Urban wetlands make cities liveable

Ramsar Convention on Wetlands
World Wetlands Day 2018 – get involved!

Celebrated every 2 February to mark the adoption of the Ramsar Convention in Iran in 1971

Wetlands for a sustainable urban future, the theme for 2018 highlights the important role of urban wetlands in making cities liveable

Ways you can participate:

• Organize an event to educate others about the importance of urban wetlands

• Register and upload your event to www.worldwetlandsday.org

• Share the information materials on social media to raise public awareness about wetlands.
Ramsar Convention on Wetlands: Working to reverse wetland loss and degradation

- First global environmental treaty; only one to focus on a single ecosystem
  - Adopted in Ramsar, Iran in 1971
- Parties commit to designating protected wetland Ramsar Sites, wise use of wetlands and cooperation on transboundary issues
- Number of Contracting Parties: 169
- Number of Ramsar Sites: 2,284
- Total surface area of Ramsar Sites: 220,673,362 ha (slightly larger than Mexico)
  - [www.ramsar.org/sites-countries/the-ramsar-sites](http://www.ramsar.org/sites-countries/the-ramsar-sites)
Ramsar Convention on Wetlands: Committed to sustainable development

Ramsar Convention’s 4th Strategic Plan contributes to 16 different SDGs; many relating to urban development:

- **Goal 6**: Ensure water & sanitation for all
- **Goal 9**: Build resilient infrastructure
- **Goal 11**: Making cities inclusive, safe, resilient and sustainable
- **Goal 12**: Ensure sustainable consumption and production patterns
- **Goal 13**: Combat climate change
- **Goal 15**: Protect, restore and promote sustainable use of terrestrial ecosystems

Mangrove planting, Balanga City Wetland Park, Philippines
Photo: Ramsar Convention
Ramsar Convention on Wetlands
Wetland City Accreditation Scheme

• Voluntary accreditation scheme for cities
  o Stem loss of urban and peri-urban wetlands due to growing urbanization
  o Decision of Contracting Parties Resolution XII.10 adopted in 2015
  o Encourages cities to take deliberate actions to conserve, restore and wisely use urban wetlands
  o First eligible cities to receive a certification in 2018 accrediting them as a wetland city.

Wetland City Accreditation winners will be announced at the 2018 Ramsar Conference of Parties (COP) in Dubai.
Photo: ramsar.org
Wetlands and cities: A long symbiotic relationship

- Earliest cities sprung up in the fertile Tigris & Euphrates floodplains
  - Benefits of agriculture, water supply, transport
- Wetland: a land area that is flooded with water, either permanently or seasonally
- Types of wetlands include:
  - Rivers & floodplains, marshes, peatlands
  - Mangroves, salt marshes, estuaries, coral reefs
- Urban and peri-urban wetlands:
  - Any wetlands found in or around cities, their suburbs and outlying areas

Wetlands in Kowloon, Hong Kong
Photo: urbanwetlands.org
Wetlands and cities: On opposite trajectories

While cities are growing . . .
50% about 4 billion people live in urban areas today and by 2050 that number will reach 66%

World urban population, 1970-2016

Wetlands are disappearing.
More than 64% of the world’s wetlands have been lost since 1900.

Wetland Extent Index 1970-2008

Estimated and projected urban populations of the world, the more developed regions and the less developed regions, 1950-2050
Wetlands and cities: the challenge
Retain & restore wetlands to make future cities liveable!

• The sustainability balancing act for urban planners:
  o Provide land for building, and basic services like water and waste removal while also
  o Preserving and restoring natural resources – including wetlands – for the long term

• Urban population rising 2.4% a year
  o Number of mega-cities (more than 10 million inhabitants) will jump from 31 to 41 by 2030

• Huge opportunity: use urban wetlands to make cities more liveable.

Cardiff Wetlands, Wales, United Kingdom
Photo: Wikimedia Commons
Urban wetlands make cities liveable by: Reducing flooding

- Wetlands act as giant sponges to lessen the impact of flooding.
  - Rivers, ponds, lakes and marshes soak up and store heavy rainfall, releasing it gradually over time

- Saltmarshes and mangroves act as a buffer against storm surges.
  - One kilometer of intact mangrove forest can reduce a storm floodsurge by up to 50cm

- Example: Hurricane Sandy
  - Wetlands avoided an estimated $625 million in damage when this storm hit densely populated US east coast in 2012
Urban wetlands make cities liveable by: Improving water quality

• Only 3% of water on the planet is fresh; most of this is frozen. Water is a scarce resource!

