

Inseparable

Water, Wetlands and Life

World
Wetlands Day

2 February 2021
Wetlands and water



Wetlands - What are they?

2



Wetlands can be saltwater or freshwater, inland or coastal, natural or human made

- **Freshwater wetlands:** rivers, lakes, pools, floodplains, peatlands, marshes, swamps
- **Saltwater wetlands:** estuaries, mudflats, saltwater marshes, mangroves, lagoons, coral reefs, shellfish reefs
- **Human made wetlands:** fishponds, rice paddies, reservoirs, salt pans



Wetlands and fresh water

3



Water, water everywhere... Our 'blue' planet seems awash with water

- But **only 2.5%** of water is **fresh water**, mostly stored in glaciers, snow caps or underground aquifers
- **Less than 1%** of fresh water is usable, 0.3% is in rivers and lakes

This is all the fresh water we have and wetlands provide most of it.



Inseparable: Water and wetlands

4



Wetlands are vital for water

- **Capture and store** rainwater and **replenish** groundwater aquifers
- **Regulate water quantity** and **supply** by releasing water at the right time to the right place in the right amounts
- **Improve water quality** by removing and absorbing pollutants



Wetlands sustain life

5



Keep us healthy

- Healthy watersheds provide safe drinking water naturally

Supply food, support food production

- Wetlands give us much of the fish we eat, rice for 3.5 billion people and water for agriculture

Important for biodiversity

- 40% of world's species live in wetlands, with 200 new fish species discovered in freshwater wetlands annually



Wetlands sustain development

6



Underpin economy

- Wetlands provide more than a billion jobs and services valued at \$47 trillion a year

Protect from natural disasters

- Coastal wetlands buffer coastal communities against storms
- Each acre of inland wetlands absorbs up to 1.5 million gallons of floodwater

Solutions for climate change

- Peatlands, mangroves, saltmarshes, seagrass beds are among the most effective ecosystems for capturing and storing carbon



Water's supply and demand

7



Unsustainable development, population growth, urbanization and consumption have devastated wetlands, putting unbearable pressure on freshwater supplies:

- Water use has increased sixfold in the past 100 years, and is growing by 1% each year
- We use more water than the earth can replenish
- 70% more food and 14% more water for agriculture needed for estimated 10 billion global population by 2050
- Industry and energy water use expected to increase to 24% by 2050



Wetland loss and water scarcity

8



Loss and degradation of wetlands from changes to land and water use and climate change is **intensifying a water crisis:**

- Nearly **90%** of the world's wetlands **lost** since 1700's
- Nearly all freshwater sources compromised by **pollution and pathogens**
- **River fragmentation** and **water flow interruptions** by dams, diversions and wetland loss threaten freshwater supply
- **Nearly 75%** of natural disasters water-related



Impact on people and economies

9



- **2.2 billion people** without safe drinking water, **485,000** die each year
- **Freshwater wetland loss** cost **\$2.7 trillion** a year in lost services (1997-2011)
- **166,000 people killed** and **3 billion** affected by floods and droughts in past 20 years, causing nearly **\$700 billion** of economic damage
- **Water insecurity** a major role in **conflict** in at least 45 countries in 2017
- **Hundreds of millions of people** in coastal areas face more threats from storms and floods due to mangrove, saltmarsh and seagrass loss



Wetland loss and our planet

10



- **One in three** freshwater species and a **quarter** of all wetland species face **extinction** from wetland decline
 - Intensive water infrastructure development key to 35% drop in freshwater biodiversity between 1970-2005
- **Climate change** exacerbates wetland and water crisis
 - Significantly less renewable surface and groundwater forecast in already dry regions by 2050
 - New regions will be water stressed, increasing water competition between people and ecosystems



Wetlands for water sustainability

11



We could have **enough water**, if we better **value** and **manage** wetlands and water – and treat both as a **collective responsibility**.

- **Stop destroying, start restoring**
 - Protection, restoration and wise use of wetlands would sustainably **support increased demands** for water
- **Integrated Water Resources Management**
 - Coordinate water, land and resources to deliver maximum social and economic welfare fairly **without compromising sustainability of ecosystems**



Wetlands: Conserve and use wisely

12



What can you do ?

