



Overview of Integrated Lake Basin Management(ILBM) Approach for Sustainability of Lakes and Wetlands in Nepal

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Why conserving Lakes and Wetlands?

Nepal

HOLDS

- 5,358 Lakes
- 2,323 Glacial
- > 2,700 Ox-bow lakes
- > 480 tectonics lakes
- > 2,300 Ponds
- 163 Wetlands in Terai
- 6,000 Rivers
- > 10 Reservoirs
- Marshy lands
- Paddy fields

Lakes hold **3%** of available water of Nepal

Why conserving....

- Homes to many Ramsar sites
- Possession of many lakes worth of global significance
- Trans boundary nature
- Religious and cultural significance



Why conserving

Major source of socio-economy of Nepal



Why conserving...

22 Indigenous lake dependent communities of Nepal rely on it

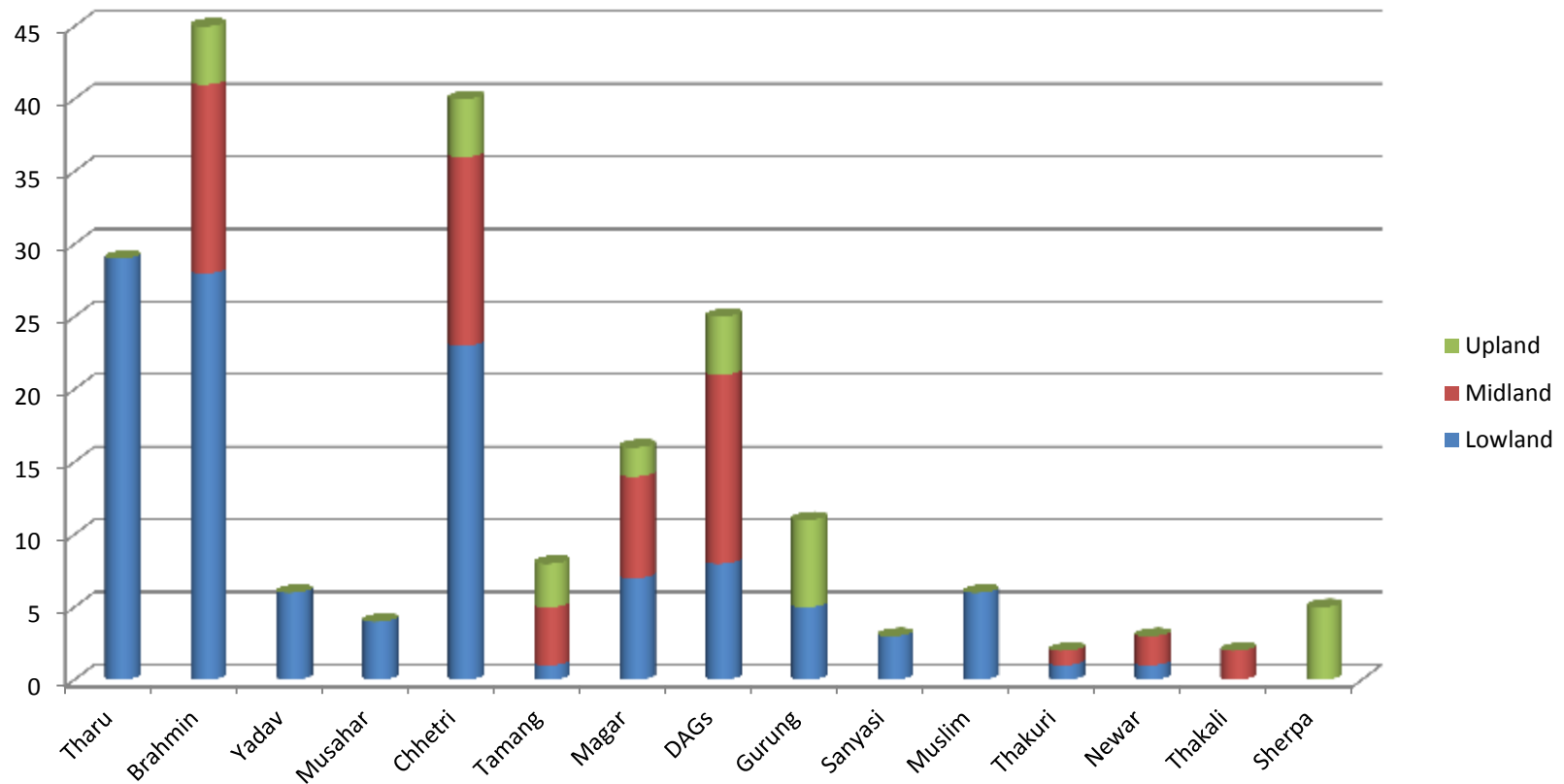


Figure: Social Structure and Composition of Lake Community

Why conserving ...

