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We stand for wildlife

WCS CANADA

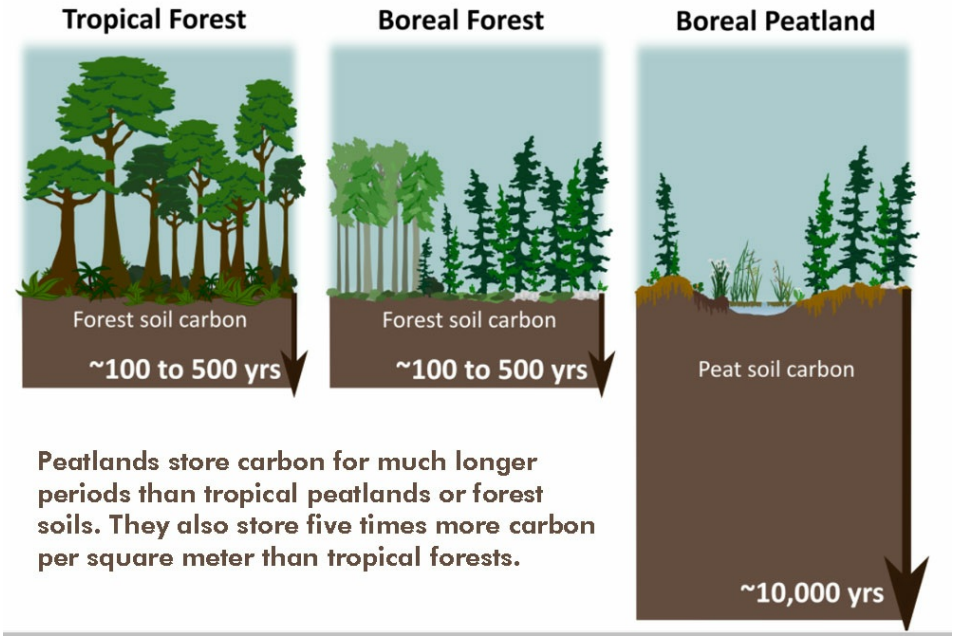
This is a special edition of our newsletter focused on climate. In the wake of the COP26 summit, it is clear that we have a lot of work still to do to curb the worst impacts of climate change. Here in Canada we can start by recognizing the importance of protecting carbon-rich peatlands and other intact wild areas. The Glasgow Climate Pact, in fact, recognizes "the importance of ensuring the integrity of all ecosystems, including in forests, the ocean and the cryosphere, and the protection of biodiversity, recognized by some cultures as Mother Earth." Doing everything we can to keep carbon in the ground and reduce emissions is critical to avoiding impacts like melting Arctic sea ice, the importance of which is outlined in a recent study that involved WCS Canada scientists.

