create awareness and understanding of the situation and the risks-try to put our case in the terms and forms most relevant to those who can support the changes;
- Leverage external support and access that will enable the program to have greater voice;
- Pursue sector policy reform (water, agriculture, forestry, energy, etc.) and seek out the champions of reform in different key sectors, join the reform process, and support it whenever possible. Marshal evidence that care of the lake basin will benefit various sectors dependent on the resources of the lake basin. Critical values can be added to that reform process by showing how additional benefits can be gotten from such reforms (and serious costs and risks of loss avoided), by showing how the special vulnerability and associated risks of lakes and reservoirs can be reduced through the reforms.

One of the most difficult questions is resolution of conflict over resources or access to resources. These conflicts are

causing political bottlenecks to change or creating controversy that is hardening opposing positions and views. Seek if “win-win” solutions can be created by giving opposing sides reason to come to agreement. The lake briefs collectively imply the following;

- Most conflicts over resources or access to resources (even the requirement to reduce pollution discharges) are seen by at least one party to the conflict as a “win-lose” situation-someone else gains but I have to give up resources or incur greater cost, or both-there are many ways around and through this mentality, but the most promising are approaches that work to increase the amount of resource available, or enlarge the idea of what is being shared, i.e., total benefits rather than water, so that each side feels they gain significantly from the agreement;
- Are there technologies or infrastructure which can change the ways in which resources and especially benefits can be equitably shared (storage, water saving technology, or waste reducing technology are good examples)? Is it possible, for example by improving efficiency to increase the level of resource availability? Who could pay for these changes? Much creative thinking is useful in this regard and there is experience globally on how one side of the dispute could pay for a technological change by the other side in return for a substantial share in the benefits without the other side losing benefits and perhaps even gaining as well.
- Are there policy and legal changes, such as the allocation of secure and tradable rights, or resource pricing, or access charges, that could alter demand and lead to resolution of the conflict;
- Water scarcity conflicts are often exacerbated by the traditional supply side mentality of sector organizations, hence, promoting a shift to demand management on their part may also help to alleviate conflict;
- Creating and sharing revenue streams through the imposition of user or access charges, or pollution charges for example, open new ways for stakeholders to share in the benefits of resource use that opens the door to compromise.

From Lake Basin Management Initiative to Global Lake Basin Governance

Toward Global Stakeholder Participation and Partnerships

Every global natural resource management experience today points out the importance and the central role of effective stakeholder participation at every step in its process. The central lesson from the LBMI project also points to that direction. Essential awareness and understanding to overcome the barriers and opposition can be created only through broad participation of stakeholders. Improved

governance, especially in terms of accountability, won't be achievable unless a large and committed constituency with a strong voice for change exists. When stakeholders are able to both understand and have an influence on the choice of goals and options, even those who may initially see themselves as losers can often become proactive supporters. In some contexts, the participatory approach may run counter to existing political, cultural and social norms. In these instances, the lake briefs suggests (Tonle Sap, for instance) that a gradual, very site specific approach that yields quick local benefits can be successful in gradually overcoming these barriers.

Similarly, the lake briefs illustrated that the typical institutional setting for lake basin management involves a large number of organizations both governmental and non-governmental. Implementation of a management plan thus requires effective partnerships with key organizations. The same is true globally. Most lake basin projects carried out in developing countries are supported in various capacities by more than one agency of technical collaboration and/or financial support, some with catalytic funding coming from GEF. It is evident that the role played by GEF has been extremely important and instrumental. It is also apparent that GEF alone won't be able to meet all the expectation of lakes in the world in need of basin management program. Exploration for new and innovative approaches for partnership among key agencies would become extremely important.

Toward Enhancement of the Global Lake Basin Management Knowledge Base

Amplified throughout the process of LBMI Project was the importance of developing the broad and reliable knowledge base for lake basin management. Development and enhancement of knowledge base for better management of individual lakes is extremely important. However, with limited financial and manpower resources to go around, a great many lakes in developing world will continue to suffer from meager knowledge base that won't be effectively updated or upgraded. The international technical cooperation agencies, scientific communities, local and international NGOs specializing in lake basin management must collectively seek ways to mobilize resources to help those lakes to be able to take advantage of the exiting knowledge base for better management as well as for being able to generate important information resources that will themselves form the knowledge base useful for better management of lake basins elsewhere. This is particularly important today as the threats to lakes in the world have been increasing rather dramatically due to increased global risks leading to increased vulnerability. Perhaps, use of the modern information management technologies, be they planning tools like GIS, remote sensing, database management, computerized models, etc., will greatly facilitate the organization, management and use of the knowledge base as exemplified in many of the lake briefs.