INTEGRATED MANAGEMENT OF LAKES VISION & ACTIONS

OF

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Pollution of Lakes: Environmental Issues

Morphometrical : Shrinkage of Submergence Areas

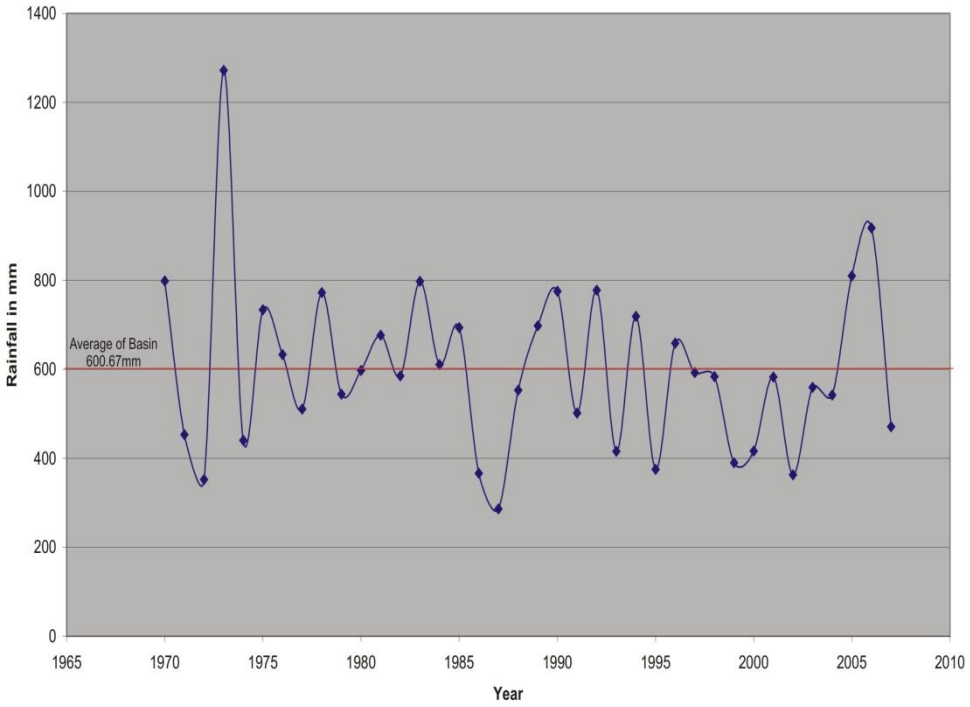
- Land Use Changes
- Encroachments

UDAIPUR CITY PICHOLA LAKE

- Degradation of Catchment Areas
- Stream Flow Obstructions
- Silting
- Over Exploitation of Surface & Ground Water

Ecological & Limnological: Eutrophication

- Nutrient Loading
- Solid Waste, Sewage Disposal
- Washing, Bathing , Immersions
- Loss of Useful Aquatic Flora & Fauna
- Invasive Species
- Aquatic Weeds
- Poaching

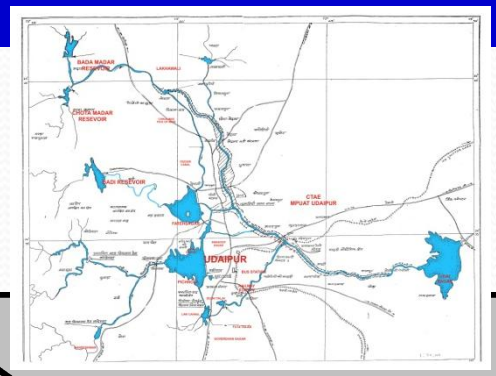


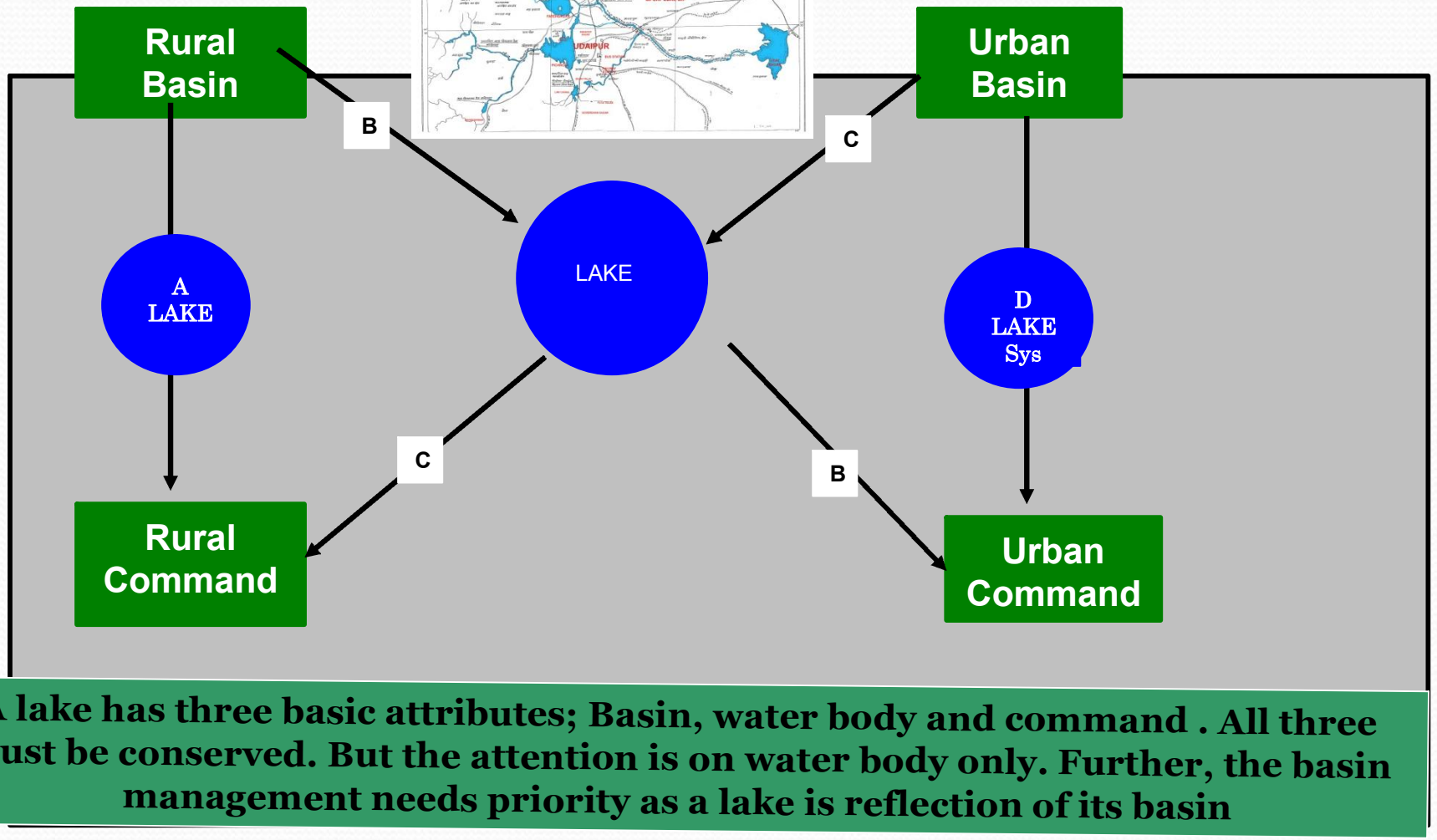
Climatological:
Poor Rainfall
Obstacles to Runoff

