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15 WAYS WETLANDS ARE VITAL FOR CITIES, FOOD AND PEOPLE – A PHOTO ESSAY FROM SRI LANKA

A Photo Story by Madeline Dahm, Priyanie Amerasinghe

"We cannot afford to lose one more inch."

-Nadeera Rajapakse Rubaroe, Wetlands Ecologist and Consultant for the World Bank

When we think of urban infrastructure, what probably comes to mind are roads, pipes, drains and construction. But healthy urban wetlands are equally essential to developing livable cities.

Madeline Dahm / IWMI

Balancing green and grey infrastructure



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In fact, it's bigger than most people realize: this unique wetland complex has a total estimated area of over 56,000 acres in the quickly growing Sri Lankan capital. A current hot topic of political debate, the government is juggling the needs of different sectors while deciding how to manage a quickly developing city, where dependable infrastructure is becoming a dire need.

Viewed through the sites and experiences in Colombo, here are 15 facts and photos showing the importance of wetlands.

Sri Lankan Land Reclamation and Development Corporation (SLLRDC)



The Colombo Wetland Complex

Whether or not people realize it, we all benefit from having wetlands in our cities. All too often wetlands are seen as unused or wasted space when in reality, they are extremely valuable elements of urban infrastructure whose benefits are vast, sustainable and cost-effective.



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Cityside buffers - Madeline Dahm/ IWMI



THE BENEFITS OF URBAN WETLANDS

Flooding in Sri Lanka - Hafiz Issadeen



Flood Mitigation

The wetlands of Colombo have enough storage capacity to fill 27,000 Olympic-size swimming pools with rainwater, making them extremely valuable for buffering floods. These marshy lands and plants absorb water and release it slowly, helping to regulate water levels while its plants and soils act as filters to improve water quality.



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Boats on Talangama Lake - Madeline Dahm / IWMI



Temperature Reduction and Better Air Quality

Through the process of evaporative cooling, more than half of Colombo's wetlands help to reduce extreme air temperatures. Furthermore, the plants and soils of wetlands capture and store airborne toxins, in turn helping to curb environmental health and pollution dangers.



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Biodiversity

Wetlands can be urban biodiversity hotspots, home to over 280 species of animals and 250 species of plants in Colombo alone. The Talangama tank, one of the city's healthiest wetlands, is home to over 100 species of animals in just 35 acres. Recreationists can see otters, fishing cats, monitor lizards, purple-faced monkeys on a walk around the lake.

A Sri Lankan farmer in his rice paddy - Kannan Arunasalam / IWMI





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Local Food Supply

Ninety percent of the wetlands in Colombo are urban farms, and contribute to food supply in the city through the production of rice, vegetables, dairy and poultry products as well as through fishing and gathering of native plants.



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Rural Livelihoods

Aside from food production, wetlands are an oasis of rural lifestyle. People depend on the health of the ecosystems to provide water for their livestock, irrigate subsistence gardens, harvest water lilies for sale, do their domestic washing and more. Wetlands are also an important source of traditional medicine.



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Recreation

Recreation is a major factor in valuing wetlands. Peoples’ psychological quality of life and well-being is largely connected to access to recreation and exercise.

Public parks allow all economic classes to enjoy open air and green space.

A walk through Diyasuru Park - Madeline Dahm / IWMI



THREATS TO WETLANDS



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Current Rate of Loss: 1.2% Per Year

And since the 1980s, as much as 60% of Colombo's wetland area has been lost. The overall rate of loss of Colombo's wetlands is about 1.2% per year due to indiscriminate filling and dumping of solid waste.

“Unless this trend is reversed, the wetland area will decline by one-third over the next two decades.”

– Dr. Priyanie Amerasinghe, Senior Researcher in Human and Environmental Health International Water Management Institute (IWMI) and its Water Land and Ecosystems (WLE) program

Waste-logged water - Madeline Dahm / IWMI





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The water quality situation in Colombo has become critical in the last 5 years. Throughout most of the city, water quality has been classified as “poor” to “extremely poor,” mostly because of untreated domestic wastewater.

Furthermore, dredging wetlands has been a highly controversial issue because it disrupts farming, the natural ecosystem processes and flows, and creates an environment suitable for invasive species to overtake native plants.



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Water Hyacinth (*Eichhornia crassipes*) is a very common invasive plant that is well established. Invasive species like this and other algae forms a mat over the water surface, reducing oxygen availability in the water. When it compacts and dies, it dries up seasonal water bodies, offsetting the normal life cycle of the ecosystem.

