

Indonesian Lakes in Critical Condition? - A US-Japan Led Quagmire

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Idealism, Politics, Professionalism and Science

Dr. Payaman Simanjuntak, chairman of the Lake Toba Heritage Foundation (LTHF), has been honored in recognition of his paper "The role of NGOs in implementing the World Lake Vision" he presented in a World Lakes Congress in Chicago in June 2003. The honors were awarded of his core message that "...many lakes in Indonesia are in critical condition and that quick action to implement the principles of the World Lake Vision was crucial to their restoration". His strategy to implement the World Lake Vision in Indonesia was also praised.

However, the status of Indonesian natural lakes is nowhere near as dire as mentioned, not even that of reservoirs. The views can be condemned as misleading and advancing the cause of those seeking profits at the expense of the real status of lakes and display professional and scientific dishonesty. Both the strategies of Dr. Simanjuntak and World Lakes Vision are idealistic and show a one-sided, very complex mode to manage lakes, unrealistic to implement in Indonesia.

The LTHF is an example of a non-transparent NGO driven by economic interests, supported by Monitor International (later LakeNet/Worldlakes) and UNESCO. LTHF has been involved in the regional politics in North Sumatra with objectives masked under the preservation of Lake Toba. The interventions have caused civil unrest and economic consequences to the local communities and are yet to be resolved.

The core message represents publicity-seeking opinions of Dr. Simanjuntak, LTHF and LakeNet/Worldlakes, not professional understanding of the situation. Such views of individuals and environmental civil society groups that discredit professionalism and science are a surprise. Cooperation with professionals and scientists should be the backbone of these groups. It is also surprising that a number of respected scientists have entered the fray on the side of these environmental advocates.

Waters and Lakes

In order to understand the complexity of issues in inland water management, types of waters need to be defined. Waters are divided into four categories: i) rivers, ii) lakes, iii) transitional waters and iv) coastal waters. Wetlands, transitional ecotones between land and water, are not defined as a separate water category or water body type and cover 25 percent of Indonesian land area. They are ecologically and functionally parts of the water environment and hydromorphological quality elements and may play an important role in the riparian zones of rivers, shore zones of lakes and tidal zones of transitional and coastal waters. In river and lake basin management, a clear distinction between various lake types and reservoirs is necessary.

A wide variety of biological indicators have the central role in the evaluation of the ecological health of a watercourse, body of water or lake. In the interim, during decades the state of waters was primarily judged by the simple physical and chemical variables, such as oxygen, phosphorus and nitrogen, the major factors controlling eutrophication.

Global databases would be important in providing objective information of Indonesian lakes. However, both the International Lake Environment Committee (ILEC) and LakeNet/Worldlakes databases cannot be considered prolific assets for Indonesian lake managers. Information, if any above the name of the lake, is superficial, often incorrect and shows great reference disrespect. The databases have no real value for Indonesia.

Water Scarcity and Remediation

What is troubling is that economic speculations have been placed above the true ecological value of lakes. The views expressed imply that the professional opinions and science are wrong, and consequently idealism and politics of those who accept the justification of honors must be correct. In trying to equate political righteousness with professional and scientific truth is an undesirable eccentricity.

Lake management professionals and scientists shall be deeply concerned that members of the LTHF, ILEC and LakeNet/Worldlakes have been chosen more for their political views and aptness than for their professional and scientific merits. The choices made are distressing because policy-making related to professionalism and science can benefit from objective and open debate. Politicization is a risky thing, whether used by governments or by defenders of the environment. Politics and science mix badly.

Increasing seasonal water scarcity is a serious matter, amplified by pollution and loss of forest. Wrong

information makes it look even worse. In many areas in Indonesia, scarcity has forced investments into remediation of water quality at the river basin or sub-basin scale to increase availability of clean water. In Indonesia, river basin and sub-basin scale remediation helps reservoirs but seldom lakes, apart from restoration of hydrology. However, results are poor.

Management and remediation decisions involving complex aquatic environments are often made in data-poor and knowledge-poor situations, common in developing countries, Indonesia included. The available information needs to be used wisely. Management and remediation objectives are often poorly articulated, raise unrealistic expectations and cannot be evaluated in cost-benefit terms. Lake management, remediation and popular modeling as a tool require substantial investments in reliable data and scientific capacity, are expensive, have numerous technical problems, require a high degree of input by foreign experts and rarely leave residual capacity in Indonesia.

Unanimity Basis for Decisions

In the data-poor and knowledge-poor situation Dr. Simanjuntak, ILEC and Lakenet/Worldlakes did not utilize all available information in their World Lake Vision verdict on Indonesian lakes, or misinterpreted the information. Developing experimental ecology and knowledge-based prediction in Indonesia helps use local knowledge and establish meaningful objectives to manage lakes.

Such a decision support system allows in Indonesia scientists, professionals and lake managers find alternative preservation and remediation options with outputs expressed with a degree of uncertainty. This approach builds local capacity, which with access to wider knowledge domains diminishes reliance on foreign experts as local specialists assume similar tasks, empowering self-reliant water resources management in Indonesia.

Indonesian researchers and authorities shall work out management options and advise decision-makers and the public. There are no single recipes and imported solutions are costly. Conversely, politicians are responsible for the kind of rivers and lakes they give to the people. So far, the future seems gloomy.

Knowledge and local experience help to adapt and phase measures. Harmony in any conceivable aspect in integrated lake management is a critical necessity. Without unanimity in status of lakes, cause-consequence synthesis and goals and means to achieve goals, activities will be fragmented and pointless. Eradicating one adverse factor or manipulating one component of the ecosystem may amplify the others. Deliberate wrong information undermines these efforts.

Superficial Information vs. Knowledge

One of the most prominent lake scientists has written: "...bibliographic negligence is more than a lack of responsible scholarship because it leads to increasing scientific redundancy..." He continues: "...particularly in the United States, there is a tendency to promote superficial understanding of ecological subjects, which is not acceptable for professional limnologists, aquatic ecologists and water resource managers". Shall Japan be included into this category?

The World Lakes Vision has elements of being superficial or biased, which can lead to superficial and biased understanding, and waste of energy and funds. The increasing tendency to promote old ideas under the guise of new and invariably ambiguous visions and paradigms like ecohydrology and phytotechnology. In such ambiance, the applicability of information delivered to Indonesia should be rigorously scrutinized.

On top of visions and strategies, tangible knowledge is needed for successful lake management. For the effects-based approach (ecosystem approach), individual basins and lake ecosystems shall be profoundly known and continuously monitored. It is not politics and a one-time exercise.

Maintained or improved ecological state of lakes is the measure of success, not investments in technology to improve wastewater treatment and reduce sewage and effluent loads, which are tools to achieve the goals, not goals themselves. Restoration should be only a delusion in the horizon. Views and acts discrediting professionalism and science have to be fought with stern measures. It would be crucial that individuals and organizations involved in the discrediting take quick measures to restore their own credibility.

Indonesian lakes are great ecological entities and large stores of safe freshwater. During severe droughts when rivers and reservoirs dry, lakes can provide emergency water supply. Unfortunately, their distribution is uneven. They shall not be considered as continuous supplies of water unless their hydrological features are secured.