1. Plants:

5% of Nepal's flowering plants (> 5700 sps) ; 4.8% of total plant endemics of Nepal (246 sps); About 10% of nationally threatened plants (91 sps)

2. Animals

Mammals

(181sps):

About 7% as critically endangered and threatened

Birds (861sps): 22.5% of Nepal's bird

Pisces (185 sps): 4 endemic to lakes

Herpeto-fauna

(143 sps):

9 endemic sps

Butterflies

(656 sps):

> 12% of butterflies

Supra
Biodiversity
Gene Galaxy
Complex

Under Estimated

Needs
Further
exploration



Culture





Gokyo: Spectacular Lake



Phewa lake

Biological Richness



Rara : Largest lake



Shey Phokusndo: Deepest lake

Threats to Nepal's Lakes

Anthropogenic Origin

- 1.Diversion of water
- 2.**Pollution** (Direct input of nutrients sewage, pollutants, pesticides)
- 1.Land-use change (deforestation, intensive agriculture, settlements)
- 2.**Spread of invasive species**, replacement of local species by exotic
- 3.Eutrophication, habitat degradation
- 4.**Encroachment**

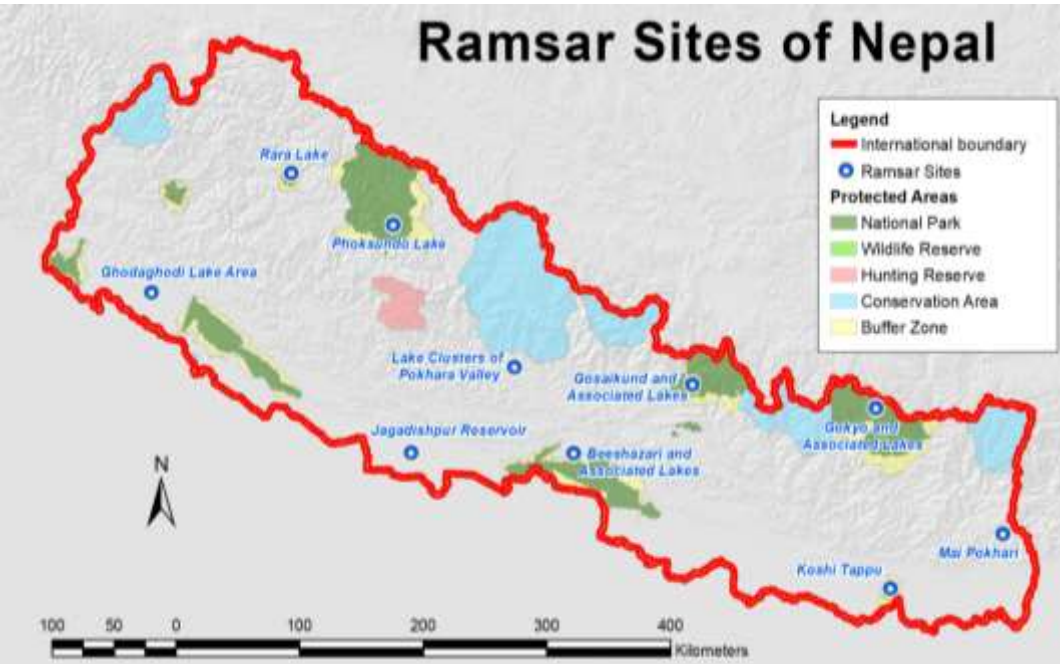
Natural Processes

- 1.Erosion
- 2.**Sedimentation**
- 3.Transportation

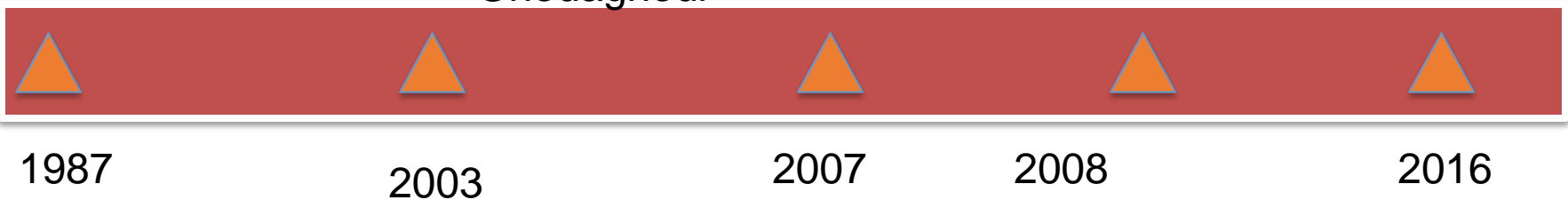
Climatic Impacts

- 1.Temp. rise
- 2.UV radiation

Ramsar Sites in Nepal



- Koshi Tappu
- Bis Hazaar
- Jagdishpur
- Ghodaghodi
- Gokyo
- Gosaikunda
- Foksundo
- Rara
- Mai Pokhari
- Pokhara



Wetlands Conservation Policies and Laws

Policy

Constitution
of Nepal

(2015)

Wetland
Policy 2012

Forest
Policy 2018

Climate
Change Policy
2019

Acts

National Parks and Wildlife
Conservation Act (1973)

Forest Act (2018)

National Ramsar Strategy and
Action Plan, Nepal 2018-2024

Electricity Act (1992)

Water Resource Act (1992)

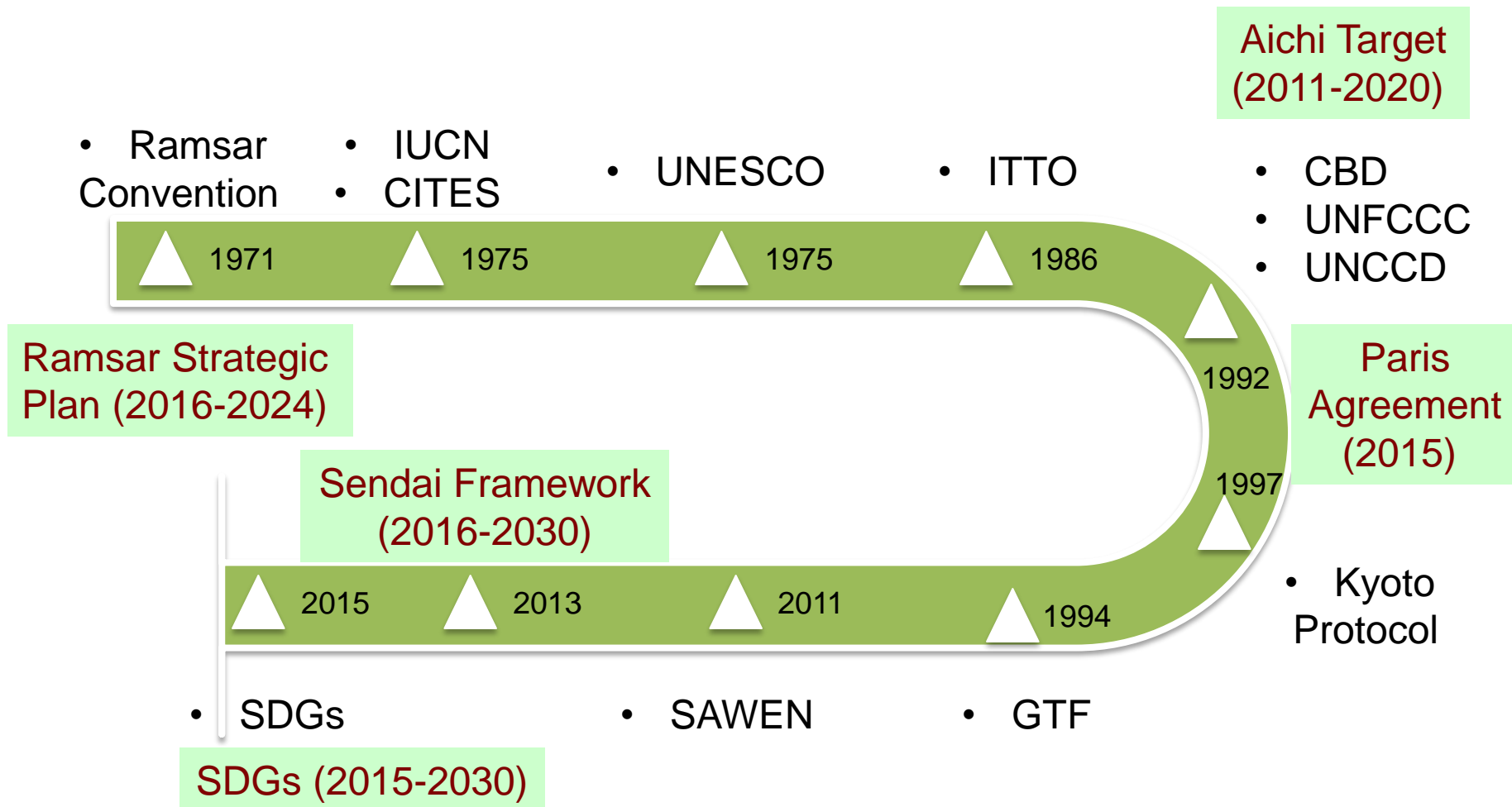
Environment Act (2019)

