



◀ Invasion of water hyacinth


▶ Fishing net with small-meshes catching both full-size fish and fish larvae

▶ Loss of fish harvesting and spawning grounds by paved drainage streams

◀ A dried-up portion of the Aral Sea

Japan will contribute to the conservation of the world's lake environments through promoting **ILBM**

Lake Basin Management Initiative



"Managing Lakes And their Basins For Sustainable Use," highlighting Management Experiences and Lessons Learned from 28 Lakes Globally

Download from <http://www.ilec.or.jp/eg/index.html>

Integrated Lake Basin Management

Threats to world lakes

WLV (World Lake Vision)* and ILBM (Integrated Lake Basin Management) are two "wheels" needed to carry "Lake Basin Management" forward to "Sustainability."



*WLV (World Lake Vision)
 WLV is a participatory approach, complementing ILBM, for developing broad consensus of the basin stakeholders on the future state of the lake in question. It consists of guiding principles for identifying significant lake problems and developing practical solutions, particularly for the general public assisted by government officials and experts. (<http://www.ilec.or.jp/eg/wlv/index.html>)

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Damage by acid rain

Proposal for Integrated Lake Basin Management for the Sustainable Use of Lakes in Response to the World's Growing Water Resources Crisis

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Why Focus on Lakes and Why Now?

Degradation of the World's Lakes is a Serious Global Water Resource Issue

What are the Essential Considerations for Sustainable Use of Lake Basin Resources?

A Lake and its Basin Must be Managed as a Single, Indivisible Unit.

Some Resource Values of Lakes and Reservoirs

Resource Provision Services
 - Water supply
 - Recreation
 - Flood control
 - Hydropower
 - Aquaculture
 - Wetland

Regulating Services

- Water quality
 - Sediment
 - Nutrient

Cultural Services

- Recreation
 - Aesthetics
 - Education
 - Research

Examples of Degradation Threats to Lake Environments

Inside the Lake	Around the Lake	Beyond the Lake
1 Exploitative fish harvesting	2 Erosion and siltation	8 Airborne transport and deposition of acidic pollutants
2 Introduction of alien species of fish	3 Inflow of nonpoint sources of pollution	9 Airborne transport and deposition of hazardous chemicals
3 Change in salinity	4 Release of agro-chemicals and diversion	Climate change
4 Invasion of invasive flora and fauna	5 Excessive withdrawal and diversion	
5 Release of nutrients from cultural fisheries	6 Intrusion of sewerage and drainage wastewaters	
6 Destruction of shoreline ecosystem and habitats	7 Industrial discharges	

What is Good Lake Basin Management for Sustainable Resource Use?

Integrated Lake Basin Management (ILBM) with Due Consideration for Their Lentic Water Properties

Features

Integrating nature	Everything comes together, and the issues are mostly inseparable.
Long retention time	Problems remain long, finding solutions also takes long time, and the changes are gradual and invisible.
Complex response dynamics	Everything affects everything else in water, and the ecosystem behavior is unpredictable and uncontrollable.

“Lake Basin Governance”

