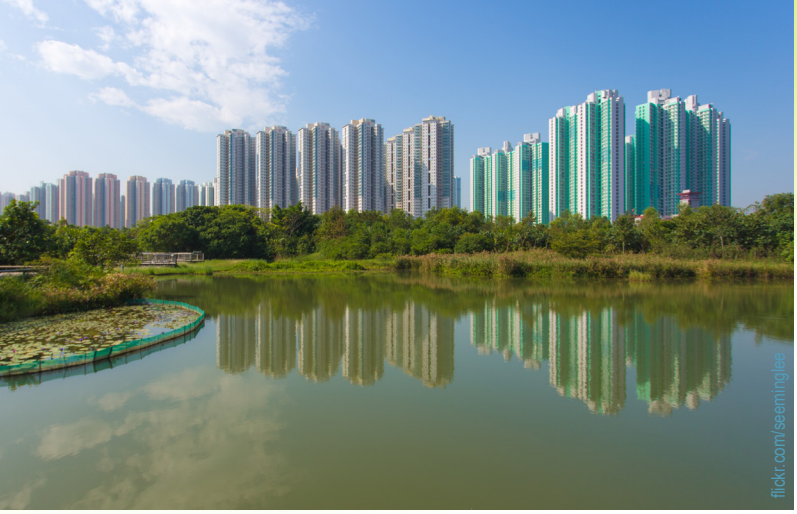

World Wetlands Day
Monday, 2 February 2015

Wetlands for our Future

CBD Press Brief

Wetlands and Ecosystem Services

Wetlands are unique, productive ecosystems where terrestrial and aquatic habitats meet. Wetlands play a critical role in maintaining many natural cycles and supporting a wide range of biodiversity. They purify and replenish our water, and provide the fish and rice that feed billions. They serve as a natural sponge against flooding and drought, protect our coastlines and help fight climate change. Bursting with biodiversity, wetlands are a vital means of storing carbon. Wetlands are also tremendously productive ecosystems that provide a myriad of services to society worldwide.

Wetlands are particularly important providers of all water-related ecosystem services. They regulate water quantity, groundwater recharge, and can contribute to regulating floods and the impacts of storms. Wetlands also help in erosion control and sediment transport, thereby contributing to land formation and increasing resilience to storms. All these ecosystem services improve water security, including security from natural hazards and climate change adaptation. The final Rio+20 outcome document, "The Future We Want", *inter alia*, recognised the role of ecosystems in the supply of water and its quality.

Wetlands are productive areas for plant life, animals and wetland agriculture. Compared to many other ecosystems, wetlands are one of the most productive habitats in the world. With greater species diversity nutrient recycling and niche specialization than most other ecosystems.

Wetlands are the major habitat for most of the world's waterbirds and key habitat for migratory species. Almost all of the world's waterbirds use wetlands as feeding and breeding grounds. Migratory waterbirds use wetlands throughout their range which can sometimes literally be from pole to pole. The feeding, breeding and stop-over areas across and between continents that migratory birds depend on requires co-ordinated wetlands conservation efforts among many nations.

Wetlands are an important source of food. Well-managed rice paddy systems, for example, produce not only rice but also co-benefits from rice-associated biodiversity, such as highly nutritious food in the form of fish, molluscs and crustaceans. Wetlands also support the multitude of biota that helps sustain rice productivity through supporting nutrient cycling and pest and disease regulation. The entire production of inland capture fisheries and most coastal fisheries is derived from wetlands, as is most aquaculture production.

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Values of coastal and inland wetlands ecosystem services are typically higher than for other ecosystem types. Wetland ecosystems can have some of the highest ecosystem service values compared to other ecosystems. This is due to the importance of clean water provision, natural hazards mitigation, for example mangrove forests and floodplains, and carbon storage, for example in peatlands, mangroves and tidal marshes. A large proportion of the values reported for most types of wetlands come from their water-related services.

Wetlands have high recreational, historical, scientific, and cultural values. Wetlands have played an important part in human development and are of significant religious, historical or archeological value to many cultures around the world. They are also often inviting places for popular recreational activities including hiking, fishing, bird watching, photography and hunting.