Disturbances in Local Microclimate
Scanty ,Erratic Rains

Lake Pollution : Governance & Management Issues

Fragmented Definition & Understanding of Lake





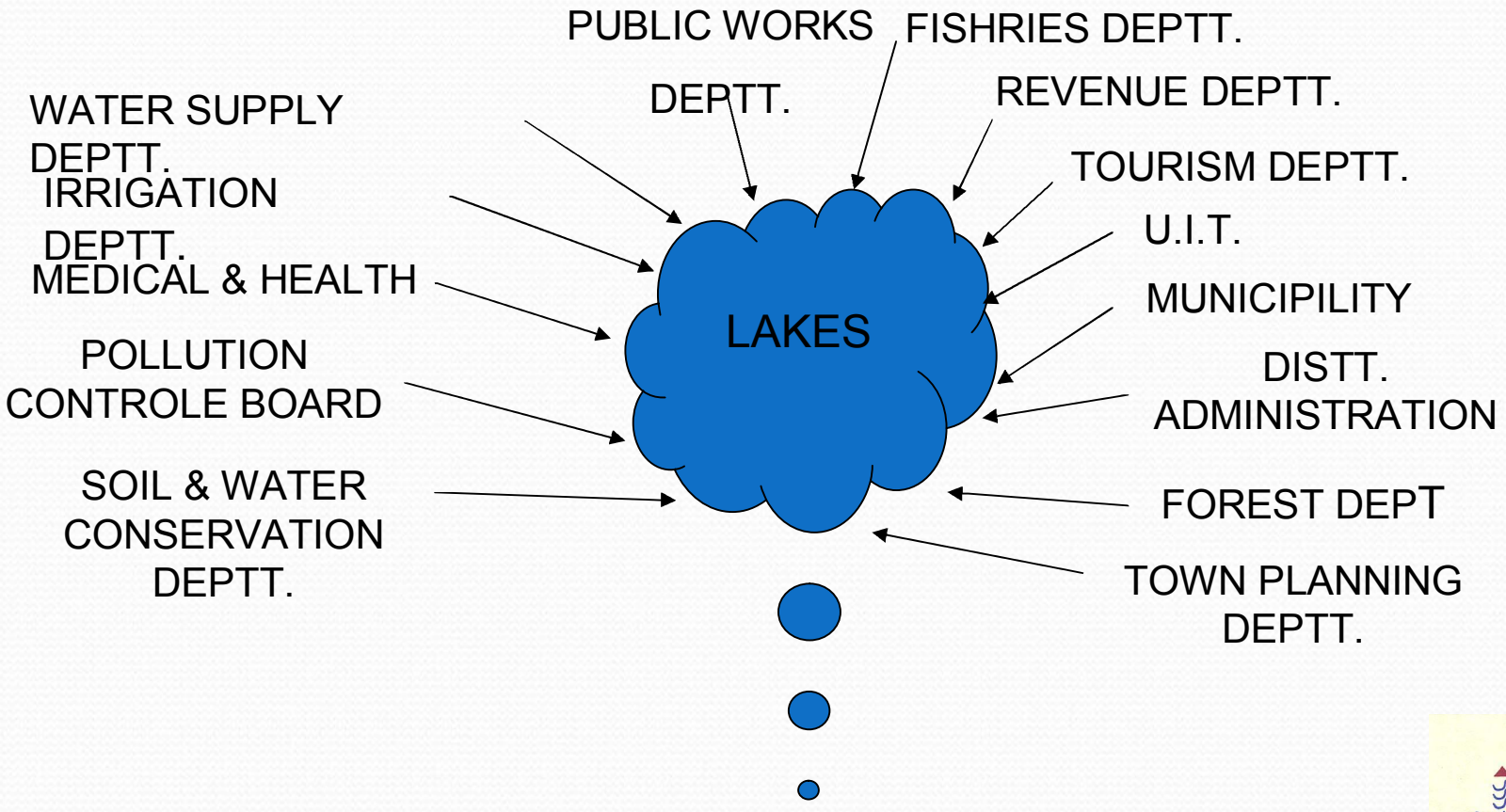
A lake has three basic attributes; Basin, water body and command . All three must be conserved. But the attention is on water body only. Further, the basin management needs priority as a lake is reflection of its basin

Multiplicity of Institutions:

