

# Wetland Conservation Program : INDIA

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**Ministry Of Environment, Forest And Climate Change  
Government of India**

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## NATIONAL WETLAND ATLAS

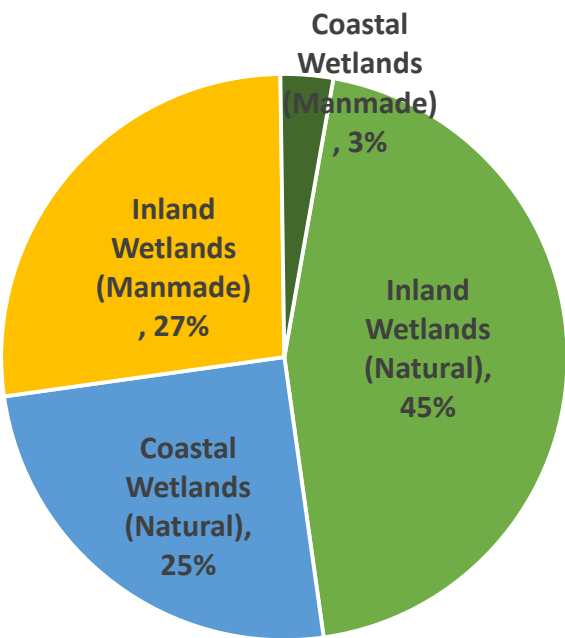
- Updated geospatial database of wetlands a pre-requisite for wetland planning
- A national wetland inventory in the form of **National Wetland Atlas** prepared by Space Application Centre in 2011
- Information on wetlands across India using the latest in satellite imagery carried out with mapping at 1:50000 scale
- Wetlands up to 2.25 ha have been digitally mapped in the atlas
- 19 wetland type classification available for all States
- National Wetland Atlas available in public domain



# Wetlands in India : Profile

Total area: 15.26 million hectares

Total wetlands: 757,060



Sr. No.	Wetland Category	Number of wetlands	Total wetland area	% of wetland area	Open water	
					Post-monsoon area	Pre-monsoon area
1	Inland Wetlands - Natural	45658	6623067	43.40	4100766	3115701
2	Inland Wetlands -Man-made	142812	3941832	25.83	3267602	1654170
	Total - Inland	188470	10564899	69.23	7368368	4769871
3	Coastal Wetlands - Natural	10204	3703971	24.27	930663	750339
4	Coastal Wetlands - Man-made	2829	436145	2.86	301767	281010
	Total - Coastal	13033	4140116	27.13	1232430	1031349
	<b>Sub-Total</b>	<b>201503</b>	<b>14705015</b>	<b>96.36</b>	<b>8600798</b>	<b>5801220</b>
5	Wetlands (<2.25 ha)	555557	555557	3.64	-	-
	<b>Total</b>	<b>757060</b>	<b>15260572</b>	<b>100</b>	<b>8600798</b>	<b>5801220</b>

