



CONVENTION ON WETLANDS

(Ramsar, Iran, 1971)

What are 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.

The Ramsar Convention takes a broad approach in determining the wetlands which come under its aegis. Under the text of the Convention (Article 1.1), wetlands are defined as:

“areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres”.

In addition, for the purpose of protecting coherent sites, the Article 2.1 provides that wetlands to be included in the Ramsar List of internationally important wetlands:

“may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands”.

Five 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); and
- **palustrine** (meaning “marshy” - marshes, swamps and bogs).

In addition, there are **human-made wetlands** such as fish and shrimp ponds, farm ponds, irrigated agricultural land, salt pans, reservoirs, gravel pits, sewage farms and canals. The Ramsar Convention has adopted a Ramsar Classification of Wetland Type which includes 42 types, grouped into three categories: Marine and Coastal Wetlands, Inland Wetlands, and Human-made Wetlands.

Wetlands occur everywhere, from the tundra to the tropics. How much of the earth’s surface is presently composed of wetlands is not known exactly. The UNEP-World Conservation Monitoring Centre has suggested an estimate of about 570 million hectares (5.7 million km²) – roughly 6% of the Earth’s land surface – of which 2% are lakes, 30% bogs, 26% fens, 20% swamps, and 15% floodplains. Mitsch and Gosselink, in their standard textbook *Wetlands*, 3d ed. (2000), suggest 4 to 6% of the Earth’s land surface. Mangroves cover some 240,000 km² of coastal area, and an estimated 600,000 km² of coral reefs remain worldwide. Nevertheless, a global review of wetland resources prepared for Ramsar COP7 in 1999, while affirming that “it is not possible to provide an acceptable figure of the areal extent of wetlands at a global scale”, indicated a ‘best’ minimum global estimate at between 748 and 778 million hectares. The same report indicated that this “minimum” could be increased to a total of between 999 and 4,462 million hectares when other sources of information were taken into account.

Why conserve wetlands?

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. Wetlands 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.

The multiple roles of wetland ecosystems and their value to humanity have been increasingly understood and documented in recent years. This has led to large expenditures to restore lost or degraded hydrological and biological functions of wetlands. But it's not enough – the race is on to improve practices on a significant global scale as the world's leaders try to cope with the accelerating water crisis and the effects of climate change. And this at a time when the world's population is likely to increase by 70 million every year for the next 20 years.

Global freshwater consumption rose sixfold between 1900 and 1995 – more than double the rate of population growth. One third of the world's population today lives in countries already experiencing moderate to high water stress. By 2025, two out of every three people on Earth may well face life in water stressed conditions.

The ability of wetlands to adapt to changing conditions, and to accelerating rates of change, will be crucial to human communities and wildlife everywhere as the full impact of climate change on our ecosystem lifelines is felt. Small wonder that there is a worldwide focus on wetlands and their services to us.

In addition, wetlands are important, and sometimes essential, for the health, welfare and safety of people who live in or near them. They are amongst the world's most productive environments and provide a wide array of benefits.

Wetland values

Wetlands provide tremendous economic benefits, for example: water supply (quantity and quality); fisheries (over two thirds of the world's fish harvest is linked to the health of coastal and inland wetland areas); agriculture, through the maintenance of water tables and nutrient retention in floodplains; timber production; energy resources, such as peat and plant matter; wildlife resources; transport; and recreation and tourism opportunities.

In addition, wetlands have special attributes as part of the cultural heritage of humanity: they are related to religious and cosmological beliefs, constitute a source of aesthetic inspiration, provide wildlife sanctuaries, and form the basis of important local traditions.

These functions, values and attributes can only be maintained if the ecological processes of wetlands are allowed to continue functioning. Unfortunately, and in spite of important progress made in recent decades, wetlands continue to be among the world's most threatened ecosystems, owing mainly to ongoing drainage, conversion, pollution, and over-exploitation of their resources.

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