WCS statement on the Glasgow Climate Pact

Vast and intact peatlands are a key part of natural climate solutions

Peatlands in Canada store more than 150 billion tonnes of carbon

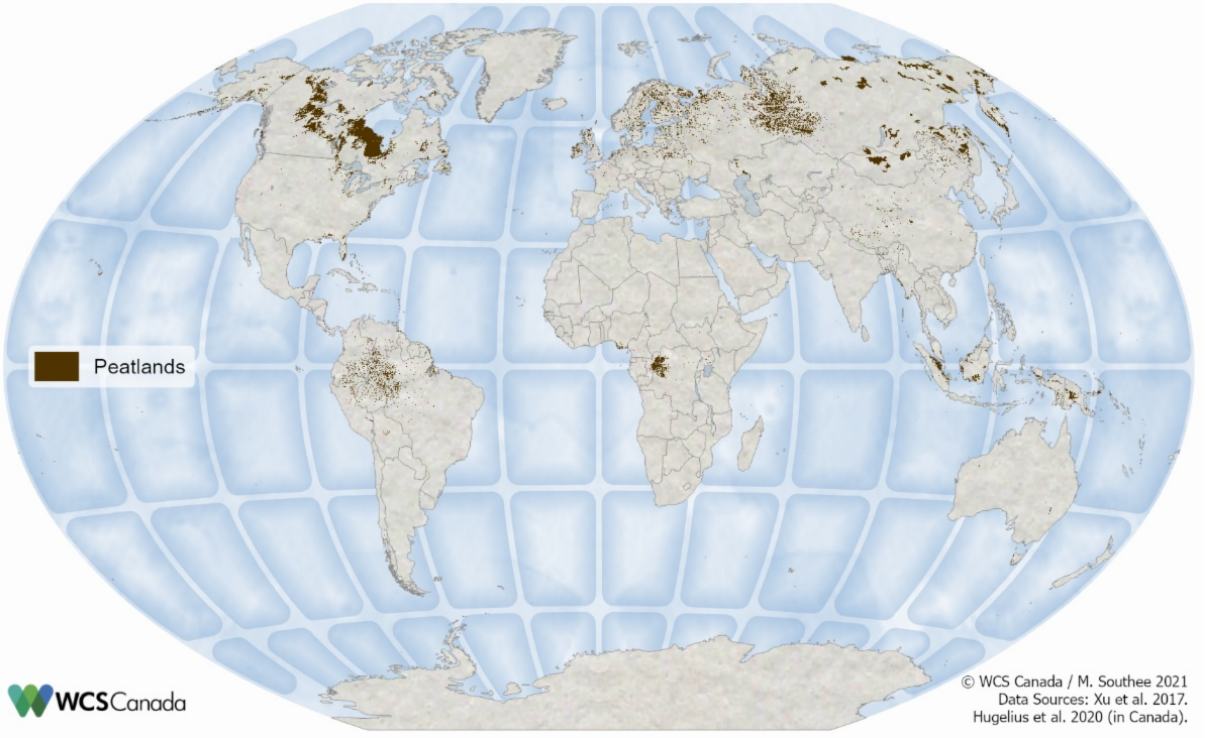
If the COP26 summit made anything clear, it is that we need to embrace solutions that can help stabilize our climate now and keep carbon out of the atmosphere in future ASAP. One of the most important opportunities to do that in Canada is our ability to protect one of the world's greatest natural tools to fight climate change: the vast, carbon-rich peatlands spread across the country.



WCS Canada took the message about the importance of peatlands to the international climate negotiations in Glasgow, including participating in the global Peatland Pavilion. In Glasgow, we presented new collaborative research by experts from across Canada on the importance of peatlands, and our newly revised storymap that takes people from around the world on a virtual tour of these vitally important ecosystems.

Peatlands in Canada – water saturated areas composed of tightly compressed plant material that has built up over centuries – are estimated to store 150 billion tonnes of carbon. The vast peatland areas – more than 1.1 million square kilometres -- that stretch across the boreal zone straddling the country's midsection are a globally important carbon bank. Right now, however, only 10% of the peatland area in Canada is formally protected, and policy safeguards outside these protected areas provide minimal protection. As well, Canada does little to track the carbon stored in peatlands or emissions caused by disturbances such as mining, drainage, wildfires or permafrost thaw. That's particularly concerning given the strong interest in developing mining projects in Ontario's Ring of Fire region, which lies within the Hudson Bay Lowlands -- the second biggest peatland area in the world and a region that stores more carbon than all the managed boreal forest in Canada.

Take a peatlands tour



Canada is home to 25% of the world's peatlands. We have an outsized responsibility for protecting these carbon-rich areas. Map: Meg Southee/WCS Canada

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Stronger policies to safeguard peatlands and support Indigenous-led stewardship is not just an opportunity to keep carbon in the ground, it is also an opportunity to address the biodiversity crisis that is being made worse by climate change. For example, the Hudson Bay Lowland along the Hudson and James Bay coasts in the far north in Ontario, is home to a great variety of life, including many plants that can only be found in Canada. Wildlife species of national conservation concern found here include caribou, wolverine, polar bear, lake sturgeon, red knot, and Hudsonian godwit. It is the location of several Key Biodiversity Areas that include critical stopover habitat for millions of shorebirds and waterfowl. Protecting peatlands will protect the land, the water, and the habitat for these animals.

