

# Conservation and Management of Lakes: A way forward

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## What is IUCN?

- ✓ Founded in 1948
  
- ✓ A membership union representing the world's largest conservation network bringing together:
  - 83 States and 112 government agencies
  - 800+ non-governmental organizations (NGOs), and
  - some 10,000 scientists and experts from 181 countries as volunteer members in 6 Commissions
  
- ✓ An international environmental organization with Observer status at the UN General Assembly



## IUCN – Asia work on Wetlands



- Tonle Sap Great Lake in Cambodia
- Tangaur Hoar in Bangladesh
- Wetlands in Korea
- Mekong Delta Wetlands, Vietnam
- Poyang Lake, China
- Wetlands Policy in Pakistan
- Siphandone Wetlands, Lao PDR
- High Altitude Wetlands in Nepal
- Wilapattu, Sri-Lanka
- Coastal Wetlands, Thailand



# Lakes : Natural, Created, Urban.....





**We still have pristine  
Lakes...**

**But this is not why we  
have gathered today**





We are here because of this !!!!!!!!!!!!!!!





## Importance of Lakes

- ***Source of water: surface and recharge of groundwater, for drinking and irrigation***
- ***Supports livelihoods***
- ***Food and nutrition***
- ***Act as flood control measures***
- ***Recreation***
- ***Lakes are 'natural infrastructure' for climate change adaptation***





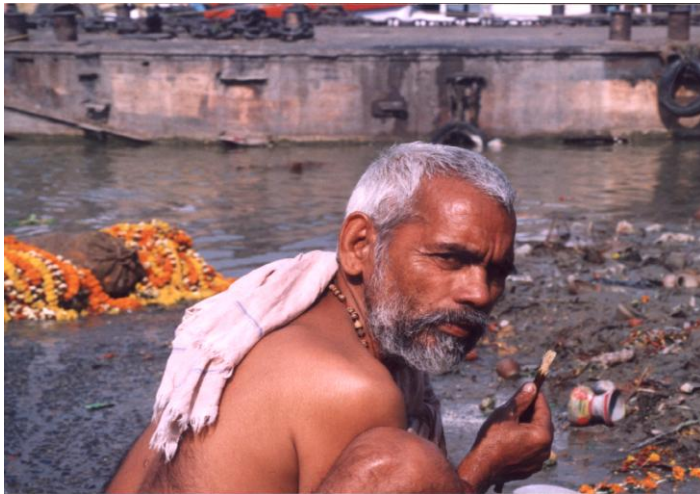
# Pollution affects them all







# Problems



- Encroachment and draining of lakes. Lakes are fast becoming a lost heritage
- Pollution from domestic sewage and industries: Nitrates, phosphates and toxic substances increasing in lakes
- Loss of biodiversity also resulting in loss of food like fish
- Impact on health: Diseases like jaundice, typhoid and gastro enteritis rise and vector transmitted diseases like malaria also increase among the population living near the lake shore and using its water.

# IUCN What pollutes



# Challenges for intervention



- Governance and ownership: Lake management requires involvement of multiple government departments and coordination between these departments is often lacking. Many departments involved: where does the buck stop? Whose responsibility is it?
- Inadequate political will to implement policy for lake preservation at local, state, national level.
- Lack of data and information