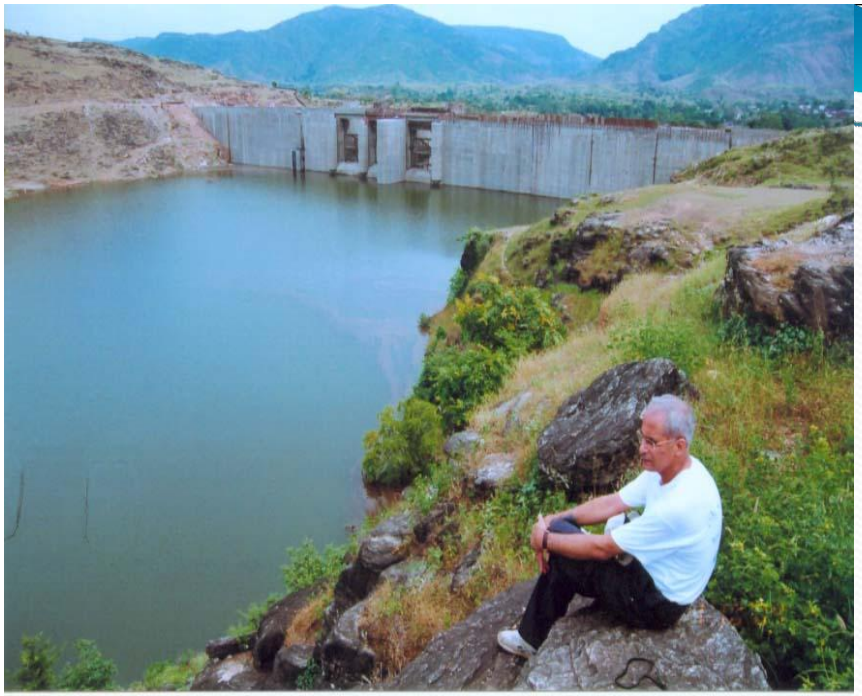
Conflict of Interests & No Accountability

Multiplicity of Policies & Laws:

No Unified, Holistic Policy & Legal Framework

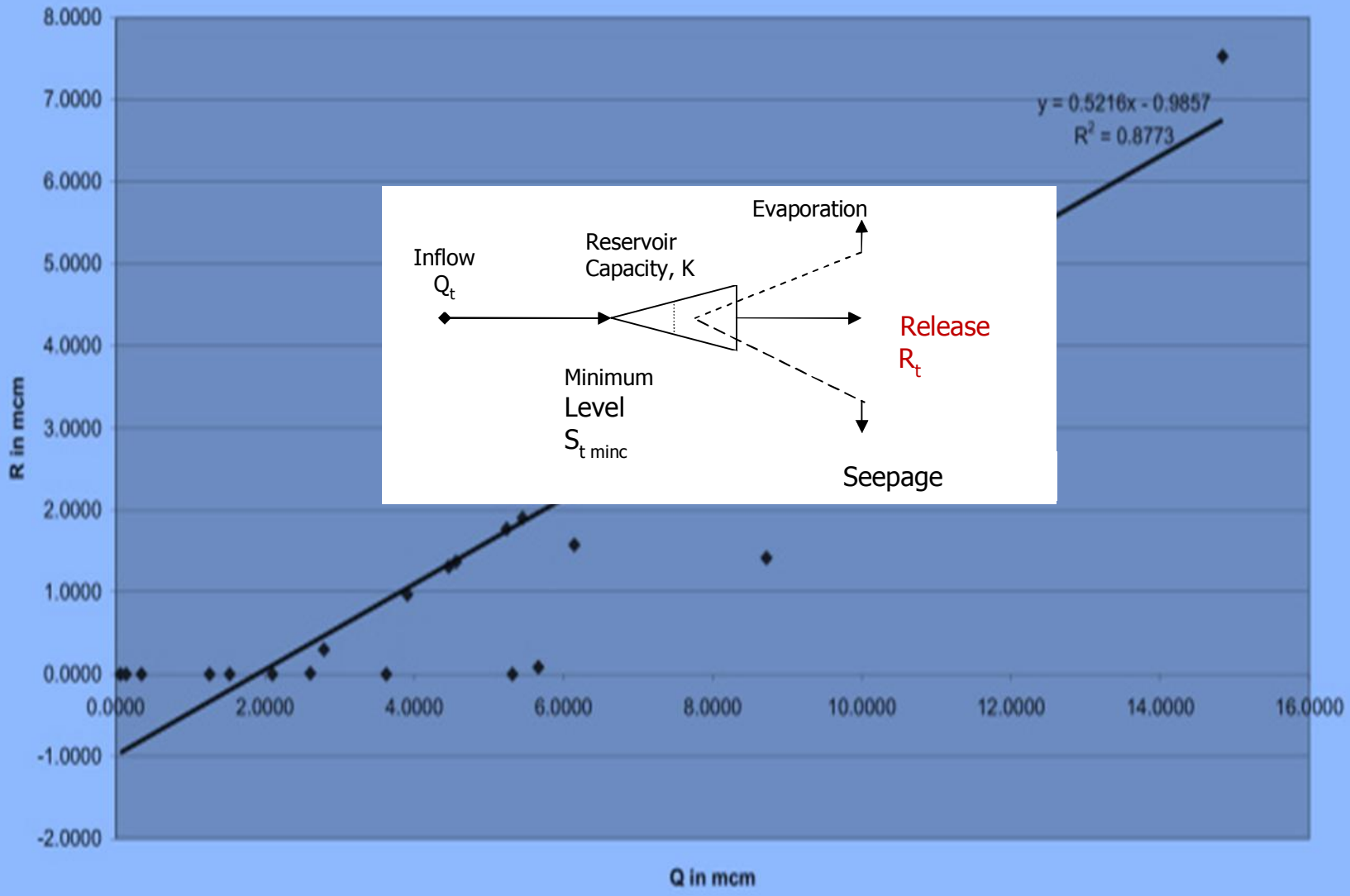


झील संरक्षण समिति, उदयपुर
LAKE PROTECTION SOCIETY, UDAIPUR



No Stakeholder Participation
&
Capacity Building
PSEUDO NGOs !!!

