



## **WETLANDS**

Wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life. They occur where the water table is at or near the surface of the land, or where the land is covered by water.



Wetlands are among the world's most productive environments. They are cradles of biological diversity, providing the water and primary productivity upon which countless species of plants and animals depend for survival. They support high concentrations of birds, mammals, reptiles, amphibians, fish and invertebrate species. They are also important storehouses of plant genetic material.

Rice, for example, which is a common wetland plant, is the staple diet of more than half of humanity.

### **Six major wetland types are generally recognized:**

- marine (coastal wetlands including coastal lagoons, rocky shores, and coral reefs);
- estuarine (including deltas, tidal marshes, and mangrove swamps);
- lacustrine (wetlands associated with lakes);

- riverine (wetlands along rivers and streams);
- palustrine (meaning “marshy” - marshes, swamps and bogs);
- human-made wetlands such as fish and shrimp ponds, farm ponds, irrigated agricultural land, salt pans, reservoirs, gravel pits, sewage farms and canals.

**Wetlands provide tremendous economic and environmental benefits, including:**



- Regulation of water supply - flood control, maintenance of stream flow and recharging groundwater tables
- Reduction in the momentum of water as it flows into a river or a stream, thereby reducing soil erosion
- Control runoff rate in urban areas
- Assistance in agriculture, through the maintenance of water tables and nutrient retention in floodplains
- Over two thirds of the world's fish harvest is linked to the health of coastal and inland wetland areas
- Source of drinking water, timber, fodder, fuel and resources for crafts; they provide livelihoods for the local population
- Habitat for flora and fauna, including numerous species of migratory birds; sanctuaries for wildlife



- Genetic reservoir for various species of plants
- Stabilization of local climate
- Transport
- Recreation and tourism; they are also places of cultural importance
- Wetland plants help filter out water pollution
- Wetland plants retain sediments and help increase soil fertility
- Mangroves protect shorelines from strong winds and erosion.



**Unfortunately, and in spite of important progress made in recent decades, wetlands continue to be among the world's most threatened ecosystems. Some of the major threats to wetlands are as follows:**

- Urbanization- increasing developmental pressure for residential, industrial and commercial facilities.
- Anthropogenic activities-unplanned urban and agricultural development ,industries, road construction, impoundment, resource extraction and dredge disposal
- Agricultural activities- conversion of wetlands for paddy fields; construction of a large number of reservoirs, canals and dams; diversion of streams and rivers to provide for irrigation
- Deforestation-removal of vegetation in the catchment leading to soil erosion and siltation
- Pollution-unrestricted dumping of sewage, solid wastes and toxic chemicals from industries and households
- Salinization-over withdrawal of groundwater has led to salinization
- Aquaculture-pisciculture and aquaculture ponds
- Introduced Species-exotic introduced plant species such as Water Hyacinth and Salvinia clog waterways and compete with native vegetation
- Climate change- increased air temperature; shifts in precipitation; increased frequency of storms, droughts, and floods; increased atmospheric carbon dioxide concentration; and sea level rise.

Source: [www.ramsar.org](http://www.ramsar.org)

*National Wetland Conservation Programme Guidelines for Conservation and Management of Wetlands in India*