# Linkages between using polluted water for irrigation and food safety

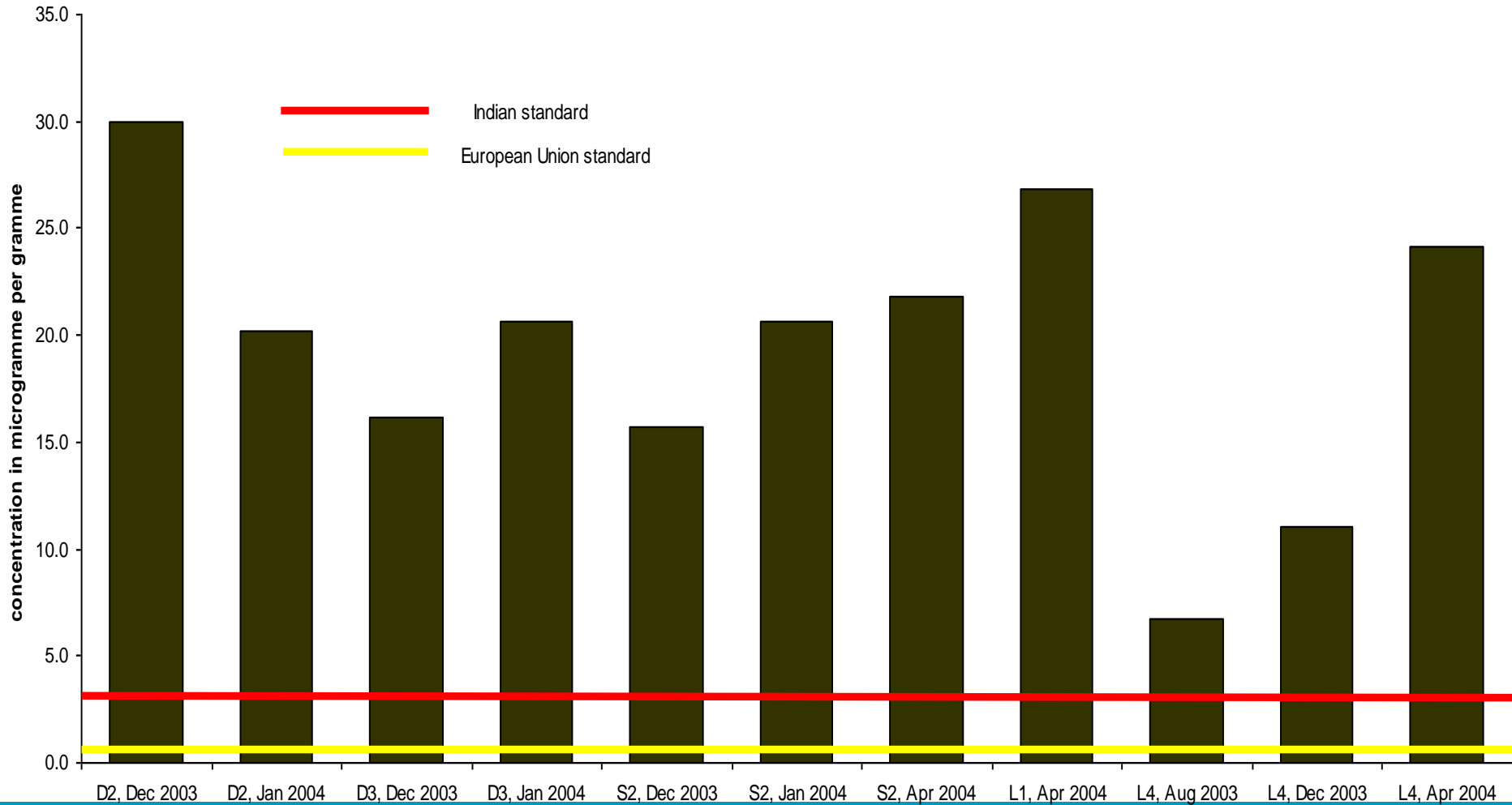


- Contamination of food crops with heavy metals, and the particular link with waste water use for irrigation.
- **Wide range of crops grown have been tested for contamination**
- Bhindi, Palak, Cauliflower, Cabbage, Wheat, Tomato, Brinjal, Radish, Pumpkin, Parwal, Nenua, Lauki, Wheat, Kohanda, Amaranthus
- **Heavy metals**
- Cadmium, Zinc, Nickel, Manganese, Copper, Lead, Chromium



# Contamination levels in crops

**Lead** concentration in Palak at different sites in different seasons





# We can turn the situation around





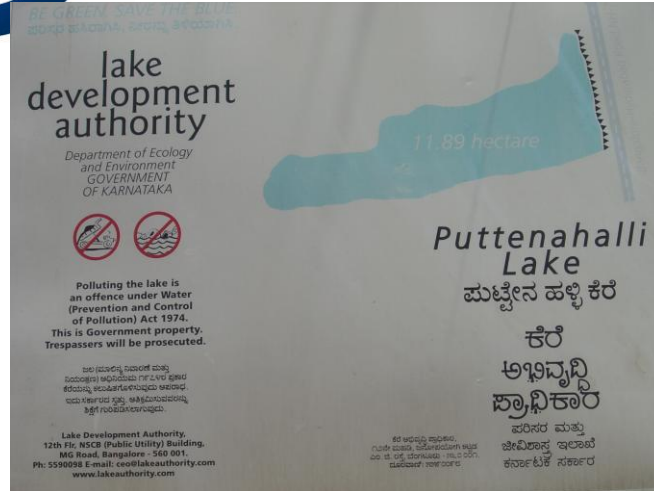
# Tangaur Haor, Bangladesh

- **Community Based Sustainable Management of Tangaur Haor**
- **Communities have capacity to negotiate, manage and use the natural resources for better livelihood**
- **A well functioning co-management body composed of the state, local government and communities manages the Tangaur Hoar**
- **Political and policy support continued at the national, regional and local level for up-scaling and ensuring long-term sustainability of the -management system for Tangaur Haor**





# Lake Development Authority, Karnataka:



- The basic concept for Bangalore City lakes was to divert the sewage away from the lakes into the main sewer line
- In many cases, the management of the lakes have been left to the traditional users of the lake – the farmers — and the authorities do not interfere there
- A massive campaign to desilt lakes and increase storage capacity was initiated





# Safilguda Lake, Hyderabad, HUDA





## What can we learn and do ?

- Treat the lake as a part of the drainage basin
- Segregate sewage from domestic, industrial and hospital waste
- Mobilize stakeholders and build partnerships to facilitate a common understanding of issues and solutions
- Provide science-based and reasonable policy recommendations
- Mobilize resources, create awareness
- Enact the Lake Conservation Act which calls for interdepartmental coordination and provides a platform for action
- Legal framework with polluter pays principles in place



# Finally not all solutions are expensive: We need to change mindsets and attitudes