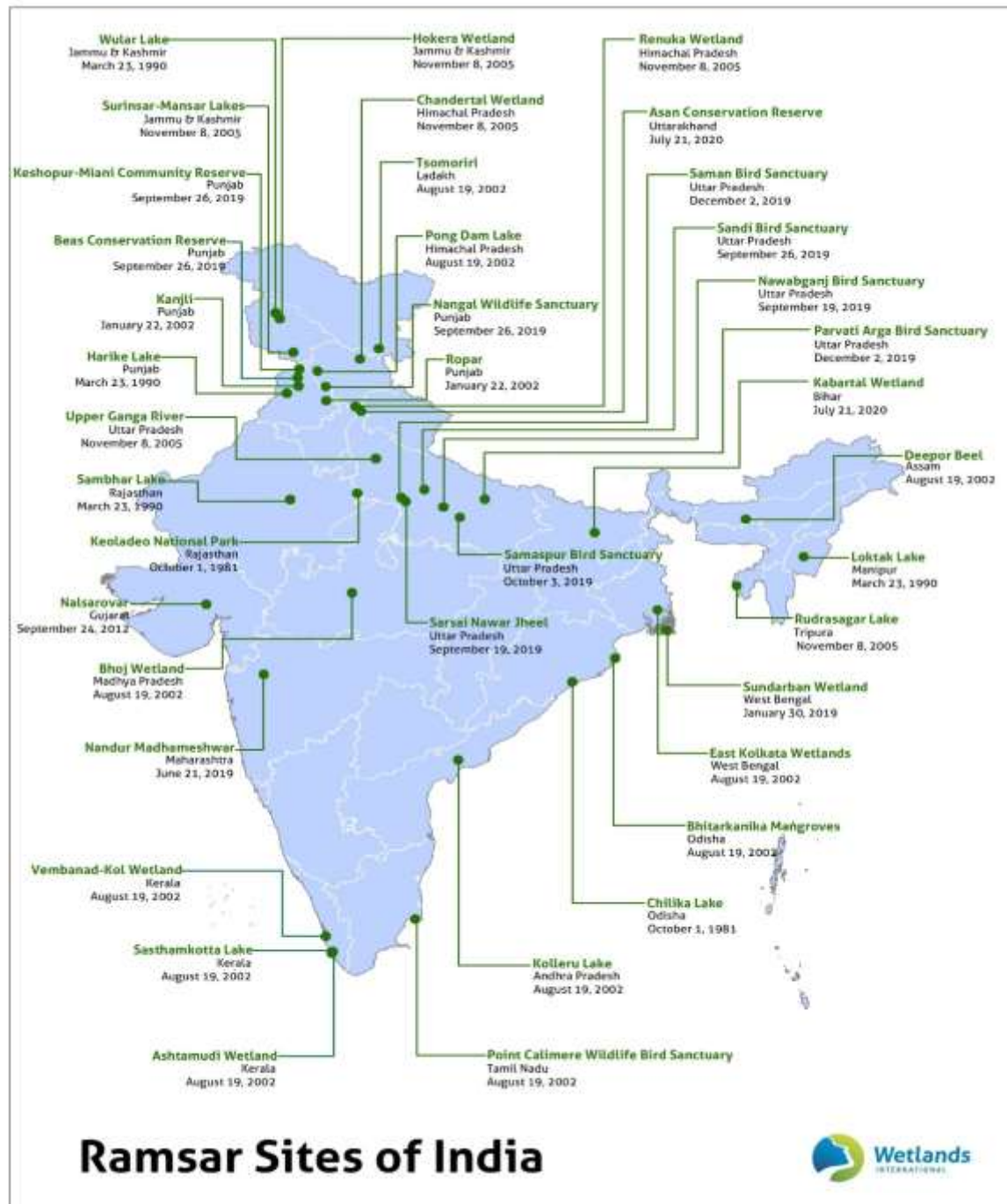
Area (hectares)



Total Number of Ramsar Sites in India :  
39

*Highest number in South Asia*

Total Area under Ramsar sites :  
1.07 million hectares



# Regulatory Framework (Policy)

Central Government notified  
**Wetlands (Conservation and  
Management) Rules, 2017**  
superseding Rules of 2010



*a significant step to conserve, manage  
and maintain the ecological character  
of the wetlands without restricting the  
wise use*



**Guidelines to** help the States  
**implement the Rules** released



**State Wetland Authorities** constituted





## *Jal Shakti*

### The water conservation program of Government of India

- Water stressed districts identified
- Water conservation/rainwater harvesting, renovation of traditional waterbodies/tanks, watershed development and intensive afforestation taken up in a mission mode in these districts
- For the first time, an integrated approach in implementation of the Ganga rejuvenation programme has been initiated and riverine wetlands conservation has been integrated in the Ganga basin(Integration of lentic – lotic water)
- Being initiated for other rivers also.

