View online

We stand for wildlife

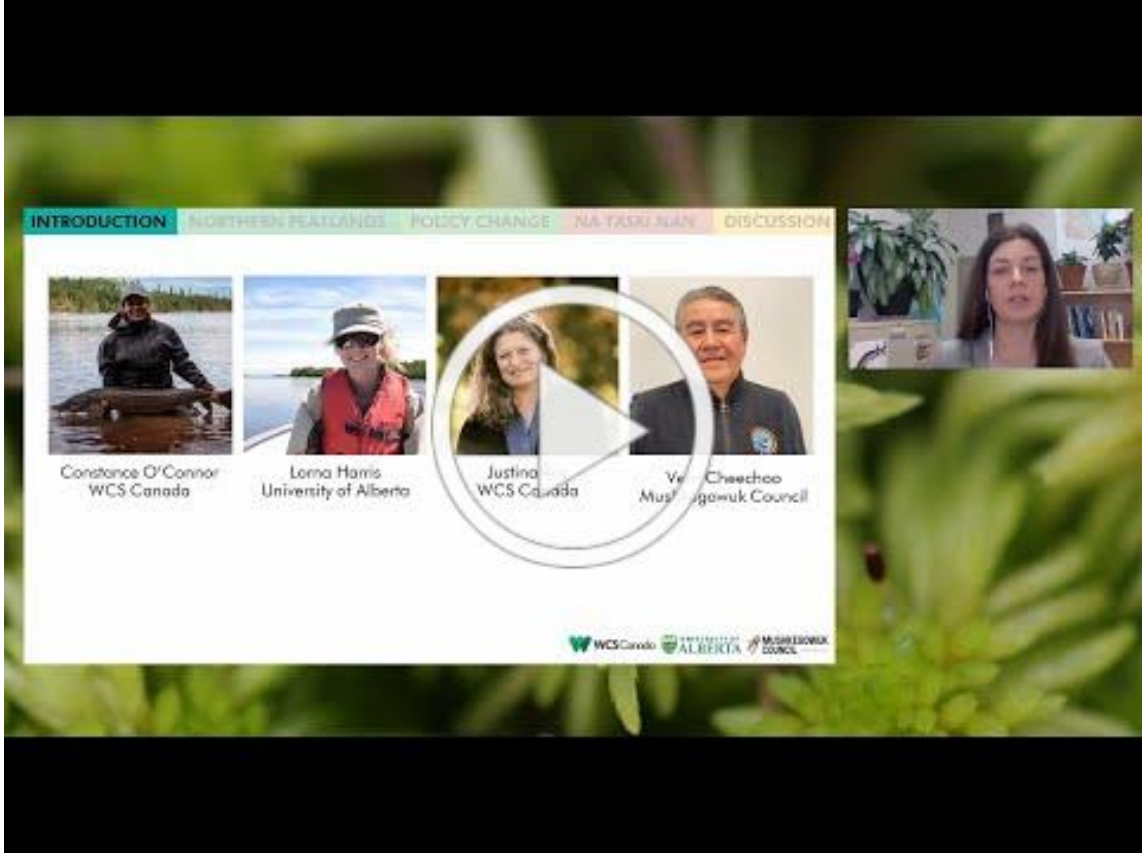
WCS CANADA

Peatlands play a big role in the fight against climate change

These massive carbon storehouses need to be protected

Peatlands and other carbon-rich ecosystems naturally cool the planet by capturing and storing carbon. Today, 50% of the carbon emitted by our cars, industry and other sources is absorbed by nature, including forests, wetlands (including peatlands) and the ocean. Plans to fight the climate emergency largely assume that nature will continue to do its part.

But we have been taking nature's role in fighting climate change for granted. Although many of Canada's peatlands are still intact, they are at risk from development and climate change. Protecting the health of Canada's peatlands – and the carbon stored within them – must be a key part of climate planning with our efforts focused on supporting good land-use decisions, strong policies and financial incentives that encourage the protection of these vital ecosystems. That's the message our team shared with world leaders at the Glasgow Climate Summit last fall. A recording of our presentation as part of the Summit's Peatlands Pavilion is now available.



We were joined for this presentation by Vern Cheechoo from the Mushkegowuk Council, which represents seven First Nations whose homelands in northern Ontario include the world's second biggest peatland area, the Hudson Bay Lowland. Vern talked about the changes that communities are already seeing due to climate change, and about the role Indigenous communities have in conserving the lands they have lived on and stewarded for millennia.

WCS Canada President Justina Ray addressed the need for governments to be proactive in protecting areas like the Hudson Bay Lowland while we still have the opportunity to safeguard the roughly 35 billion tonnes of carbon stored within its peatlands *before* this carbon and the intact natural habitat it is part of is disturbed by multiple human impacts – from roads and mines to flooding by hydropower dams.

Click here for the story of Canada's peatlands in maps and graphics

The director of WCS Canada's Ontario program, Constance O'Connor, who moderated the event, noted that the Hudson Bay Lowland also supports abundant wildlife, many of North America's last free-flowing rivers, and a coastal ecosystem that is globally significant for migratory birds, polar bears and other wildlife.

Peatlands researcher Lorna Harris talked about why these areas are so unique from a climate perspective, noting they continue to actively draw carbon from the atmosphere and store it long-term – often for thousands of years. We are excited to announce that Lorna has recently

joined the WCS team as our Peatlands, Forests and Climate Change Scientist. She will be continuing her research on these critical ecosystems and sharing her scientific knowledge on peatlands, including in another peat-rich area – the Northwest Territories.

