Wetlands: why should I care?

Humans often equate wetlands with wasteland; a place to be drained, filled in, burnt off and re-purposed. In fact, scientific studies show that 64% of the world’s wetlands have disappeared since 1900. Measured against 1700, an estimated 87% have been lost.

Why is this such an alarming trend? And why are wetlands actually essential to sustainable development for the human race?

Wetlands are everywhere
- Wetlands are land areas that are saturated or flooded with water either permanently or seasonally.
- Inland wetlands include marshes, ponds, lakes, fens, rivers, floodplains, and swamps.
- Coastal wetlands include saltwater marshes, estuaries, mangroves, lagoons and even coral reefs.
- Fish ponds, rice paddies, and salt pans are human-made wetlands.
- Wetlands range in size from less than a single hectare to the Pantanal in Brazil, Bolivia and Paraguay, which covers an area three times the size of Ireland.

Wetlands guarantee our food supply
- Humans consume 19 kg of fish each year on average. Most commercial fish depend on coastal wetlands for part of their life cycle.
- Rice, grown in wetland paddies, is the staple diet of nearly three billion people, and accounts for 20% of the world’s nutritional intake.

Wetlands purify and filter harmful waste from water
- Some of the pollutants from pesticides, industry and mining, including heavy metals and toxins are absorbed by wetland sediments, plants and marine life.
- Almost two billion people in Asia and 380 million Europeans depend on groundwater aquifers for their water supply.

Wetlands ensure fresh water for all of us
- Less than 3% of the world’s water is fresh, and most of that is frozen. Yet every human requires 20-50 litres of water a day for basic drinking, cooking and cleaning. Wetlands provide our water needs and help replenish the groundwater aquifers that are an important source of fresh water for humanity.
Wetlands are nature’s shock absorbers

- Peatlands and wet grasslands in river basins act as natural sponges, absorbing rainfall, creating wide surface pools and reducing floods in streams and rivers. This storage capacity also helps safeguard against drought.

- Mangroves, saltmarshes and coral reefs all reduce the speed and height of storm surges. Their roots bind the shoreline, resist erosion by wind and waves, and increase resilience against climate change.

Wetlands store carbon

- Peatlands alone cover an estimated 3% of the world’s land area, but they hold 30% of all carbon stored on land. This is twice the amount stored in all the world’s forests. But when they are burned or drained for agriculture, they go from being a carbon sink to a carbon source. CO₂ emissions from peatland fires, drainage and extraction equate to 10% of all annual fossil fuel emissions.

Wetlands are critical for biodiversity

- Wetlands are home to more than 100,000 known freshwater species alone, and this number is growing all the time. From 1999 to 2009, some 257 new species of freshwater fish were discovered in the Amazon.

- Wetlands are essential for many amphibians and reptiles, as well as for bird breeding and migration.

- Individual wetlands often hold endemic species; forms of life that are unique to one particular site such as Lake Baikal in Russia or the Rift Valley lakes of East Africa.

Wetlands create sustainable products and livelihoods

- 61.8 million people earn their living directly from fishing and aquaculture. Including their families, more than 660 million people depend on these sectors.

- Sustainably managed wetlands provide timber for building, vegetable oil, medicinal plants, stems and leaves for weaving and fodder for animals.

The Ramsar Convention

The Convention on Wetlands of International Importance, commonly known as the Ramsar Convention, is a global intergovernmental 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.
Wetlands: wise use basics on site

A wetland site can be less than a single hectare, as much as 6 million hectares, or anything in between. These are dynamic areas open to natural and human influences. Wetland managers and decision-makers all grapple with one fundamental question: How can we keep a resilient wetland ecosystem that provides for human well-being and still sustains biodiversity and many other wetland services?

There isn’t any one-size-fits-all solution, but experience shows a range of practices that seem to work.

Good practices in wetlands planning and management

Integrate local stakeholders from the start
People who occupy, own, govern, or rely on the wetlands have a natural interest in them. Involve them directly and take their needs into account.

Do a wetlands inventory and impact assessment
Note the extent and types of wetlands, the biodiversity present (what species, how abundant, how are they threatened), the other services they provide, and who relies on them. Evaluate the likely impact for a range of possible uses and activities for the site.

