

Peat fires could accelerate climate change: researchers

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In 1997, a forest fire in Indonesia ignited an area of peatlands that smouldered for months. By the time it was over, the fire had released greenhouse gases equal to 20 to 40 percent of the total worldwide emissions that year from fossil fuels.

But that could be a drop in the bucket compared to future [emissions](#) from peat fires. Indonesian peatlands are dwarfed by Canada's. The total area of all peatland in Canada is estimated to be about twice the size of Saskatchewan.

At this week's meeting of the [American Association for the Advancement of Science](#) (AAAS) in Vancouver, Douglas Woolford of Wilfrid Laurier University will present findings that show how the fire season is becoming longer, and Mike Flannigan of the University of Alberta will highlight the increased risk of peat fires.

During a forest fire, especially in years of [drought](#), peat can also ignite. When that happens, it produces a smoldering, smoky burn that is difficult to extinguish. Peat can grow several meters deep beneath the ground. In fact, some peat fires burn right through winter, beneath the snow, then pick up again in the spring.

A warming climate appears to be increasing the risk of peat fires in the North, according to Flannigan. For example, in 2007, Alaska's Anaktuvuk River region experienced a "tundra fire" fuelled by peat that covered 1,000 square kilometres. Until then, fire had largely been absent

from the tundra since the Holocene epoch—12,000 years ago.

Woolford's statistical analysis has shown that the forest fire season is becoming longer. Now, climate change models have been used to predict greater risk of forest fires in the future. On top of that, a warming climate means dryer weather, which makes [peatlands](#)—rich in legacy carbon—more likely to ignite and release greenhouse gas emissions. This would further contribute to global warming, creating a vicious circle of environmental harm.

Woolford and Flannigan will present their findings at the AAAS session Forest Fires in Canada: Impacts of Climate Change and Fire Smoke that will take place on Sunday, February 19.

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