Sustainable Development GOALS

- ❖ SDG emerged as the success and continuation of Millennium Development Goal 2005-2015
- ❖ There are 17 goals with 169 specific targets which is adopted by more than 150 countries around the world
- ❖ Each goal seeks to integrate social, economic and environmental dimension of sustainable development
- ❖ Function of wetland contributes in achieving each goal in some ways but is specifically linked with Goal 6, 13, 14, 15



Multilateral Environmental Agreements



Institutions

Federal Level

- Ministry of Forests and Environment
- DOFSC
- NLCDC
- DNPWC

Provincial Level

- Provincial Lake Authority
- Provincial Ministry of Industry, Forest and Tourism

Local Level

- DCCs
- Municipality/Rural municipality
- Local Lake Conservation Users Groups (LCUGs)

Partner Organizations: UNDEP, ICIMOD, WWF, UNEP, UNICEF etc. and NGOs

Conservation of Lakes and Wetlands(ILBM Approach) Begins From 2007

National Lake Conservation Development Committee (NLCDC) 2007

1. Policy Level

- Policy review
- Policy consolidation

2. Program

- National Lake Conservation Strategy
- Lake Inventory

3. Actions

- Identification of wetlands for Ramsar listing
- Support to restore lake habitats at community level
- Linkages establishment/Partnership development/Network
- Updating Lake Database
- Lakes and wetlands conservation at local level