# National Plan on Aquatic Ecosystems (NPCA)

- Developing policy guidelines for conservation and sustainable management of aquatic ecosystems
- Restoration of prioritized ecosystems
- Developing a national inventory, setting up information and decision support system
- Framing guidelines for formulation and implementation of integrated management plans
- Strengthening capacity of managers and stakeholders for effective management
- Strengthening implementation of international commitments



Nangal, Punjab

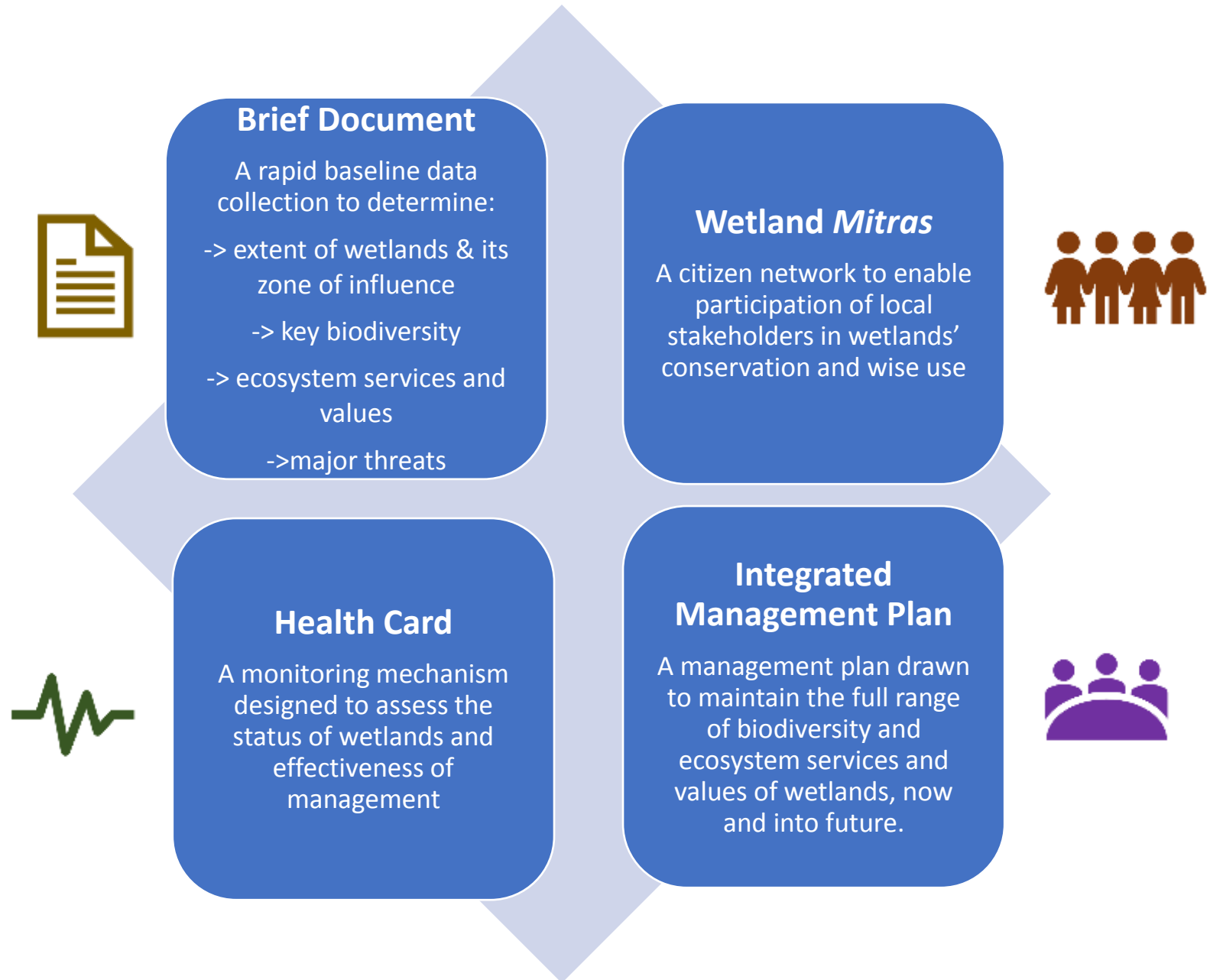


## Activities undertaken under NPCA

- interception, diversion and treatment of wastewater
- shore line protection
- lake front development
- de-silting
- bioremediation
- Catchment area treatment (plantation & soil conservation)
- lake beautification
- survey & demarcation
- fisheries development
- weed control
- biodiversity conservation
- Livelihood development activities
- education and awareness creation
- community participation



# Rejuvenating Wetlands - The 4 pronged approach



## Indicators used to determine Wetland Health

### Conversion to non-wetlands use

- % **Area** of wetland converted

### Hydrological regimes

- Ratio of natural inflows choked and diverted to total number of natural **Inlets**
- Ratio of natural outflows choked and diverted to total number of natural **Outlets**
- % of **Water Quality** samples conforming to desired Biological Oxygen Demand / Dissolved Oxygen levels

### Biodiversity

- % wetland area covered by **Invasive Macrophytes**
- Annual January **Water Bird Count** as a proportion to maximum count observed count in last 10 years

### Governance

- Status of **Wetland Mapping**
- Status of **Wetland Management Action Plan**
- Status of **Notification**

