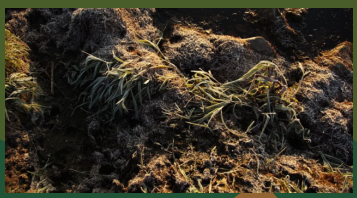
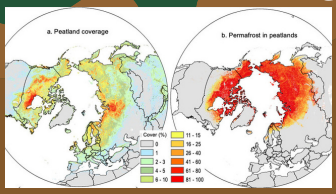
For Peat's Sake

What is Peat?

Peat is the organic layer of soil composed of an accumulation of organic material and decomposed vegetation found in wetlands, such as peatlands [1].



Where is peat found?



[2]

Peatlands are concentrated in **northern latitudes** [2].

a) 3.7 million square kilometers across the Earth are covered by peatlands [2].

b) Almost 1/2 of peatland carbon storage exists in permafrost regions [2].

Why is peat important?

42%

of global soil carbon is stored in peatlands, making them the largest natural terrestrial carbon store [3].

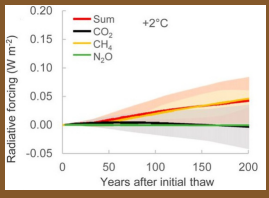
Peat material has a thermo-insolating quality, which is important in minimizing permafrost thaw [4].

In the Arctic, peat carbon storage is **dependent on permafrost** to stay frozen throughout the year [4].

Effects of Climate Change

As permafrost thaws, the peat in the soil thaws and decays, causing Carbon Dioxide and Methane to be released into the atmosphere - which are greenhouse gases contributing to additional warming [5].

At a **2 °C** warming scenario permafrost peatland extent will decrease to half of its current size [2].



[2]

Radiative forcing - changes in the flux of energy in the atmosphere due to factors of climate change [2].

Impacts on Canadian Communities

[6]

12%

of Canada is made up of peatlands [6].

Communities in northern Canada situated on or near peatlands will undergo the strongest increases to risks of **hazards and damages** [7].

Infrastructure

will lose stability, and become more susceptible to mass movement [7].

Increase in wildfires

as peat becomes more vulnerable to warming temperatures [8].

Transportation

will be disrupted as roads deform and travelling routes change [7].

References and Graph sources: https://docs.google.com/document/d/1A4dkRDljmnu56fYO1mAAT4a2LQ4iW5zSLfNJrHt33EM/edit?usp=sharing

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