No Mechanism for Recording & Monitoring of Hydrological & Ecological Data Base



NO WATER BUDGETING, NO OPERATION POLICIES

Energy Consuming,
Expensive Approaches
Thrust on Beautification Only

No Mix of Eco-Technological
Solutions

- **NO CONSISTANT FINANCING**
- **NO PRE & POST REVIEW & EVALUATION OF PROJCTS/SCHEMES**
- **NO ENVIRONMENTAL AUDITING BASED ON ECOLOGICAL & HYDROLOGICAL INDICATORS**

critical indicators:

benthic macro-invertebrates, flora & fauna

changes in -- wetland vegetation, algae, invertebrates, vertebrates, faunal species

contextual indicators:

hydrology, morphometry, water & soil quality

Disturbances

Physical Disturbance:

Catchment, Area of wetland,Topography, Soil .

Hydrological Disturbance:

Physical modification to hydrology, changes to surface and ground water regime;

Water and Soil Quality Disturbance :

Eutrophication , pathological organisms

Fringing Zone Disturbance :

Change in fringing zone around wetlands

Let Us Understand Unique Features of Lakes to Determine Our Roles & Responsibilities

Integrating Nature

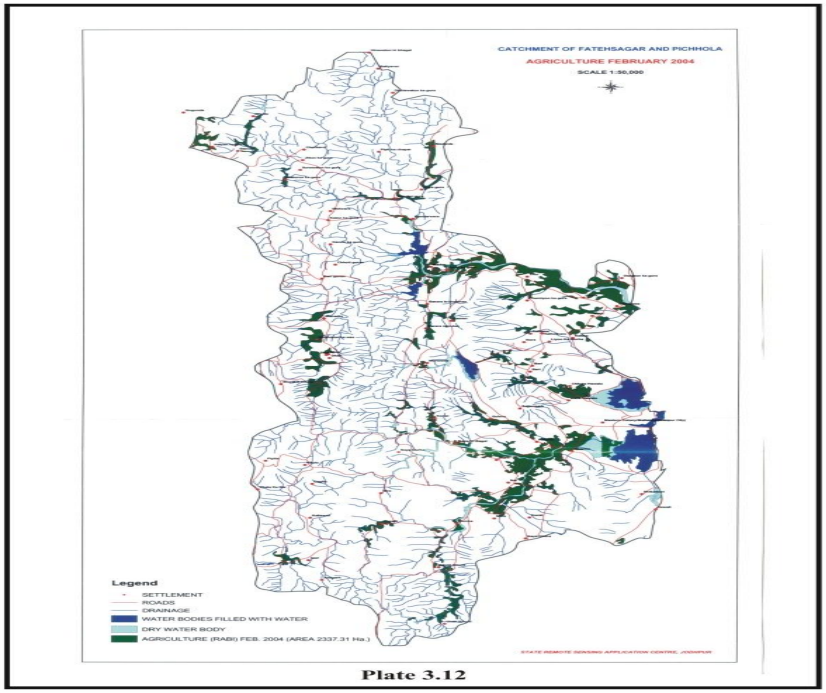


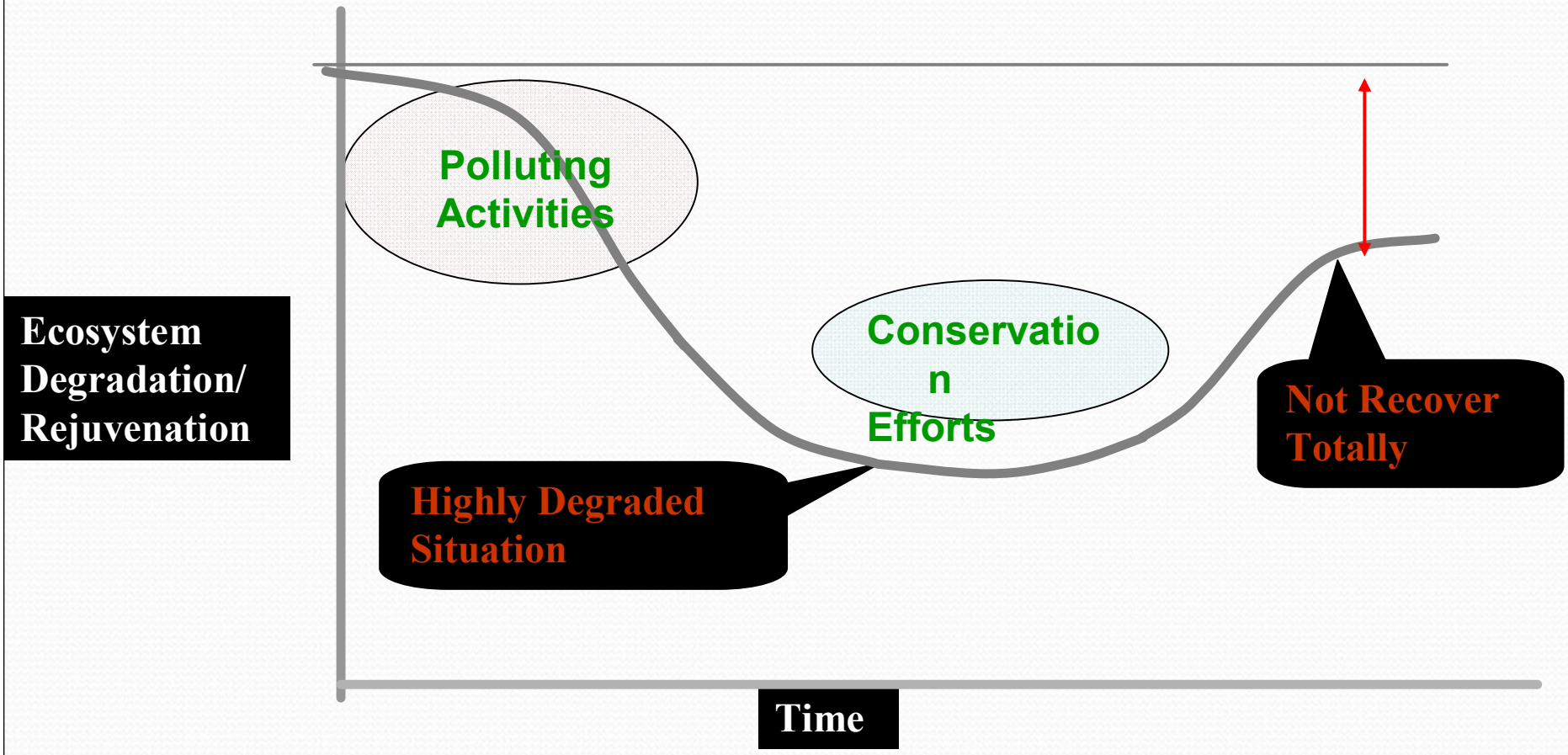
Plate 3.12

Everything Comes Together, Resources and Problems are Disseminated Throughout. No Localization of Problems.

Management Needs to be Coordinated and integrated

Long Retention Time :

Takes very long time to recover

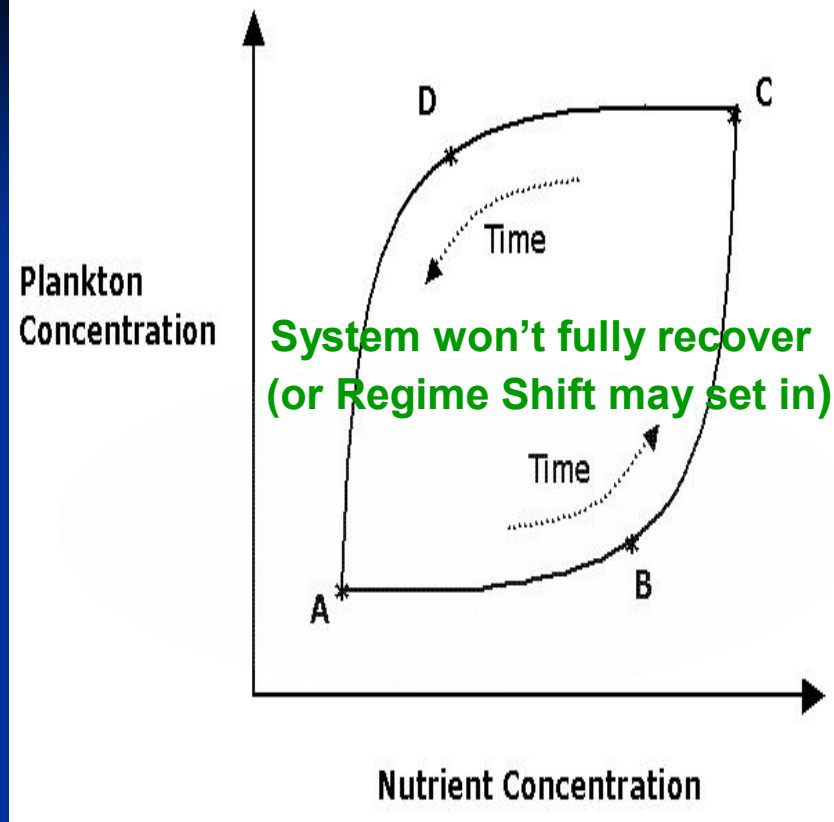


Management should be Anticipatory, Non Myopic, Well planned, and Flexible .