- **Don't dam, divert or drain**
- **Industry** has opportunities to **reduce** water use by up to **50%**
- **Agriculture** can produce food and be **wetland/water stewards**
- **Don't waste food**. Water to fill Lake Geneva **3 times each year** would be saved by cutting **1.3 billion tons of food waste** from farm to fork
- **Increase investment** in wetlands as **nature based solutions** for water resource management, currently less than 1%
- **Integrate water resource management** across all sectoral policy and planning locally, national, internationally



World Wetlands Day

2 February 2021

13



2021 Theme: Wetlands and Water

- Annual opportunity to raise global awareness on the **value of wetlands**
- Celebrate wetlands' **diverse services to humanity and nature**
- **Trigger action** locally, nationally, internationally to **save the world's wetlands**

Get involved:

- Download and **share information materials** from worldwetlandsday.org
- **#RestoreWetlands**
- **Where are your wetlands? How can you help protect them?**



Sources

14



Types of wetland; aquaculture; Water pollution; climate change; biodiversity; wetland loss; sustainability – Global Wetland Outlook

https://static1.squarespace.com/static/5b256c78e17ba335ea89fe1f/t/5ca36fb7419202af31e1de33/1554214861856/Ramsar+GWO_ENGLISH_WEB+2019UPDATE.pdf p22-24, p40, p43, p6, p61, p19

Wetlands take care of water https://www.ramsar.org/sites/default/files/documents/library/leaflet_1.pdf p4, p8

https://docs.wbcsd.org/2019/12/WBCSD_Feeding_3.5_billion-Innovative_finance_for_Climate-Smart_Rice.pdf

Ramsar news release, “World’s Most Valuable Ecosystem Disappearing Three Times Faster Than Forests, Warns New Report,” 27 September 2018, <https://www.ramsar.org/news/wetlands-worlds-most-valuable-ecosystem-disappearing-three-times-faster-than-forests-warns-new>

Ramsar Factsheet 6 Reservoirs of biodiversity

https://www.ramsar.org/sites/default/files/documents/library/services_06_e.pdf p1

Worth of Wetlands: revised global monetary values of coastal and inland wetland systems

<https://www.publish.csiro.au/mf/MF18391>

World Wetlands Day 2016 https://www.ramsar.org/sites/default/files/wwd16_hand-outs_desktop_print_eng.pdf

<https://sciencing.com/do-wetlands-filter-water-6398284.html>

UN WATER Water Development Report 2020: Water and Climate Change

<https://www.unwater.org/world-water-development-report-2020-water-and-climate-change/> 21 March 2020

UNEP/IWMI Ecosystems for water and food security 2011

<https://wedocs.unep.org/bitstream/handle/20.500.11822/8002/->

[Ecosystems%20for%20%20water%20and%20food%20security-20111057.pdf?sequence=3&isAllowed=](https://wedocs.unep.org/bitstream/handle/20.500.11822/8002/-Ecosystems%20for%20%20water%20and%20food%20security-20111057.pdf?sequence=3&isAllowed=1) p2, 45, p65

UN WATER Water Development Report 2020: Water and Climate Change Facts and Figures

<https://unesdoc.unesco.org/ark:/48223/pf0000372876.locale=en>

<https://www.unwater.org/water-facts/quality-and-wastewater-2/>

<https://www.who.int/news-room/fact-sheets/detail/drinking-water> p6, p7, p10

**World
Wetlands Day**
2 February 2021
Wetlands and water



Sources

15



Recent Loss of Freshwater Wetlands Worldwide Valued at \$2.7 Trillion per Year

<https://blog.nationalgeographic.org/2014/06/24/recent-loss-of-freshwater-wetlands-worldwide-valued-at-2-7-trillion-per-year/>

The Geo Wetlands Initiative (GWOS)

https://www.ramsar.org/sites/default/files/documents/library/strp20_agenda_item_5_geo-wetlands_mpaganini.pdf

World Humanitarian Data and Trends 2018

https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/whdt2018_web_final_singles.pdf p34

Global Biodiversity Outlook 5 <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

p57, p68, p141

<https://www.zsl.org/sites/default/files/LPR%202020%20Full%20report.pdf> p24

IPCC Fresh water resources https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap3_FINAL.pdf p232

Half the world to face severe water stress by 2030 <https://www.unenvironment.org/news-and-stories/press-release/half-world-face-severe-water-stress-2030-unless-water-use-decoupled> 21 March 2016

Water Infrastructure and Investment High Panel on Water

<https://sustainabledevelopment.un.org/content/documents/hlpwater/08-WaterInfrastInvest.pdf>

Food wastage: Key facts and figures <http://www.fao.org/news/story/en/item/196402/icode/>

Consumers discard a lot more food than widely believed

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0228369>, 12 February 2020

Is the world running out of fresh water? <https://www.bbc.com/future/article/20170412-is-the-world-running-out-of-fresh-water>