Wetlands

By

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Wetlands

Wetlands are land areas or ecosystem in which land remain covered with water either permanently or seasonally. They occur where the water table is at or near the surface of the land. Water can be salt water, fresh water or brackish water. The total number of Ramsar sites in India are now 37 & the surface area covered by these sites is 1,067,939 hectares.

The highest number of identified wetlands are in Uttar Pradesh (16) followed by Madhya Pradesh (13), Jammu & Kashmir (12), Gujarat (8), Karnataka (7) and West Bengal (6).

Five major wetland types are generally recognized:

1. Marine - Coastal wetlands including coastal lagoons, rocky shores, and coral reefs.
2. Estuarine - Including deltas, tidal marshes, and mangrove swamps.
3. Lacustrine - Wetlands associated with lakes.
4. Riverine - Wetlands along rivers and streams.
5. Palustrine - Meaning —marshy‖ - marshes, swamps and bogs.

6. Human-made wetlands - such as fish and shrimp ponds, farm ponds, irrigated agricultural land, saltpans, reservoirs, gravel pits, sewage farms and canals.
Why Are They Important?

Wetlands are one of the most productive ecosystems in the world and essential for human survival. Wetlands are home to various species of mammals, birds, fishes and invertebrates. They support the cultivation of crops like rice, and also provide ecological services benefiting the human race like water filtration, storm protection, flood control etc. Marshes are the most productive wetlands dominated by grasses. Swamps are forest wetlands dominated by trees. Bogs and Fens are organic soil wetlands produced by the accumulation of plant material.
Why are Wetlands are called Ramsar Sites?

- In 1971, an international treaty was signed at Ramsar, Iran for the conservation and sustainable use of wetlands.
- The mission of the Convention is “the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”.
- Ramsar Convention is an only intergovernmental treaty which gives a solid framework to the nations for the conservation and use of wetlands and their resources and helps to protect such unique ecosystems.
- It is also known as the “Convention on Wetlands”. It was adopted in the Iranian city of Ramsar on 2nd February 1971 and came into force on 21 December 1975. 2nd February is celebrated as “World Wetlands Day” every year.

The Ramsar Convention has adopted a Ramsar Classification of Wetland Type which includes 42 types, grouped into three categories: 1. Marine and Coastal Wetlands, 2. Inland Wetlands, 3. Human-made Wetlands

The aim of the Ramsar list is to develop and maintain an international network of wetlands, which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits.
Ramsar Sites in India

- Wular Lake
- Hokera Wetland
- Pong Dam Lake
- Kanjli
- Harike lake
- Ropar
- Surinsar Mansar
- Tsomoriri
- Chandertal Wetland
- Renuka Wetland
- Upper Ganga River
- Deepor beel
- Keoladeo National Park
- Sambhar Lake
- Nalsarovar Bird Sanctuary
- Bhoj Wetland
- Bhitarkanika Mangroves
- Chilika Lake
- Kolleru Lake
- Vembadad Kol Wetland
- Sasthamkotta Lake
- Ashtamudi Wetland
- Point Calimere Wildlife and Bird Sanctuary
- East Calcutta Wetlands
- Loktak Lake
- Rudrasagar
India’s prominent wetlands include:

Chilika lake - Odisha
Wular lake - J&K
Renuka - Himachal Pradesh
Sambhar lake - Rajasthan
DeeporBeel - Assam
East Kolkata wetlands - West Bengal
Nal Sarovar - Gujarat
Harika - Punjab
Rudra Sagar – Tripura
Bhoj wetland - Madhya Pradesh

“Wetlands and Biodiversity” is the theme for World Wetlands Day 2020.

“Wetlands and Climate” Change was the theme of World Wetlands Day 2019.
What are the threats to wetlands?
India has lost 38 percent of its wetlands between 1991 and 2001 alone due to the following:

1. Urbanization and land use changes: During the 90 year period from 1901 to 1991, the number of urban centers doubled while urban population has increased eightfold. That have posed tremendous pressure on wetlands. For example, the Kanwar lake in Bihar, Asia’s largest freshwater oxbow lake, has shrunk to one-third of its size due to encroachment, Kolleru lake (Andhra Pradesh) have been reclaimed for agriculture in recent years.

2. Agricultural residues: As per estimates, 10–15 percent of the nutrients added to the soils through fertilizers eventually find their way to the surface water system. High nutrient contents stimulate algal growth, leading to eutrophication of surface water bodies.

3. Municipal and Industrial pollution: Untreated industrial effluents have become a major threat to the survival of wetlands. For instance, the Bellandur Lake in Bengaluru city was ‘on fire’ in May 2015 due to the discharge of effluents (especially nutrient rich foams) by the surrounding industries. For example, the Kanwar lake in Bihar, Asia’s largest freshwater oxbow lake, has shrunk to one-third of its size due to encroachment, Kolleru lake (Andhra Pradesh) have been reclaimed for agriculture in recent years.

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6. Climate Change: As per a study, wetlands located in high altitude as well as coastal areas, like mangroves and coral reefs, are some of the most sensitive classes that will be affected by climate change. For example, climate change caused rise in level of Tsomoriri Lake in Ladakh, a glacial fed high altitude lake, thereby causing submerged important breeding islands in the lake where endangered migratory birds like the Black-necked Crane and Bar-headed Goose would breed.

Bureaucrats-Politicians-Businessmen nexus, one of the major threat for existence of wetlands across the country.