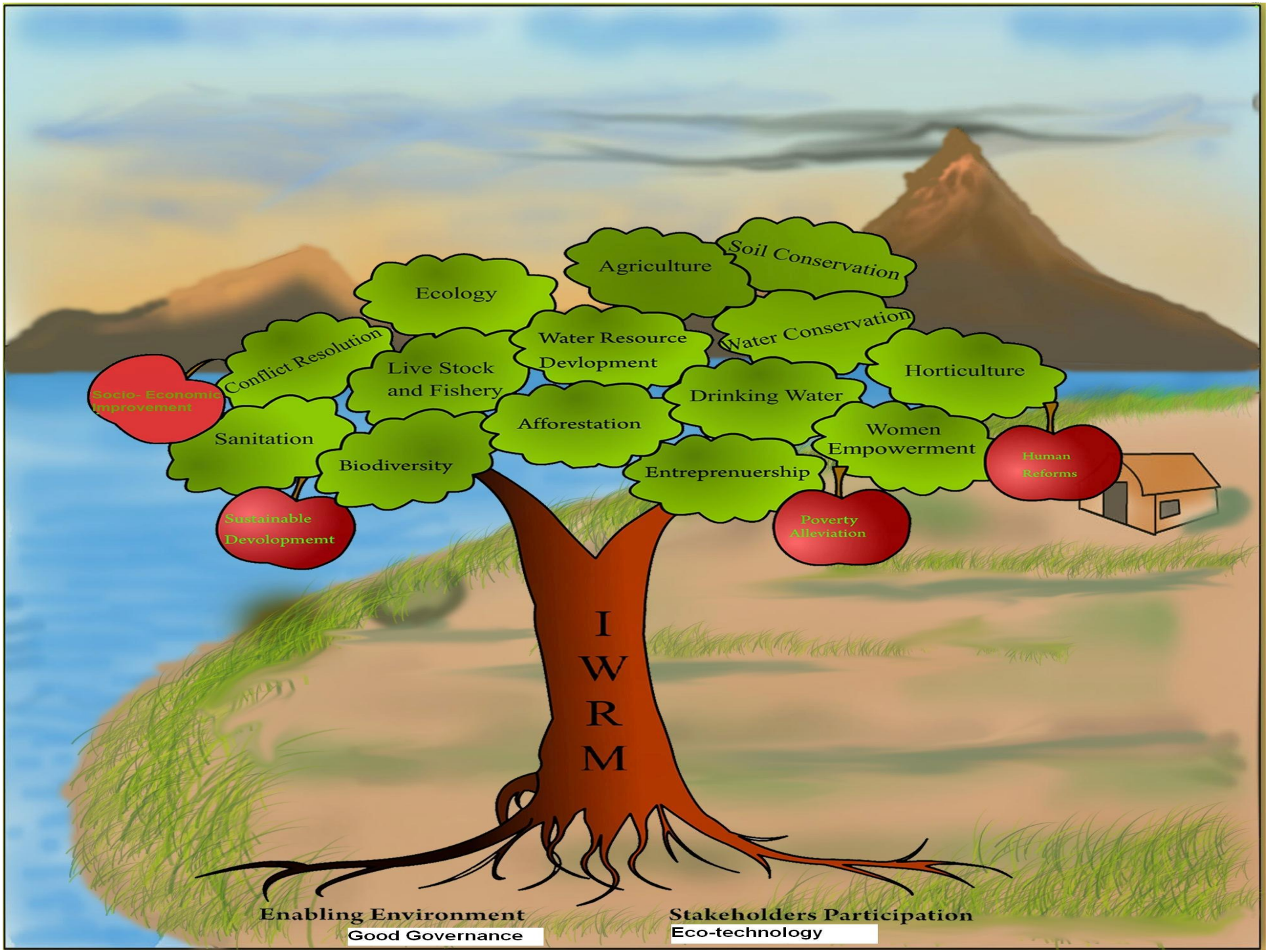
Medium for Climate Change

Complex Response Dynamics

Lakes do not respond to changes in linear fashion



MANAGEMENT SHOULD BE BASED ON BEST AVAILABLE SCIENTIFIC AND TECHNICAL KNOWLEDGE AND INFORMATION


Agriculture
Soil Conservation
Ecology
Water Conservation
Water Resource Devlopment
Conflict Resolution
Horticulture
Live Stock and Fishery
Drinking Water
Socio- Economic Improvement
Afforestation
Women Empowerment
Sanitation
Human Reforms
Biodiversity
Entreprenuership
Sustainable Devolopmemt
Poverty Alleviation
I
W
R
M
Enabling Environment
Good Governance
Stakeholders Participation
Eco-technology

Good Lake Basin Governance : a key to success

ILBM essentially emphasizes On improved Lake Basin Governance

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A lake basin is dynamic entity and status quo can not help.

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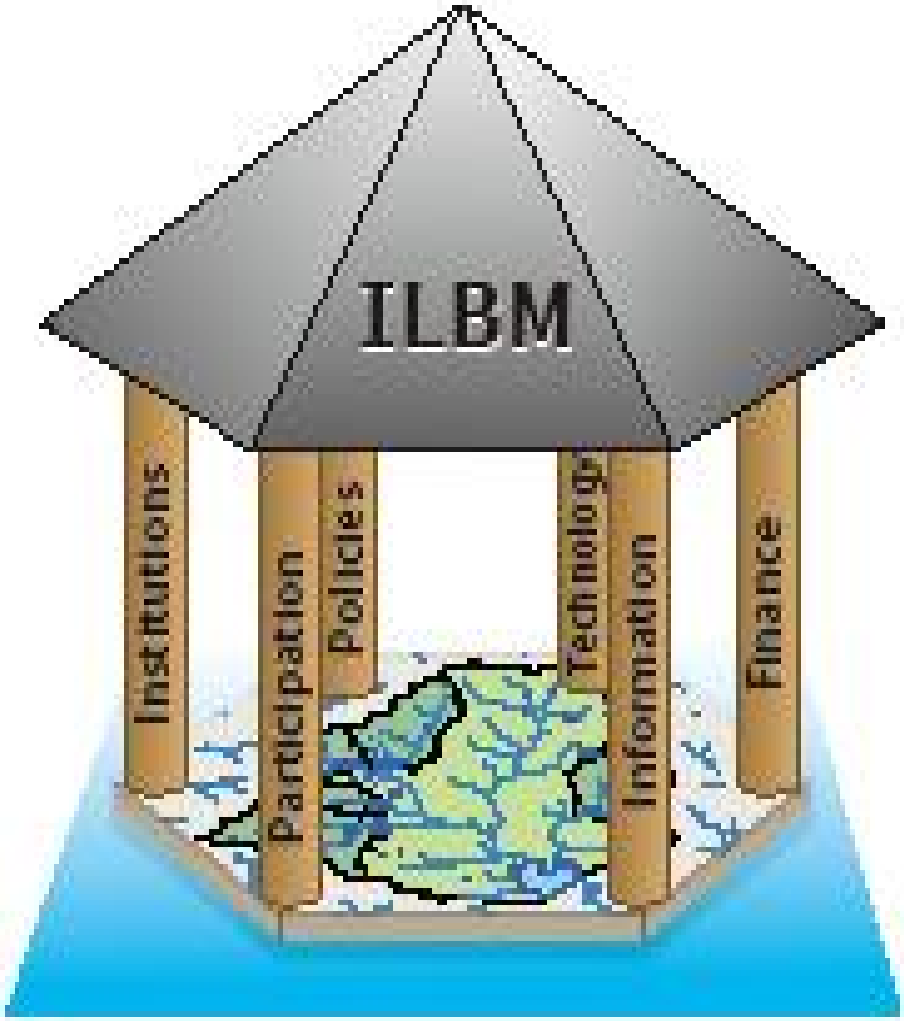
To address new issues and Problems Solutions based on new knowledge and Technologies essential