Information sourced from the Ramsar Convention on Wetlands and the Secretariat of the Convention on Biological Diversity

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- World Wetlands Day 2015: www.worldwetlandsday.org
- Convention on the Conservation of Migratory Species of Wild Animals: www.cms.int
- Open Working Group proposal for Sustainable Development Goals: https://sustainabledevelopment.un.org/focussdgs.html

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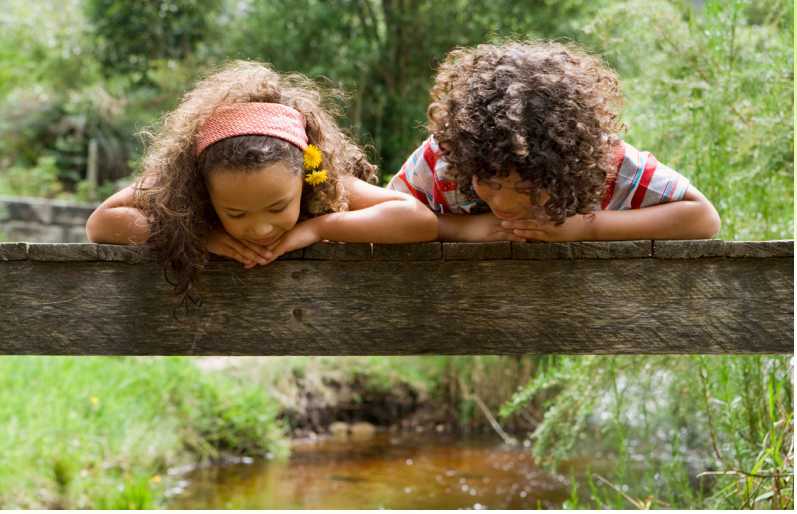

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Wetlands for our Future

CBD Press Brief

Wetlands Meeting the Challenges of the Future

The future of humanity depends on wetlands. Wetlands are some of the most important biodiverse areas in the world. Many of the challenges of the future can be met through conserving and sustainably using wetlands, such as food and water security, human health, disaster risk reduction and climate change resilience. However, wetlands are experiencing rapid decline. Newly-published estimates show that 64 % of the world's wetlands have disappeared since 1900. In Asia, the loss is even higher. This means that access to fresh water is eroding for 1 -2 billion people worldwide, while flood control, carbon storage and traditional wetland livelihoods all suffer. Biodiversity has also been affected, as populations of freshwater species have declined by 76 % between 1970 and 2010 according to WWF's Living Planet Index.

Drivers of wetland loss. Often viewed as wastelands to be drained, filled and converted to other purposes, the main causes of wetlands loss and degradation include major changes in land use, especially an increase in agriculture and grazing and urban infrastructure development, air and water pollution and excess nutrients, and water diversion (dams, dikes and canalization).

Wetlands ensure fresh water for us all. Only some 3 % of the world's water is fresh, with most of that frozen. Only 1% of that, or 0.03% of total water, is available for direct use by people. Yet every human needs 20-50 litres of water a day for basic drinking, cooking and cleaning with astronomically higher requirements to grow the food eaten. Wetlands provide that water, and help replenish groundwater aquifers.

Wetlands purify and filter harmful waste from water. Plants from wetlands help absorb harmful fertilizers and pesticides, as well as heavy metals and toxins from industry. The Nakivubo Swamp in Kampala, Uganda, for example, filters sewage and industrial effluents for free; a treatment plant would cost $2 million per year.

Wetlands feed humanity. Rice, grown in wetland paddies, is the staple diet of nearly three billion people. The average human consumes 19 kg of fish each year. Most commercial fish breed and raise their young in coastal marshes and estuaries. 70 % of all fresh water extracted globally is for crop irrigation.

Wetlands burst with biodiversity. Wetlands are home to over 100,000 known freshwater species. That number is growing. In just 10 years, 272 new species of freshwater fish were discovered in the Amazon alone. Wetlands are essential to bird life, breeding and migration.

Wetlands act as nature's sponges. Peatlands, wet grasslands and floodplains in river basins act as natural sponges by absorbing rainfall and creating wide surface pools that ease flooding in rivers. The same storage capacity can also safeguard against drought.

Wetlands help fight climate change. Peatlands alone store more than twice as much carbon as all the world's forests. Faced with rising sea levels, coastal wetlands reduce the impact of typhoons and tsunamis. They also bind the shoreline and resist erosion.

Wetlands provide sustainable livelihoods and products. Some 62 million people depend directly on fishing and fisheries for a living. Timber for building, vegetable oil, medicinal plants, animal fodder, and stems and leaves for weaving can all originate from sustainably managed wetlands.

