Chapter 5-2
Integrated Lake Basin Management (ILBM)

Abstract
Integrated Lake Basin Management (ILBM) is an approach for achieving sustainable management of lakes and reservoirs through gradual, continuous and holistic improvement of basin governance, including sustained efforts for integration of institutional responsibilities, policy directions, stakeholder participation, scientific and traditional knowledge, technological possibilities, and funding prospects.
Keywords: ILBM, Governance, Lentic water

Managing water systems (lakes, wetlands, rivers, aquifers) for sustainable use is a complex challenge involving a range of interconnected scientific, socio-economic, political and environmental issues, sometimes even with conflicting or contradictory goals. Integrated Lake Basin Management (ILBM) is an approach for achieving sustainable management of lakes and reservoirs through gradual, continuous and holistic improvement of basin governance, including sustained efforts for integration of institutional responsibilities, policy directions, stakeholder participation, scientific and traditional knowledge, technological possibilities, and funding prospects. It has been conceptualized on the premise that, globally, sustainable management of lakes and reservoirs together with their basins has not been so successful. A great many of them has already lost their wide range of life-supporting ecosystem service. ILBM also takes the position that even the problems facing individual lakes cannot be properly addressed unless the fundamental issue of sustainable resource development, use and conservation facing the lakes is addressed globally, and with strong, long-term political commitment. The ILBM process also is designed for lake basin stakeholders collectively to fill the gaps between what has already been achieved, and what remains to be achieved realistically in continuing governance improvements over time. As discussed further below, the ILBM Platform is a virtual stage for collective stakeholder actions for improving the basin governance through ILBM, as a strategic means of facilitating the gradual and continuous improvement of basin governance, conveniently termed as an ILBM Platform Process, over a long time period.

Lakes and reservoirs are broadly considered to be "standing" or "static" water systems or, using an ecological term, "lentic" systems. It contrasts against the term "lotic" systems that connotes "running" or "moving" water systems. Ecologically the lentic waters, either fresh or saline/brackish, have a particularly vulnerable and fragile property due in large part to their unique bio-chemo-physical features transcending to complex management challenges, i.e., an integrating nature (it receives all forms of stress from almost every direction), long water residence time (the stress received remains long and persistently); and complex response dynamics (the stresses change their form from one state to another within the water body, often being hardly noticed since they occur in small increments). Management of a basin that consists mostly of a strongly lentic-lotic regime, for example, requires a different management approach than that for a basin consisting primarily of man-made hydraulic systems with little historically-fostered ecosystem functions. The concept of ILBM, while derived from the term Integrated Lake Basin Management, is in fact a concept for lentic waters of all kind, and they are generally complexly intertwined with lotic waters.

The adequacies and inadequacies of lake basin management for individual lake basins may be determined by reviewing

and assessing the existing management activities and practices. Based on the comprehensive surveys of the state of world's lakes conducted over the past decades, relevant review questions have been categorized into six thematic domains. They are; (1) institutions to manage a lake and its basin for the benefit of all lake basin resource users; (2) policies to govern people's use of lake resources, and its impacts on lakes; (3) involvement of people to facilitate all aspects of lake basin management; (4) technological possibilities and limitations that often dictate long-term decisions; (5) knowledge of both traditional and modern scientific origin as the basis for informed decisions; and (6) sustainable finances to support implementation of all of the above-noted activities.

The number of ILBM application cases is slowly, but steadily, growing in different regions of the world, each being at different stages of Platform development. The time required for a Platform Process to evolve from one stage to the next, i.e., from 1) preparation of a lake brief, to 2) development of a Basic Platform Process, and finally to 3) development of a Cyclic Platform Process, depends in part on the adequacy of the available human and financial resources. It is hoped that the situation will change for the better as the number of successful ILBM application cases increases.

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Fig. 5-2-1 Conceptual illustrations of ILBM Platform Structure with 6 pillars of governance

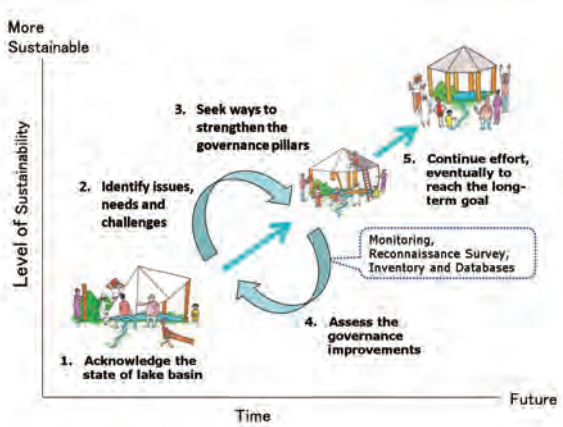

Fig. 5-2-2 Conceptual image of a Cyclic ILBM Platform Process