The six basic components of this Governance structure

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1. Institutions,

2. Policies,

3. Participation of all the stake holders,

4. Technologies,

5. Knowledge and Information and

6. Finance.

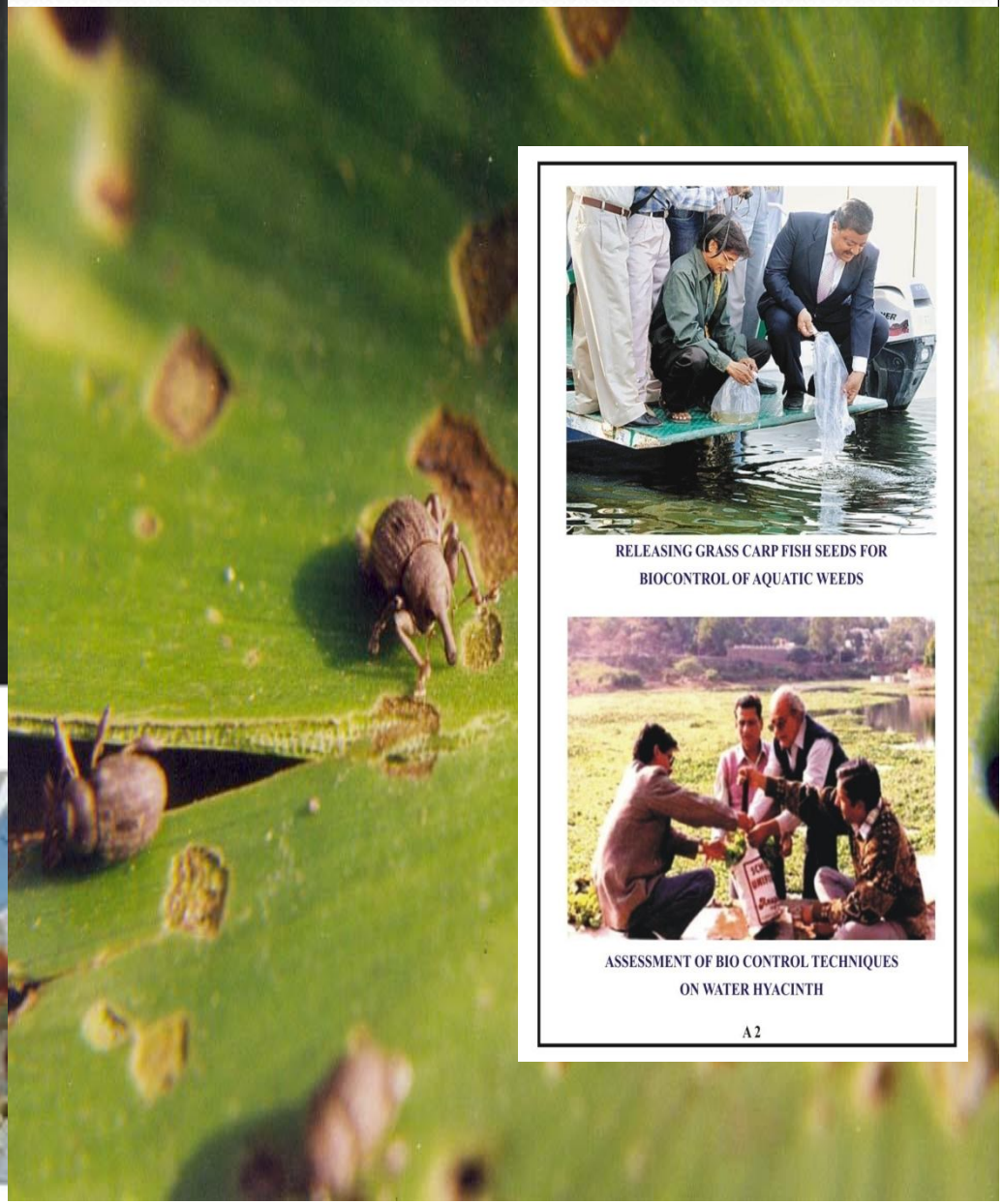
World Lake Vision

- **Principle 1 :** A harmonious relationship between humans and nature is essential for the sustainable use of lakes.
- **Principle 2:** A lake drainage basin is the logical starting point for planning and management actions for sustainable lake use.
- **Principle 3 :** A long-term, preventative approach directed to preventing the causes of lake degradation is essential.
- **Principle 4 :** Policy development and decision making for lake management should be based on sound science and the best available information.
- **Principle 5:** The management of lakes for their sustainable use requires the resolution of conflicts among competing users of lake resources, taking into account the needs of present and future generations and of nature.
- **Principle 6 : Citizens and other stakeholders should be encouraged to participate meaningfully in identifying and resolving critical lake problems.**
- **Principle 7 : Good governance, based on fairness, transparency and empowerment of all stakeholders, is essential for sustainable lake use.**

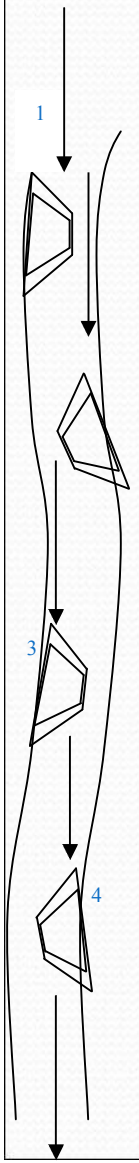
Jheel Sanrakshan Samiti"(JSS)

- Voluntary Organization , Operates at grass root levels in urban and rural areas
- ✓ Works on IWRM/ILBM approach.
- ✓ Partner organization of Global Water Partnership
- ✓ Supports, strengthens various lake conservation citizen groups.
- ✓ Various PILs on lake conservation;
- ✓ Identification of causes of lake degradation and remedial measures;
- ✓ Establishment of bio-control mechanism of aquatic weeds ;
- ✓ Sanctioning of inter- basin transfer schemes of Udaipur ;
- ✓ Preparation of sewerage scheme of Udaipur & Corrections;
- ✓ Development and dissemination of IEC material ;
- ✓ Drafting of project proposal under National Lake Conservation plan for Udaipur and its sanction ;
- ✓ Drafting of Lake Development Authority draft act ;
- ✓ Declaration of No Construction Zone around lakes to save them.
- ✓ Helping the government agencies in conceptualizing planning and Implementing schemes and projects for the ecological, hydrological and limnological conservation of lakes and water bodies; involving all stakeholder groups.
- ✓ Resists and challenges the erroneous intensions, decisions & actions of the governmental departments and private agencies, individuals through protests and requisite legal actions.