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Wetlands for our Future

CBD Press Brief

Wetlands and the Sustainable Development Goals

The sustainable use of water and wetlands, by protecting the services they provide, is critical to enable society to achieve sustainable social and economic development, adapt to climate change and improve social cohesion and economic stability.The proposed United Nations Sustainable Development Goals (SDGs) offer a universal agenda that, for the first time, recognises the need for restoration and management of water-related ecosystems, including wetlands, as a basis for addressing water scarcity and water risks. Wetlands are a solution for several key challenges around the world related to water, food and climate, and key to meeting the SDGs. Most of the proposed SDGs are relevant in some way or another to wetlands, but the following are of particular importance:

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Rice grown in wetland paddies is the staple diet of nearly three billion people. The average human consumes 19 kg of fish each year. Most commercial fish breed and raise their young in coastal marshes and estuaries. 70 % of all fresh water extracted globally is used for crop irrigation.

Goal 6: Ensure availability and sustainable management of water and sanitation for all
Wetlands ensure fresh water, help replenish ground aquifers, and purify and filter harmful waste from water – such as fertilizers and pesticides, as well heavy metals and toxins from industry.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
Wetlands act as natural sponges absorbing rainfall, providing protection against coastal and river flooding to (partially) offset the need for man-made infrastructure. They also help reduce drought, protect coastal areas for fisheries nurseries and regulate sediment transport thereby contributing to land formation and coastal zone stability.

Goal 13: Take urgent action to combat climate change and its impacts
Wetlands act as carbon sinks. Peatlands alone store more than twice as much as all the world's forests. Coastal wetlands reduce the impact of rising sea levels, acting as storm surge buffers and providing erosion control.

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Without wetlands, the water cycle, carbon cycle and nutrient cycles would be significantly altered. Water cycles, essentially the continuous movement of water on, above and below the surface of the Earth, are of critical importance to biodiversity and to the functioning of virtually all terrestrial and coastal ecosystems.

Coastal wetlands are important for sustaining seas and marine resources, for example as nursery grounds for many marine fisheries.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
The values of benefits provided by wetlands, per unit area, have been consistently shown to be orders of magnitude higher than for other ecosystems with the major benefit delivered through improving water security.

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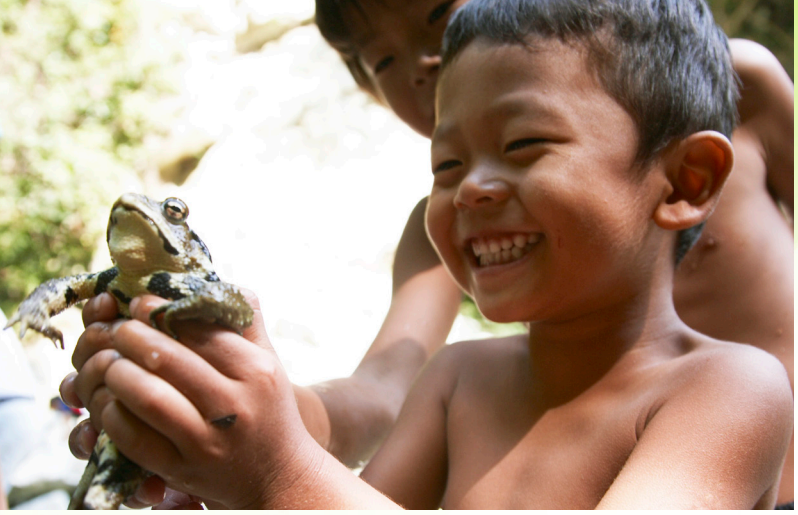

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Wetlands for our Future

The Value of Wetlands

Wetlands deliver multiple co-benefits of significant social and economic values, and can help address a wide range of needs and objectives. The Millennium Ecosystem Assessment gave wetlands a total economic value of US$15 trillion in 1997. Many of the ecosystem services that benefit people, society and the economy at large are related to water and wetlands through water provision, regulation, purification and groundwater replenishment, and are crucial in addressing objectives of water security and water for food security. Ecosystem services provided by wetlands also play important roles in relation to nutrient cycling, climate mitigation and adaptation, food security, job security and a range of cultural benefits, including knowledge (scientific and traditional), recreation and tourism, and formation of cultural values, including identity and spiritual values.

The values of benefits provided by wetlands, per unit area, have consistently been shown to be orders of magnitude higher than for other ecosystems. Importantly, most of this value is derived from their role in regulating water; for example, water-related disaster risk reduction.