## Indicators used to determine Threats to the Wetlands

Physical Regime Change

- **Water Quality & Quantity**
- **Sediments**
- **Salinity**

Extraction

- **Water**
- **Biota**
- **Soil**
- **Minerals**

Introduction

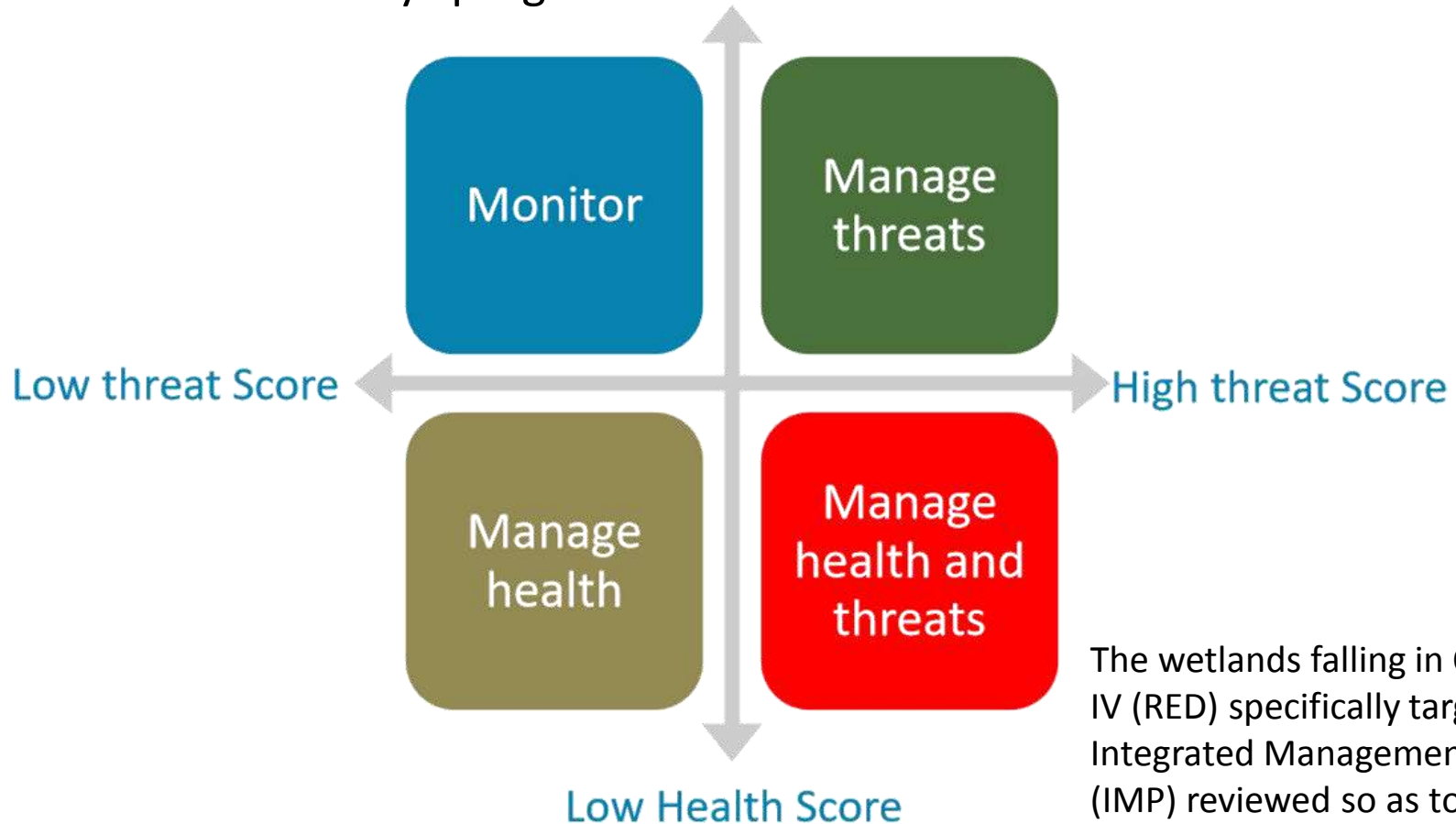
- **Pollutants**
- **Invasive Species**

Structural Modification of  
Habitat

- **Drainage**
- **Conversion into non-wetland use or encroachment**

## Health and Threat Analysis

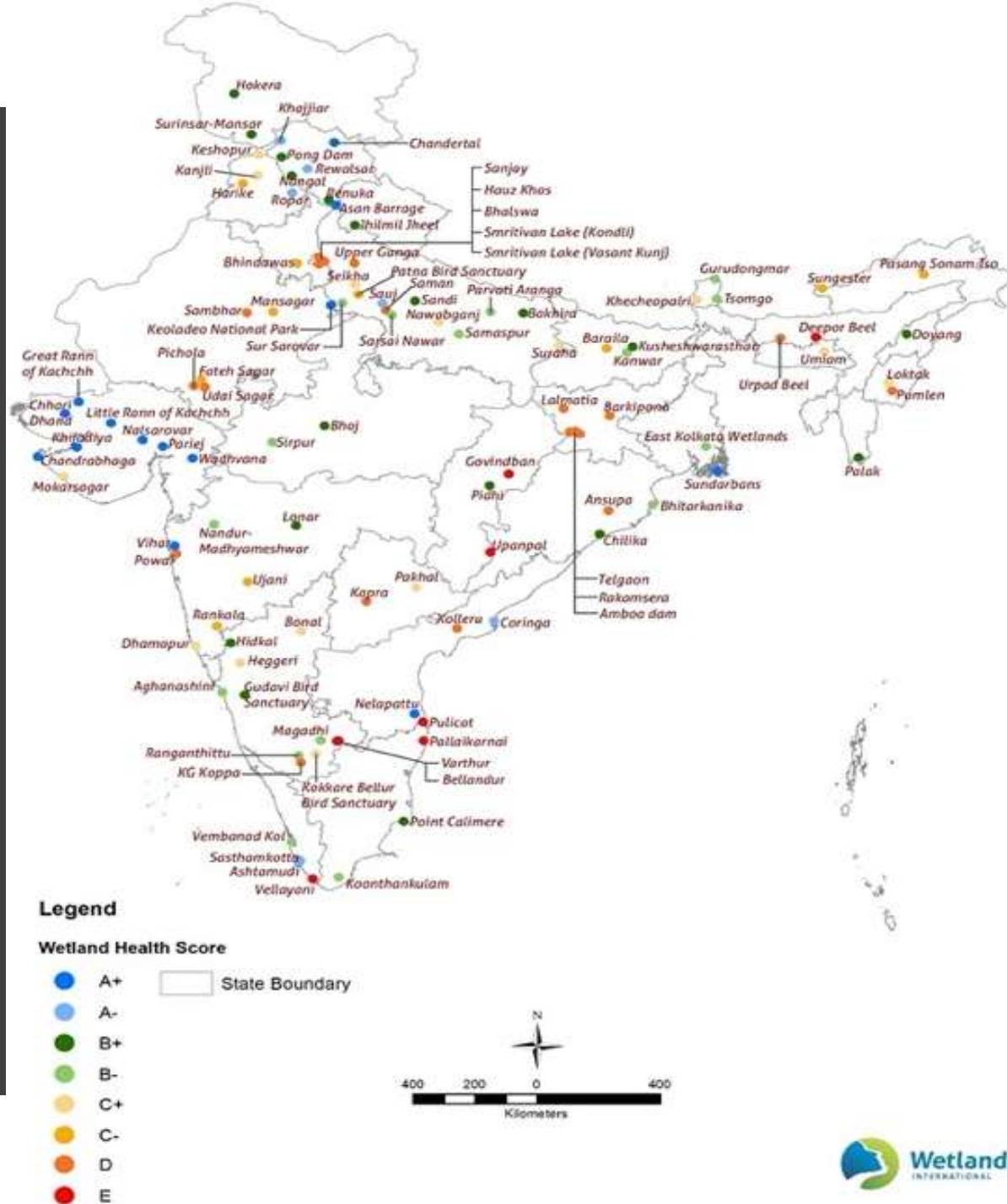
**Wetland Ecosystem Health Assessment Report** prepared as an outcome of Phase 1 of 100 days programme



The wetlands falling in Quadrant IV (RED) specifically targeted : Integrated Management Plan (IMP) reviewed so as to align the intervention measures proposed with the threats as highlighted by the brief documents and health cards