Citizen Action



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algae is labor-intensive and expensive.

The Sri Lankan Parliament sits on a wetland - Madeline Dahm / IWMI



Whats next for the Colombo Wetlands

Groups like the [Sri Lanka Land Reclamation & Western Development \(SLLR&DC\)](#) in the Sri Lankan government are actively promoting the economic and livelihood value of the wetland system in Colombo. At present, a management strategy is being discussed, aimed at helping stem the loss of wetlands to urbanization. One of the biggest challenges around managing these urban systems is finding a balance where wetland conservation is made compatible with urban development.

The recent management strategy draws on extensive studies of the ecology, socioeconomic surroundings, and hydrologic modeling, and emphasizes the key role of science in providing an evidence base for restoration of wetlands across the city.



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Kalhari Munaweera – Environmental Officer at Diyasaru Park / SLLR&DC - Madeline Dahm / IWMI



Ramsar: International Recognition

In 1990, Sri Lanka became a member of **The Ramsar Convention**, a national treaty that provides the framework for national action for wetland conservation and wise use of their resources. Colombo is being considered by the Ramsar Convention's new program for Wetland Cities. If it receives this accreditation, there is strong incentive for the government to place high priority on the conservation and raising public awareness of the importance of wetlands.

A farmer looks across Talangama Lake - Madeline Dahm / IWMI



“Investing in wetland conservation does add substantial value to the urban economy and it avoids many costly losses and damages. Sri Lanka is emerging as a real leader in calculating these figures of economic values of wetlands.”



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The greatest challenge to wetland management is understanding that urban development doesn't necessarily have to come at the hefty pricetag of wetland loss. Sustainable management Colombo's wetlands is a relatively low-cost investment in long term infrastructure, and Colombo cannot afford to lose another inch.

Thrive blog is a space for independent thought and aims to stimulate discussion among sustainable agriculture researchers and the public. Blogs are facilitated by the CGIAR Research Program on Water, Land and Ecosystems (WLE) but reflect the opinions and information of the authors only and not necessarily those of WLE and its donors or partners. WLE and partners are supported by CGIAR Fund Donors, including: ACIAR, DFID, DGIS, SDC, and others.



JANUARY 10, 2018

Natural Infrastructure for Water

In 2018, the UN designated World Water Day's theme was Nature for Water, while Stockholm World Water Week focused on Water, ecosystems and human development. WLE researchers have a wealth of knowledge and information to share on the role of natural infrastructure in water resource management. Through its lead organization, the International Water Management Institute (IWMI), WLE is interested in the links between natural capital and its contribution to livelihoods, development and sustainable growth.



MARCH 09, 2015

Putting a price on wetlands

If tomorrow, all of East Africa's wetlands disappeared, what costs would governments incur? While it is nearly impossible to place a quantitative value on wetlands, a new project is exploring methods of valuation of wetlands in the Nile Basin.

1 comment



FEBRUARY 02, 2017

Exaggerating the value of wetlands for natural disaster mitigation is a risky business

There is certainly evidence to suggest that wetlands can help reduce the negative impact of some natural disasters. However, wetlands cannot be treated as a disaster mitigation cure-all: they should be considered as one piece of a context-specific puzzle.

6 comments



FEBRUARY 01, 2016



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 World Wetlands Day 2016

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RELATED PUBLICATIONS

Wetlands and people

International Water Management Institute (IWMI). 2014. Wetlands and people. Colombo, Sri Lanka: International Water Management Institute (IWMI).

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Towards decision support-based integrated management planning of papyrus wetlands: a case study from Uganda

Zsuffa, I.; van Dam, A. A.; Kaggwa, R. C.; Namaalwa, S.; Mahieu, M.; Cools, J.; Johnston, Robyn. 2013. Towards decision support-based integrated management planning of papyrus wetlands: a case study from Uganda. Wetlands Ecology and Management, 15p. (Online first)

Lagoons of Sri Lanka: from the origins to the present

Silva, E. I. L.; Katupotha, J.; Amarasinghe, O.; Manthrithilake, Herath; Ariyaratne, Ranjith. 2013. Lagoons of Sri Lanka: from the origins to the present. Colombo, Sri Lanka: International Water Management Institute (IWMI). 116p. doi: <https://dx.doi.org/10.5337/2013.215>

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