Shorebirds depend on the nutrient rich coastal zone on Hudson Bay, which is fed by nutrients

Caribou are at risk across Canada but some of the healthiest populations are in intact peatland

from peatlands. Photo: Amelia MacDonald

areas. Photo: Justina Ray / WCS Canada

Recognizing the climate and ecological importance of peatlands is just step one. We must quickly follow up with concrete measures to better steward these vital carbon storehouses. We need to identify which peatland areas are at the highest risk of direct human-caused disturbance and better quantify carbon storage loss and greenhouse gas emissions from these disturbances. And we must better measure and track their role in absorbing and storing carbon and how this is being changed by climate impacts like permafrost thaw and more frequent fires.

Peatlands truly are ecological gems that need greater care. We are focusing a great deal of scientific attention on peatlands and surrounding wild landscapes because these are globally important areas for both people and the planet.

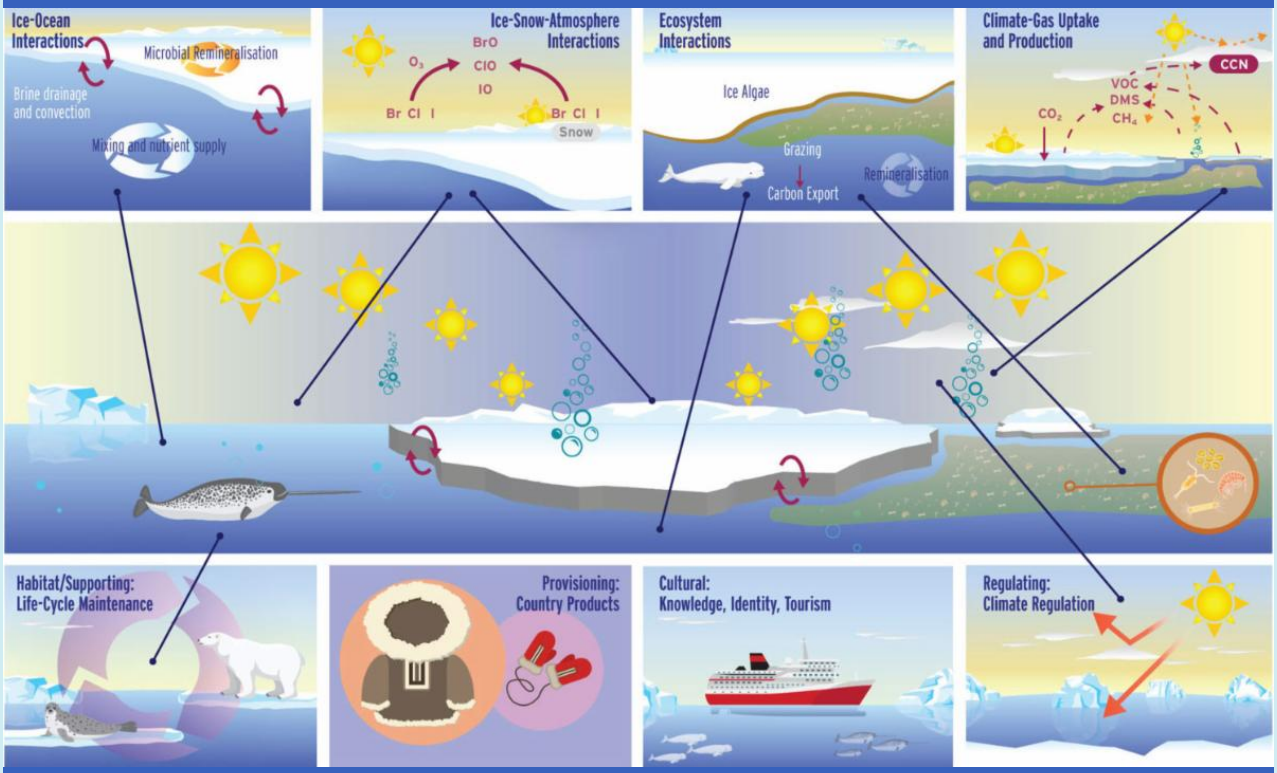
Our presentation from Glasgow will be online soon at globalpeatlands.org. Meanwhile, you can read the research paper *The essential carbon service provided by northern peatlands* and how Canada needs to respond in our policy briefing developed with the Smart Prosperity Institute. You can also listen to WCS Canada scientist Dr. Constance O'Connor talking about why it was important to put a spotlight on peatlands in Glasgow on CBC radio.

