

# Fighting Climate Change Through Wetlands Protection

□ Gemma Alexander □ January 29, 2019



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February 2 is World Wetlands Day, and if an environmental issue ever needed a day dedicated to raising awareness, it would be wetlands protection.

For most of human history, wetlands have been known as swamps or bogs, believed to be the source of disease, and scorned as unproductive. Wetlands have been and continue to be systematically destroyed around the world. It's only in recent decades that we have started to understand why you shouldn't drain the swamp.

## What Are Wetlands?

Wetlands are areas that are either seasonally or permanently saturated with water or flooded.

There are three kinds of wetlands: inland, coastal, and man-made. Inland wetlands include marshes, ponds, bogs, fens, rivers, floodplains, and swamps. Coastal wetlands include saltwater marshes, estuaries, mangroves, lagoons, and even coral reefs. Fishponds, rice paddies, and salt pans are human-made wetlands. Each of these has an environmental role to play.

# Environmental Value of Wetlands

Directly or indirectly, wetlands provide most of the world's consumable fresh water. More than 40 percent of all species live and breed in wetlands. Inland wetlands function like sponges, absorbing and storing water to reduce flooding during heavy rainfall. Also like sponges, wetlands release stored water during dry seasons, delaying droughts and minimizing water shortages.

Coastal wetlands reduce storm surges and floods, protecting coastlines from damage. A 2017 study found that coastal wetlands prevented \$625 million in direct flood damages during Hurricane Sandy, reducing damages up to 30 percent in some areas.

But one ecological service provided by wetlands has a global effect. Wetlands are a carbon sink. Because they absorb and store carbon, wetlands are critical for slowing climate change. Peatlands cover only three percent of the Earth's surface, yet store at least twice as much carbon as the world's standing forests. In fact, salt marshes, mangrove forests, and seagrass meadows are each more efficient carbon sinks than rainforests.



BECAUSE THEY ABSORB AND STORE CARBON, WETLANDS ARE CRITICAL FOR SLOWING CLIMATE CHANGE.  
IMAGE: RICS129, PIXABAY

# Threats to Wetlands

Scientists recognized the importance of wetlands by 1970, but around 35 percent of natural wetlands were lost between 1970 and 2015. The rate of destruction has accelerated in the 21<sup>st</sup> century.

The threats to wetlands are myriad, but surprisingly, most wetlands destruction is intentional. Development for human use and the construction of dams and dikes, often in a misguided attempt at flood protection, are among the greatest threats to wetlands.

## What Can I Do?

Check with your local building authority for best practices if you are building near wetlands. If you have waterfront property, use living shoreline design techniques to manage it. In daily life, use water wisely, and use phosphate-free detergents, nontoxic household cleaners, and unbleached paper products. Contribute to organizations that protect wetlands. Consider well-known organizations like The Wetlands Initiative, Waterkeeper Alliance, and Ducks Unlimited, but don't forget the small groups dedicated to local wetlands protection.

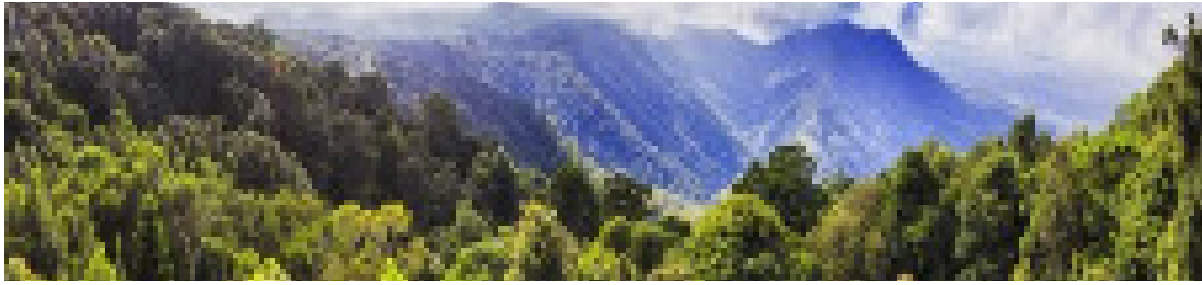
The 1971 international Convention on Wetlands, called the Ramsar Convention after the town where it was signed, provides governments with the framework for wetlands conservation. The Convention's website is full of information, including the Global Wetland Outlook report, for anyone who wants to learn more.

*Feature image courtesy of cocoparisienne, Pixabay*

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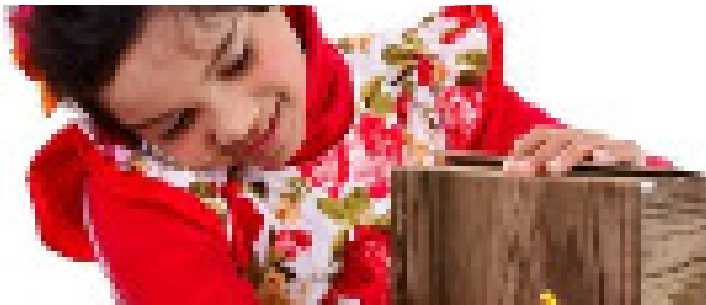


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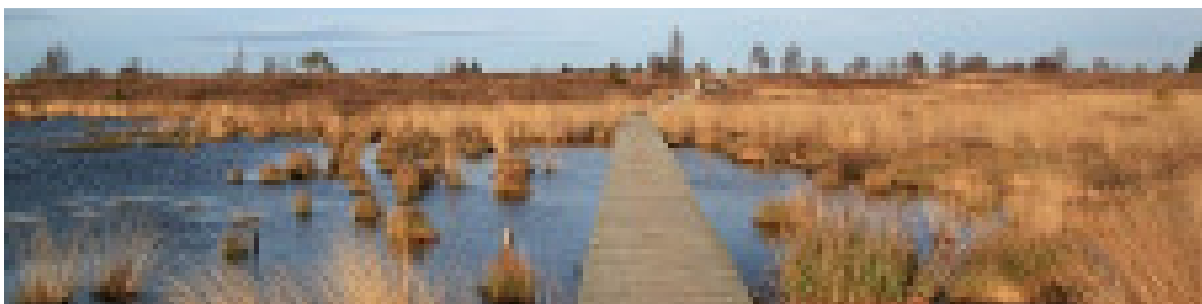


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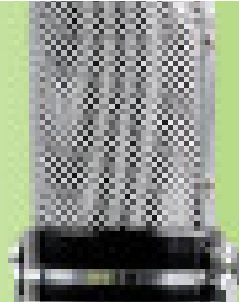


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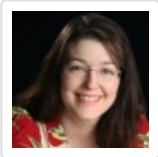


## Fighting Climate Change Through **Wetlands** Protection

# Innovator Interview



Earth911 Podcast, Jan. 28, 2019: Micaela Preston of MindfulMomma



### Gemma Alexander

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native plants. After working in a genetics laboratory and at a landfill, she now writes about the environment, the arts and family. See more of her writing [here](#).