Our presentation on the global importance of Canada's peatlands in Glasgow covered a lot of ground, but we think once you dive in, you will gain a new appreciation for these wet and wonderful areas.

The Hudson Bay Lowland is the world's second largest peatland area and a globally important area for migratory birds and other wildlife. Photo: Lorna Harris.

Protecting the Ring of Fire's carbon riches

In the heart of the Hudson Bay Lowland, roughly 400 km north of Thunder Bay, is a 2,000 sq. km crescent of staked mineral claims known as the Ring of Fire. The Ring usually receives attention for the minerals – especially nickel and chromite – beneath its surface. But as Lorna noted in her presentation to the Glasgow Summit, the area couldn't be more important from a climate perspective.

This area is "all peatlands," as Lorna notes – peatlands that are "deep and carbon rich." In fact, it is estimated that the area holds about 250 million tonnes of carbon, equivalent to the annual emissions from 1.3 million cars. This is some of the deepest and oldest peat in the Hudson Bay Lowland – some of this peat is many thousands of years old! And with peat layers taking centuries to accumulate, it cannot be restored in our lifetimes after being disturbed or destroyed.

Right now, the Ontario government is pushing hard to develop the Ring of Fire without regard for the rights of Indigenous Peoples in the area or for the combined consequences of multiple industrial developments on the climate, people, and wildlife of the area. The Ontario

government is cutting First Nations out of land-use planning decisions and ignoring that development in the Hudson Bay Lowland will jeopardize Canada's international commitments to addressing climate change.

We support First Nations in the area that have called for a moratorium on development until a comprehensive regional plan can be developed – one that is made in partnership with Indigenous Peoples, takes into account the combined impacts of all of the proposed developments, and includes a protection plan that ensures that First Nations treaty rights are respected. Over the past decade, our scientists have shown how planning tools could be used to develop a strong proactive plan for this globally important area and how research and monitoring could ensure that the plan is achieving its goals.

By adopting a proactive instead of divisive approach, we can ensure that the peatlands can keep providing a healthy home for people and wildlife and continue doing their outsized part when it comes to cooling the planet.

Surveying a Yukon wetland area as part of a study of birds. Photo: Lila Tauzer/WCS Canada.

Yukon's wetlands need our attention too

For Yukoners, wetlands are grocery stores, water taps and climate controllers. Yet, wetlands and their values are often afterthoughts when it comes to land-use decisions, whether it is allowing mining operations in streams and floodplains or draining them for agriculture or other uses. The Yukon government has tried to address the lack of attention being paid to the valuable services provided by wetlands by creating a new draft Wetlands Policy. The problem is, the policy has major shortcomings, not the least of which is that it fails to set out what exactly the territory is willing to do to protect important wetlands. In fact, the single most effective element missing from the policy is any attempt to define "how much is too much?" when it comes to destroying wetland areas, points out WCS Canada conservation scientist Dr.

Don Reid. Don weighed in on the policy in a CBC interview where he talks about why we need put more value of wetland services.

Our Yukon team has also provided the government with comments on how the draft policy could be improved, principally by providing legal protection for wetlands of special importance, listing clear criteria for when to allow human disturbance of wetlands, and setting limits on wetland loss due to human activity.

New faces around WCS Canada

Dr. Lorna Harris joins us as a Forests, Peatlands and Climate Change Scientist. Lorna's research focuses on how peatlands form and develop over time and how this development may be impacted by environmental change, whether due to climate change or resource development. Lorna is also working on improving links in science and policy for the better protection and management of peatlands. Lorna completed her PhD at McGill University in Montreal, where her research focused on the Hudson Bay Lowland (supported by a WCS Canada Weston fellowship) in northern Ontario. Prior to moving to Canada for her PhD, Lorna worked as a Wetland Project Officer and a Senior Scientist for the Environment Agency of England and Wales and as a Wetland Ecologist and Senior Scientist for the Scottish Environment Protection Agency.

Lorna Harris

Kelly Ferguson is our new Executive Assistant. She has more than 10 years of experience working for several non-profit, museum, and academic institutions including the Royal Ontario Museum and the Harvard Peabody Museum. Kelly completed her M.A. in Historical Archaeology at the University of Massachusetts Boston. Her research focuses on the inhabitants of Northeast North America and the interconnections between plants and people in the past.

Kelly Ferguson

Rachel Charish joins our Western Arctic team as a Research Assistant. She is mapping the interactions between bowhead whales and vessel traffic. Rachel grew up

in a small, landlocked village in central Spain but became fascinated by the marine environment at an early age. She spent several years working as a marine naturalist for a whale watching company in Canada's Pacific Northwest before completing her MSc in Marine Biology at Ghent University. Rachel's graduate research was focused on marine acoustics, and she modelled trends in presence and foraging by bottlenose dolphin and harbour porpoise populations near a Special Area of Conservation on the west coast of Ireland.

Rachel Charish

Liam Cowan (in background)

Caroline Lafond

Leah Rensel

Our research programs benefit enormously from the work of field technicians who help to set up field stations, wildlife monitoring devices (often in very remote places) and assist on field research projects. This winter, **Liam Cowan** will be working with our wolverine team near Red Lake, Ontario for the second year. **Leah Rensel** and **Caroline Lafond** have joined our BC Bats program, where they will be collecting and analyzing data on bat behaviour, including tree roost use, and working to extend use of a probiotic to help defend bats from white-nose syndrome. As an on-the-ground science-based research organization, we depend on these dedicated and talented individuals to make good research happen.

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 mixed flock at James Bay: Amelia MacDonald

DONATE NOW