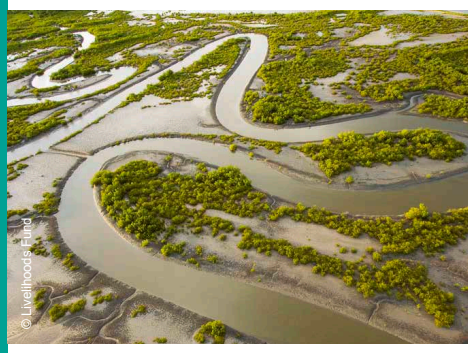
Ramsar Convention on Wetlands

Wetlands: a natural safeguard against disasters

The frequency of disasters worldwide has more than doubled in the last 35 years, to nearly 1000 in 2014. The majority arising from climate and weather-related natural hazards such as flooding, tsunamis, hurricanes, tropical cyclones and droughts. UN- Water estimates that 90% of all natural hazards are water-related and the Intergovernmental Panel on Climate Change (IPCC) predicts that climate change will further exacerbate the frequency and impacts of these hazards.



Disaster or hazard?

We think of floods, tsunamis, cyclones/hurricanes, droughts, earthquakes and other extreme events as disasters. But actually these are natural hazards. A disaster is the severe disruption that is caused to a community or nation in human, material, economic or environmental losses.

The human toll is significant: 1.35 million people died as a result of disasters between 1996 and 2015, and 90% of these fatalities were in low and middle-income countries. In material terms, weather related disasters caused US$3.3 trillion in damage between 1980 and 2014.

Wetlands: nature's own shock absorbers

Defined as land areas that are flooded with water, either seasonally or permanently, wetlands form a natural buffer against the increasing number of disasters:

- Coastal wetlands (including mangroves, salt marshes and coral reefs) act as protective barriers against waves, storm surges and tsunamis.
- Inland wetlands (such as river, flood plains, lakes, swamps) function like sponges, absorbing and storing excess rainfall and reducing flood surges.
- During the dry season in arid climates, wetlands release the water stored which helps delay the onset of droughts, and minimizes water shortages.
- Peatlands and mangroves store vast quantities of carbon which helps to mitigate climate change. Peatlands in particular store twice as much carbon as all the world's forests.

Wetlands help build resilient communities

Wetlands can help make communities resilient enough to prepare for, cope with and bounce back from disasters even stronger than before:

Preparing: To reduce the incidence of disasters and to enhance the protection of local communities, identify areas at risk of flooding in the event of extreme weather. Designate as protected sites, wetlands in flood and storm-prone areas. For example, the Biosphere Reserve of the Saloum Delta in Senegal is an area of estuaries, lakes and marshes that controls flooding and ensures water supply year round.

Coping: When extreme climate -related events occur, wetlands act as a buffer that can mitigate their impact. In Hikkaduwa, Sri Lanka where offshore coral reefs are protected through a marine park, the damage from the 2004 tsunami extended just 50m inland. In nearby Peraliya, where coral mining had degraded the reefs, the damage extended 1.5 km inland.

Bouncing back: Wetlands can speed up the recovery process following a disaster by acting as natural water filters and nutrient restorers. After a 1999 cyclone that hit Odisha in eastern India, rice paddies that were protected by mangroves recovered their food production much more quickly than croplands without the buffer.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How to conserve and sustainably use wetlands

Mismanaging wetlands, which occurs when they are drained or degraded prevents them from functioning as a buffer against natural hazards. For example, clearing mangroves and mining coral reefs can leave shorelines exposed to storms. Canalizing a river eliminates the natural sponge effect of its floodplain.

So how do we ensure that wetlands reduce the risk posed by natural hazards?

Communities can:

- Clear rubbish from wetlands and unblock streams and rivers.
- Analyze how local wetlands are being used or overused including who depends on them.
- Adopt local policies that promote sustainable use of wetlands. Practice sustainable fishing, tourism and agriculture.

Policy-makers can:

- Include wetlands in disaster coping strategies.
- Designate wetlands in flood and storm prone zones as protected areas.
- Restore degraded wetlands that act as protective barriers.
- Adopt cross sectoral policies especially for agriculture and water.

Individuals can:

- Organize or join a wetland clean-up.
- Become a Wetland Ambassador advocate for wetlands.
- Use water more sparingly and avoid toxic products that drain into wetlands.
- Participate in actions to conserve and restore wetlands.

How wetlands safeguard against disasters

- Each additional kilometer of mangrove forest can reduce a storm surge by 50cm, blunting the impact of cyclones/hurricanes and tsunamis.
- The storm protection that coral reefs provide is worth up to $33,556 per hectare every year.
- Peatlands store more than twice as much carbon as all of the world's forests combined, so they play an important role in mitigating climate change.
- Coastal wetlands in the United States helped avoid more than $625 million in damages from Hurricane Sandy in 2012.

Yangtze River: 'soft' flood control with a wetland ecosystem

Prone to monsoon flooding, the Yangtze River basin is home to 400 million people. A 1998 storm that killed 4,000 and caused US$25 billion in damage led officials to adopt a 'soft path' to natural flood management. More than 2,900 sq. km of floodplains have been restored, with the ability to retain 13 billion cubic meters of water. In addition to this safety effect, wild fish catch increased by more than 15% within a year where lakes were reconnected and restored.

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The Ramsar Convention

The Convention on Wetlands of International Importance, commonly known as the Ramsar Convention, is a global inter-governmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It is the only global treaty to focus on one single ecosystem.