Create a wise use plan for the site
Map out how the site will be used in a way that ensures its viability for the long term. The plan might:

- Define what activities can happen in which zones of the site and at which times.
- Enable hunting and fishing at natural replenishment levels.
- Outline a water management approach for how the site’s water is sourced and for how groundwater is affected, taking a wider, basin-oriented view.
- Include knowledge and capacity-building for the community.
- Consider eco-tourism potential and how a visitor centre might support this.
Interesting examples of wise management in action

**Mauritania**

**Diawling National Park Ramsar Site**

- The lower delta of the Senegal River was extraordinarily rich in biodiversity until the construction of two dams in 1986 and 1990. Mangroves and fisheries nearly disappeared.
- Ten years later, the Diawling National Park was established. An IUCN-facilitated stakeholder study recommended re-establishing the pre-dam flood cycle.
- Sluicegates and embankments for re-flooding were placed using the knowledge of local fishermen. The timing and level of the re-flooding is now agreed to meet both their needs and those of women who collect grass stems for weaving.

**Lao PDR**

**Xe Champhone Ramsar Site**

- Ten years later, the area’s condition is greatly improved, and the local community is requesting WWF’s help in designating Cakaulevu as a Ramsar Site.

**Fiji**

**Cakaulevu reef system**

- The Great Sea Reef, locally known as Cakaulevu, is the world’s third longest continuous barrier reef system.
- In 2004, a biodiversity survey conducted by WWF South Pacific confirmed the site’s international importance. The organization began working with the local communities and other stakeholders.
- The resulting broad-based management plan promotes the sustainable harvesting of fish while restoring areas of coastal wetland and the reef itself.

Need more detail? Try the Ramsar Wise Use Handbooks!

A series of Wise Use Handbooks, authored by Ramsar experts, explains all of the good practices touched on here in much greater detail. The handbooks can be downloaded free of charge from www.ramsar.org/wise-use-wetlands.

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Wetlands: a global disappearing act

It’s a sobering picture. Scientific estimates show that 64% of the world’s wetlands have disappeared since 1900. In some regions, notably Asia, the loss is even higher. Inland wetlands are disappearing at a faster pace than coastal ones, but the overall trend is clear.

As a result, access to fresh water is declining for one to two billion people worldwide, while flood control, carbon storage and traditional wetland livelihoods all suffer. In parallel, the populations of freshwater species declined by 76% between 1970 and 2010 according to WWF’s Living Planet Index.

Ramsar is a joint sponsor of the Wetlands Extent Index, which provides an indicator of the loss in recent decades, measuring the decrease in a global sampling of more than 1000 wetland sites between 1970 and 2008. Overall, these sites shrank by an average of 40% over the period. Individual wetlands and regions vary widely, but the continuing trend is unmistakable.

What is driving this loss?

Unfortunately, wetlands are often viewed as wasteland; something to be drained, filled and converted to other purposes. The main causes of the degradation and loss of wetlands are:

- Major changes in land use, especially an increase in agriculture and grazing animals
- Water diversion through dams, dikes and canalization
- Infrastructure development, particularly in river valleys and coastal areas
- Air and water pollution and excess nutrients
Decision-makers can help slow, stop and reverse the trend in several ways:

- Make policies that consider the ecosystem services that wetlands provide, and integrate them into land use planning.
- Use all remaining wetland sites wisely; meeting human needs while sustaining biodiversity and other wetland services.
- Restore wetlands that have been degraded.
- Develop financing sources for wetlands conservation.
- Educate others about the benefits of wetlands.

Detailed suggestions for wise management at site level can be found in Fact Sheet 2 Wetlands: wise use basics on site. Actions that individuals can take for wetlands are outlined in depth in Fact Sheet 4 Wetlands: What can I do?

Need more detail?
Ramsar makes a wide variety of materials available for wetlands stakeholders and decision-makers. Particularly useful are the Ramsar Wise Use Handbooks, a series of booklets that provide detailed guidance on all aspects of wetlands, ranging from policy-making and community participation to monitoring and wetlands site management. They can be downloaded free of charge from www.ramsar.org/wise-use-wetlands.

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Wetlands: what can I do?

You’re convinced that wetlands provide a multitude of benefits, including filtering our water, ensuring biodiversity, protecting our coastlines, and mitigating climate change.