• Deep groundwater aquifers provide half of all drinking water, including water supply to:
  o 2 billion people in Asia
  o 380 million people in Europe

• Wetlands on the surface filter the water that seeps into these aquifers from above, helping to replenish the water supply.
Urban wetlands make cities liveable by:
Filtering and treating waste

- Silt-rich soil and abundant plants in wetlands act as filter for
  - Harmful toxins,
  - Agricultural pesticides and
  - Industrial waste

- Urban wetlands can also treat sewage cost-effectively

- Example: Nakivubo Swamp, Kampala, Uganda
  - 550 hectare urban wetland stretching from city’s industrial center to Lake Victoria
  - Filters water and reduces contaminants
  - Water treatment worth $US2 million per year
Urban wetlands make cities liveable by:

**Improving local air quality**

- Wetlands radiate moist air thanks to their high water levels and lush plant life.
- They naturally cool the air in the local surroundings.
- Offer relief in both tropical cities and in climates where the air is extremely dry.

Restored wetland landscape at London Wetland Centre
Photo: Wikimedia Commons
Urban wetlands make cities liveable by:
Providing green space for relaxation

- Urban wetlands offer stressed city dwellers the chance to decompress and encounter diverse plant and animal life.
- Studies confirm that interacting with nature improves our health.
- Example: Huangshan City, China; city of 1.4 million people
  - 7.5km bank of the Xin’an River in city center restored to natural wetland
  - Provides natural flood control plus
  - New green belt with park, botanical gardens and housing

Chen Bridge, Henan, China
Photo: Pixabay.com
Urban wetlands make cities liveable by:
Providing jobs to local residents

- Many types of fish spawn and breed in wetlands, making them popular fishing grounds.
  - 660 million people depend on fishing and aquaculture for their livelihoods worldwide

- Wetlands produce valuable goods to gather and process, often benefiting the poor.
  - Reeds and grasses for weaving
  - Wood for building
  - Medicinal plants and fruits

- Wetlands attract tourism, also a major source of employment.
Mismanaging urban wetlands: Makes cities prone to disasters

- At least 64% of wetlands have disappeared since 1900.
- Canalizing rivers can make floods more powerful.
-Dumping rubbish ruins natural green spaces.
- Clearing mangroves and mining coral reefs can expose city coastlines to storms.
- Burning or draining peatlands releases CO2.

Los Angeles River, California, USA
Treating urban wetlands right:
Integrate wetlands into policy and planning

- Plan for wetlands as a natural part of water infrastructure.
- Adopt policies to limit degradation, promote efficient water use.
- **Example: Accra, Ghana**
  - Fast growth threatening local wetlands
  - City responded with integrated measures
    - Enforcing building regulations
    - Creating green belts to control sprawl
    - Education programs for local residents
    - Designating two local wetlands as Ramsar Sites

[Sakumono Lagoon Ramsar Site in greater Accra, Ghana]
Photo: Wikimedia Commons
Treating urban wetlands right: Preserve and restore urban wetlands

• Many cities are located in coastal areas and river floodplains where wetlands were once widespread.
• Actively restore wetlands – and their benefits.
• Example: London Wetland Centre
  o 40-hectare restored wetland on site of four old water reservoirs
  o Now home to wide range of wildlife including 180 bird species
  o Visitor Centre for wetland education

Grey heron at London Wetland Centre
Photo: Wikimedia Commons
Treating urban wetlands right: Involve local residents in planning

- People often depend on local wetlands for their living; it’s important to understand their views and get their buy-in

- Example: Stung Treng Ramsar Site, Cambodia
  - 14,600-hectare site with 21 villages and 10,000 people dependent on fishing
  - Home to several endangered species
  - Communities have restricted fishing in critical zones during spawning seasons, and larger fish are now returning

Putting up sign at Stung Treng Ramsar Site
Photo: Ramsar Convention
Treating urban wetlands right: Reduce water consumption and harmful run-off

• As individuals avoid toxic materials that drain into wetlands
• As cities measure, then act to reduce water consumption
• Example: Quito, Ecuador
  o Detailed measurement of water use in 2012-14 with Cities Footprint Project
  o Aim: cut water footprint by 68% by 2032
  o Promoting ecological toilets, water-efficient appliances

Quito, Ecuador
Photo: Wikimedia Commons
Treating urban wetlands right: Engage youth and community

- Join or organize a local wetland clean-up exercise
- Organise community based training on wetlands conservation and wise
- Example: Bolsa Chica Ecological Reserve, California
  - 356-hectare protected coastal wetland near Los Angeles
  - Non-profit conservancy holds 2 Public Service Days per month
  - Volunteers remove 10 tons of trash and debris every year

Clean-up of a Ramsar Site in Ghana, 2015
Photo: Ramsar Convention WWD Photo Contest
Thank you!

Ramsar Convention on Wetlands

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