# Wetland Health Assessment (Phase 1)



## Moving on to Phase - 2

- After the success of the pilot Phase 1, Phase 2

- Scaling Up 

<b>Phase 1</b>	<b>→</b>	<b>Phase 2</b>
<b>130</b>		<b>1000</b>

- Increase the area under better management and conservation

- **Devise Integrated Management Plans in line with the actual threats of the wetland**



## Montreux Record

- 3 Ramsar sites in India placed in the Montreux record due to changes in ecological characters.
- Keoladeo National Park in 1990, Chilika and Loktak in 1993
- Chilika removed from MR in 2001 due to restoration of its ecosystem.
- Process for removing the other two completed. Documentation being prepared and would be submitted shortly
- RSIS updation of all sites started.



## National/Regional Centre for Wetlands

- Proposal for having a National Centre for Wetlands is underway and would come up by next year
- Specialised centres available -
  - ✓ National Institute of Himalayan Environment
  - ✓ National Centre for Sustainable Coastal Management
  - ✓ Salim Ali Centre for Ornithology and Natural History
  - ✓ Space Application Centre
- Eventually India could provide leadership in the South Asian region for wetland conservation





## Way Forward

- Strengthening the implementation of Ramsar Convention
- Enhancing regional co-operation
- Designating more wetlands as Ramsar sites
- Promotion of integrated management and conservation of wetlands .



A person in a small wooden boat is seen from behind, paddling on a calm body of water. The water reflects the person and the boat. In the background, there are rolling hills or mountains under a clear blue sky. Some small green plants are visible in the water. The text "THANK YOU" is overlaid on the right side of the image.

THANK YOU