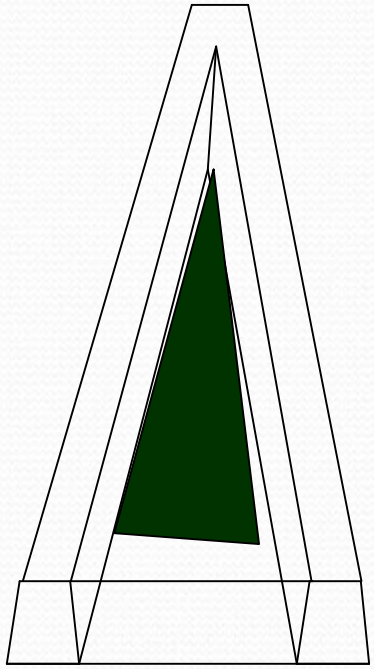
Jheel Sanrakshan Samiti Efforts

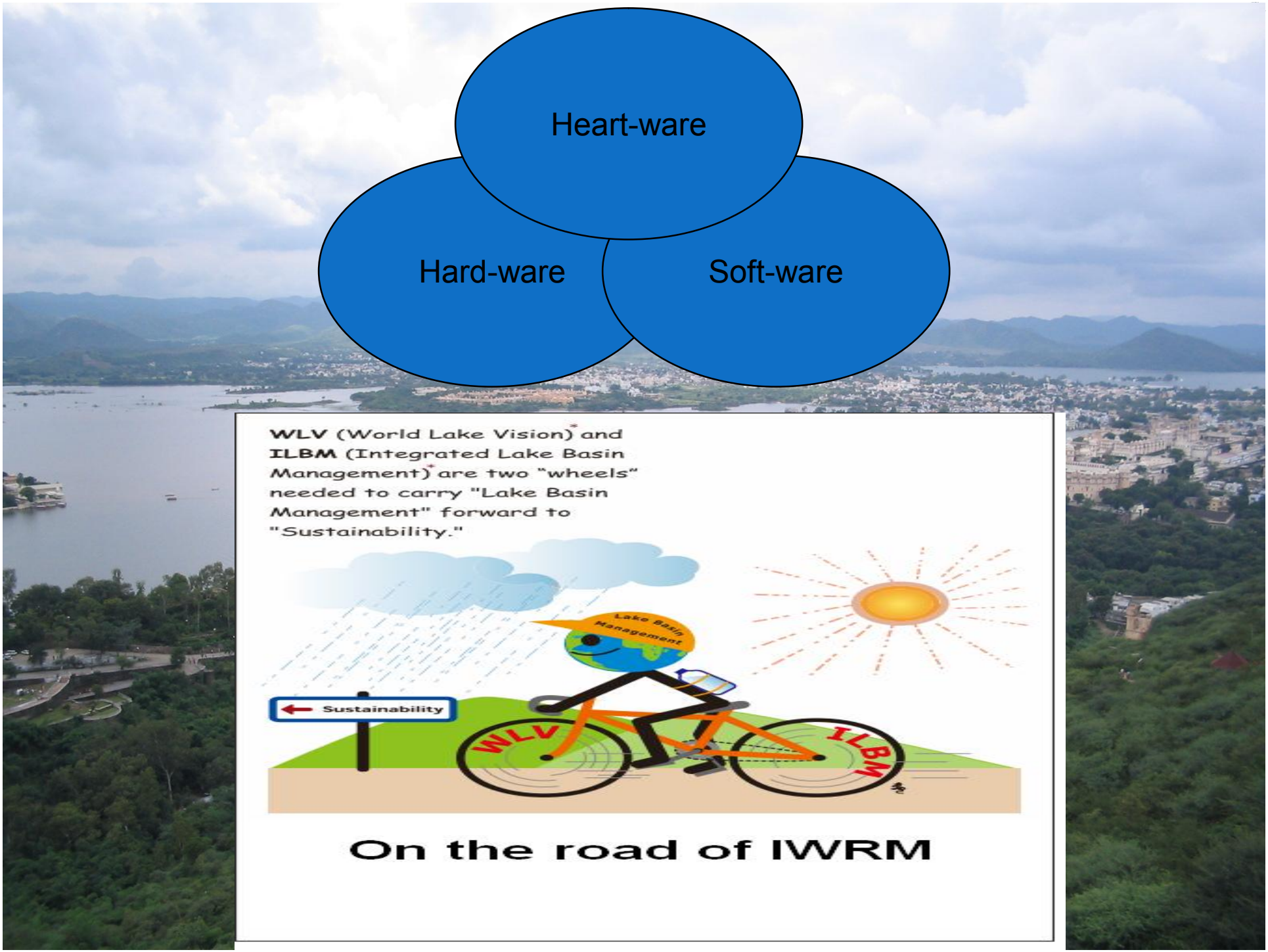


Ahar River Conservation Project



Treatment of 100 MLD
Domestic & Industrial
Waste Water




Heart-ware
Hard-ware
Soft-ware
WLV (World Lake Vision) and ILBM (Integrated Lake Basin Management) are two "wheels" needed to carry "Lake Basin Management" forward to "Sustainability."
Lake Basin Management
Sustainability
WLV
ILBM
On the road of IWRM


झीलों, तालाबों, जलस्त्रोतों को स्वच्छ रखें, स्वस्थ रखें, सुरक्षित रखें
यह बचें तो हम बचेंगें
झील संरक्षण समिति, उदयपुर