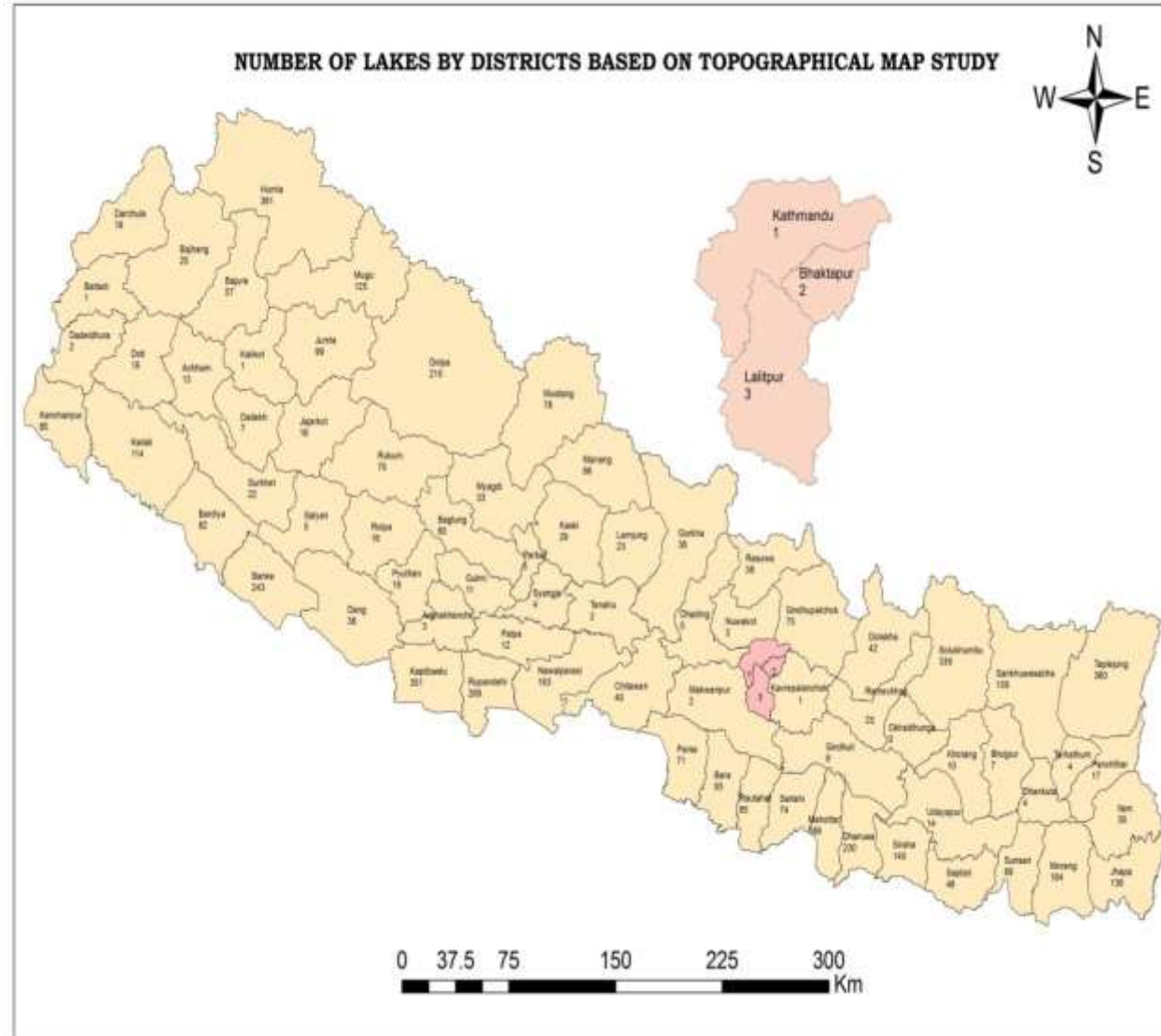


Baraha Taal Surkhet

Policies

National Lake Inventory

- Review of secondary sources
- Spotting 5358 lakes in Nepal based on 700 Topographic map survey
- Field based lake inventory of lakes of Nepal <3000 masl
 - Lakes of 62 districts by NLCDC
 - 13 districts in coordination with Department of Forest



Policies...

- Lake Management Plans
- **Lake Strategic Plan** We are in the process of implementation
- **Declaration of Pokhara Valley Lake Cluster as a new Ramsar site in 2016**

Management Plan in ILBM Approach:

Gaidahawa lake in Rupendehi district

Lake Cluster of Pokhara Valley (under construction with the financial support from USAID Hariyo Ban Program)

RIS information sheet(Pokhara Lake Cluster and Kupende Daha)

International Lake Conference 2018

- Pokhara Declaration:
ILBM in collaboration with ILEC for management and wise use of lakes and their resources
- Development of model projects
- Implementation of a special project
- Establishment of special grant schemes



Finance

Investment in Ramsar Sites Management

Investment in Ramsar sites such as Rara lake (Mugu), She-phoksundo lake (Dolpa), Lake Cluster of Pokhara Valley (Kaski), Ghodaghodi (Kailali) etc.



Dipang Lake, Kaski



Phewa lake, Kaski

Finance...

Continue Support to Community

- Strengthening local governance in Rupa lake (Kaski), Rajarani lake (Dhankuta), Jagadishpur and Gaidahawa lake (Kapilvastu), Ghodaghodi lake (kailali), Rara (Mugu), She-phoksundo(Dolpa) , Maipokhari (Ilam) etc.
- Over 45 lakes of 30-40 districts receiving government grant annually to implement ILBM at community level
- Awareness Companion



Participation

Enhancing Local Capacity for ILBM

- Exchange lake conservation learning-ILBM (Exposure)
- Capacity building and knowledge sharing training to Lake Users' Group
- Continue to participation on ILBM Workshops



Lessons

- ILBM integration needs more time to deliver impacts
- Nepal's learning of participatory conservation of forests and water resources are effective to contribute to ILBM
- Integration of ILBM with IWRM is Necessary task
- ILBM demonstration at higher scale is required
- Awareness Companion is needed to Implement

Challenges of ILBM Implementation

- Inventory of lakes above 4000m and glacier lakes
- Weak technical capability
- Financial Constrain
- Sectoral overlapping
- Low awareness among the people living in the lake region on importance of conserving the environment
- Problems facing in capacity building to implements ILBM
- Demarcation of lakes

Way Forward...

- Publication of lake Inventory of Nepal
- High priority to revised National lake strategy plan
- Wetland Academy in Nepal
- ILBM Implementation of Gaidahawa lake (Rupendahi) and Lake Cluster of Pokhara Valley (Kaski)
- International Workshop
- ILBM demonstration site





Thank you