Wetlands provide natural infrastructure that can help meet a range of policy objectives. Beyond water availability and quality, they are invaluable in supporting climate change mitigation and adaption, disaster risk and impact reduction health as well as livelihoods, local development and poverty eradication.

Meeting sustainable water management objectives cost effectively. Wetlands provide natural infrastructure that delivers a wider range of services and benefits than corresponding man-made infrastructure, and at lower cost. They are also an important complement to man-made infrastructure in river basin planning and management efforts. Wetlands can provide protection against coastal and river flooding to (partially) offset the need for man-made infrastructure, while simultaneously providing a multitude of other services, such as tourism and recreation, carbon storage or a range of provisioning services. Nature-based solutions can constitute a lower cost approach than alternative built capital solutions, or offer significant cost savings where an integrated natural and man-made infrastructure approach is adopted.

Wetlands provide multiple benefits to cities and rural communities. The aesthetic and recreational amenities of urban wetlands, and their value as wildlife habitat, can be significant. The capacity of a functional urban wetland in flood control can also be very important. In Sri Lanka, for example, flood attenuation and wastewater treatment provided by the 3000 ha Muthurajawela Marsh near Colombo have been valued at over US$5 million/year and US$1.6 million/year respectively. This exceeds the value of the wetland for

agricultural production (around US$0.3million/ year) more than twentyfold. In rural areas, wetlands provide multiple benefits that are vital to local communities. For example, the water tank system in Kala Oya, Sri Lanka, provides water for domestic use and livestock, fish and wild plants with benefits for the majority of households exceeding those from rice cultivation.

Wetlands have high nature conservation values. Wetlands are among the most bio-diverse ecosystem types. They are home to a very diverse range of animal and plant species which live permanently in wetlands or rely on wetlands for at least part of their life cycle. They are particularly important for migratory species, especially migratory waterbirds. Because of the threats to wetlands they support a disproportionate number of high conservation priority species.

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Wetlands and the Aichi Biodiversity Targets

The Aichi Biodiversity Targets are a set of 20, time-bound, measureable targets agreed by the Parties to the Convention on Biological Diversity in Nagoya, Japan, in October 2010. The Aichi Targets are the key elements of the Strategic Plan for Biodiversity 2011-2020, the overarching framework on biodiversity for the entire UN system as recognized by United Nations Resolutions. These targets are presently being translated into revised national biodiversity strategies and action plans by the 194 Parties to the CBD. Achievement of the targets will contribute to reducing, and eventually halting, biodiversity loss at the global level by the middle of the 21st century. In order to safeguard the key role that wetlands, some of the most biodiverse regions on earth, play in our societies and economies, we need to achieve all of the Aichi Targets. Wetlands are relevant to all of the targets and some examples include:

Target 14: *By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.*

Wetlands provide multiple ecosystem services supporting water security and offer a wide range of benefits and values to society and the economy. Values of both coastal and inland wetland ecosystem services are typically higher than for other ecosystem types.

Promoting restoration of degraded wetlands to improve water and food security can be a critical means of ensuring the provision of public goods and addressing poverty (as the rural poor are generally more directly reliant on ecosystem services).

Target 5: *By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.*

Wetlands continue to be lost at an alarming rate. Estimates suggest that 64% have disappeared since 1900 and 87% lost since 1700. Main causes include changes in land use, water diversion (dams, dikes and canalization), infrastructure development, air and water pollution, and excess nutrients.

Target 1: *By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.*

Wetlands are essential in providing water-related ecosystem services, such as clean drinking water, water for agriculture and regulating water quantity (e.g. flood regulation). Wetlands also play a role in erosion control and sediment transport, contribute to land formation and resilience to storms, and provide many water-dependent services, such as agricultural production, fisheries and tourism.

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Target 2: *By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.*

The full value of water and wetlands needs to be recognised and integrated into decision-making in order to meet our future social, economic and environmental needs.

Target 8: *By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.*

Wetlands act as filters and help reduce the nutrient load from fertiliser use and urban waste water and help prevent eutrophication in lakes and streams.

Target 11: *By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*

Main push is to close the gap in marine protected areas. According to the Millennium Ecosystem Assessment, damage to and loss of wetlands is more rapid than that of other ecosystems.

Target 12: *By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.*

Species dependent on both freshwater and coastal wetland are declining faster than those reliant on other ecosystem types, including many migratory species.

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