A scientific research team near the James Bay coast. Photo: Amelia MacDonald

There's a lot more to ice than meets the eye

The frozen ice surface lying over a polar ocean may not seem like the most hospitable habitat around, but the ice that has traditionally blanketed the Arctic Ocean plays a huge role in shaping both ecosystems and the Earth's climate. Now this ice is rapidly melting thanks to climate change. As a result the ecological services, from providing a platform for polar bears and people to hunt from to absorbing carbon, are under severe threat. A recent paper that WCS Canada's Arctic scientist Steve Insley contributed to looks at the multitude of services and the many complex relationships that are built on this ice and how they are being

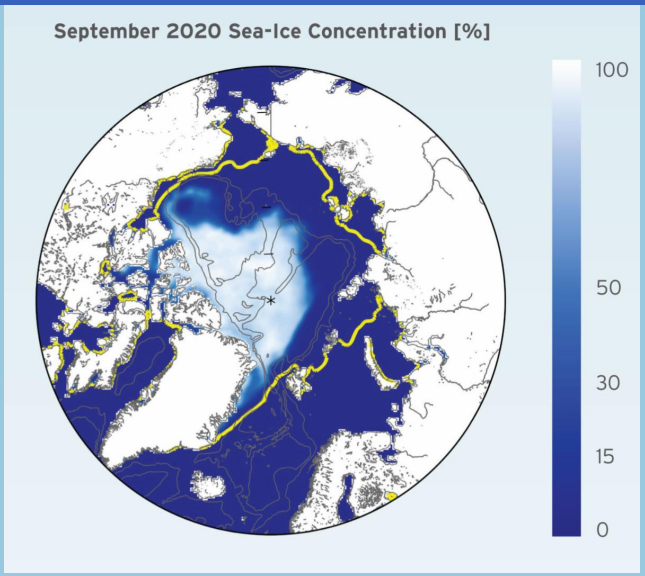
affected by a rapidly heating climate.



Sea ice provides a wide range of ecological services as explained in this graphic, which is part of short summary of the paper.

As the paper notes, conservation actions like establishing Marine Protected Areas can provide some help for species struggling with these changes – like polar bears that have had to shift their foraging to scavenging the shorelines and hunting sea bird eggs instead of ice seals – but, more fundamentally, the real solution is to slow warming as much as possible by cutting back on greenhouse gas emissions as quickly as possible. It's the perfect example of the deep linkages between the climate and biodiversity crisis and how we can't address either in isolation.

The team has also created a reader-friendly summary of this comprehensive study.



This map shows how Arctic sea ice coverage is shrinking. Click on the image to see a summary of the paper including maps.

Arctic sea ice concentration in September 2020. The historical (1979–2018) climatology for the September sea ice edge (15% sea ice concentration) is indicated in yellow.

Support our work to save wildlife!

At WCS Canada, we stand for wildlife and are in the field every day working to save wildlife and wild places. You can support our work by making a secure donation right now!

Top banner image of bears: Jerry Lee. Peatlands top: Lorna Harris

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