



## It's Time for Wetlands Restoration

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Areas that are flooded with water are called wetlands. It could be either permanently or seasonally flooded. Swamps, floodplains, ponds, marshes and lakes are included under inland wetlands. Mangroves, lagoons, salt water marshes, and coral reefs come under coastal wetlands. Human made wetlands also exists. The are fish ponds, rice paddies and salt pans. Wetland systems directly and indirectly support the livelihood of millions of people, providing various tangible and intangible benefits to them. Benefits of wetlands include preventing coastal erosion, checking floods, and reduce the effects of natural disasters like tidal waves and cyclones. They store water for long periods. They also act as spawning grounds for various fish species and provide nesting and foraging opportunities for amphibians, reptiles, birds, insects, and other animals.

The role of wetlands in mitigating climate change by acting as carbon sinks is of considerable importance. Plants growing in wetlands break down and decompose in the waterlogged soil, which traps the carbon dioxide they have absorbed by photosynthesis. Wetlands play a significant role in mitigating climate by locking carbon dioxide into the ground. Thus, these wetlands slow down climate change. When wetlands are destroyed, climate change process is accelerated as the carbon they were storing is released. In addition to storing abundant quantity of carbon dioxide, wetlands also act as large water filters. Plants and microorganisms residing in wetlands absorb chemical discharge from various industries and agriculture. Hence, they purify water. Also, plants such as water hyacinth found in wetlands, can absorb metals such as copper and iron, effectively removing them from water.

There are 75 Ramsar Sites in India and they serve as abode of many threatened species of flora and fauna including 213 species

of fish and 74 amphibians. Sundarbans in India, the world's largest halophytic block harbours two globally threatened species of mangroves. The smallest wetland in India is the Renuka Wetland in Himachal Pradesh.

Utilization as residential, industrial and commercial facilities, wetlands near urban centres are under increasing anthropogenic pressure. There are numerous threats to wetlands, namely, increased atmospheric carbon dioxide concentration, changes in precipitation pattern, increased air temperature, increased frequency of droughts, storms, floods and sea-level rise. With not more than one-fifth of the municipal solid waste treated in India, wetlands have become the ultimate waste dumps. Paddy fields have been formed by converting large areas under wetlands. The hydrology of many wetlands have been altered by construction of a large number of dams, check-dams and canals for irrigation purposes. Degradation has happened to about 90% of the world's wetlands since the 1700s. When compared the natural forests, these valuable water resources are getting lost by three times faster. The FAO of the United Nations have declared 2nd of February as the World Wetlands Day annually. The motive of this day is to inculcate global awareness among the people with reference to the vital role wetlands play in the lives of all living forms and also for existence of earth. The theme for the World Wetlands Day 2023 was Its time for wetlands restoration.

To manage the wetlands from the ever-increasing population and urbanization, an integrated approach in terms of planning, execution and monitoring are essential. For the overall management of these invaluable ecosystem, suitable collaborations among academicians and professionals, including planners, ecologist and

watershed management specialists are essential. National and international awareness about the importance of the wetlands needs to be raised. And this only will lead to reverse their rapid loss and encourage actions to conserve and restore them.