And you’re alarmed that 64% of the world’s wetlands have disappeared since 1900, and that the remaining ones are being degraded. So what can one person actually do to help turn the tide?

Seven actions you can take for wetlands

1. **Open your eyes to the wetlands near you**
   Look around to see what types are in your area. Saltwater marshes, fens, swamps, peat bogs and mangroves are some of the more common types. Coral reefs, lakes and rivers are also considered wetlands.
   - Visit a wetland near you to get a deep personal impression. What kind of vegetation and wildlife thrive there? How the site is being used? Go back at different times of year and observe how the surroundings change.
   - If you see any illegal activities such as logging in a protected site, report it to the relevant authorities.
   - Check the list of Ramsar Sites (www.ramsar.org/sites-countries/the-ramsar-sites) and see if there’s a designated Wetland of International Importance in your area. If there’s one listed, you can download a kmz file to create a placemark in Google Earth, complete with information about the site.

2. **Educate others**
   Often, wetlands are seen as wasteland; something to be filled in, drained, burned off or converted to other uses. You can help others to understand the huge benefits that wetlands bring, both globally and locally.
   - Talk with the site managers to see what kind of help they could use.
   - Is there a wetland site in your area that is not yet listed with Ramsar but perhaps should be protected? Contact a local government, university or NGO to see how you can help maintain its ecological character.
   - Drop some interesting facts about wetlands into the conversation. Ramsar Fact Sheets are a great source for these.
   - Hold an educational event so people in your area can better understand how local wetlands benefit them.
3 Organize a wetlands clean-up
In populated areas, wetlands often attract rubbish.
- Working in a group for an hour or two can show how much of a clean-up can be achieved in a very short time.
- Take pictures before and after to highlight the difference.

4 Change your consumption habits
Saving water, reducing harmful waste and encouraging sustainable farming and fishing can all have a positive effect on wetlands.
- Buy sustainably raised or caught seafood, organic produce and meat.
- Use reusable bags at the grocery store.
- Take shorter showers.
- Recycle household trash, and make sure that batteries and other harmful waste do not end up in landfills – or in wetlands!

5 Manage your own garden consciously
Polluted water and invasive plants pose a real threat to wetlands. Improve the water and drainage effects of your own garden.
- Select native and pest-resistant plants and place them in settings that suit them.
- Use as little fertilizer as possible, and avoid toxic pesticides.
- Water thoroughly but infrequently, using collected rainwater.

6 Get involved in World Wetlands Day
Monday, February 2nd, 2015 is World Wetlands Day. Support this global day of awareness:
- Encourage youths aged 15-24 in your area to enter the World Wetlands Day Youth Photo Contest. Photos must be taken in a wetland location between 2 February and 2 March 2015 and uploaded to the WWD website (www.worldwetlandsday.org).
- Combine an educational event with World Wetlands Day.
- Consult the Guide for teachers and organizers for loads of tips.

7 Join with others to make a difference
Many organizations and networks already work for wetlands and their sustainable use. Link up with their efforts.
Here are just a few of the largest:

**Wetlands International**
The only global not-for-profit organization dedicated to the conservation and restoration of wetlands.
http://www.wetlands.org

**IUCN – International Union for the Conservation of Nature**
The world’s oldest and largest global environmental organization has more than 1,200 member organisations around the globe, including Ramsar. Search their member database here: https://www.iucn.org/about/union/members/who_members/members_database/

**Birdlife International**
An alliance of 120 bird related organizations around the world. Search for partners by country here: http://www.birdlife.org/worldwide/partnership/birdlife-partners

**WWF – World Wide Fund for Nature**
Aims to build a future in which people live in harmony with nature. WWF works in more than 100 countries on six continents: http://www.wwf.org

**IMWI – The International Water Management Institute**
A non-profit, scientific research institute focusing on the sustainable use of water and land resources in developing countries.
http://www.iwmi.cgiar.org/

**WWT – Wildfowl & Wetlands Trust**
A UK-based conservation charity that saves wetlands around the world. http://www.wwt.org.uk/

**WLI – Wetland Link International (WLI)**
A support network for wetlands education centres that deliver engagement activities on site. http://wli.wwt.org.uk/

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Fact Sheet 4.2

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