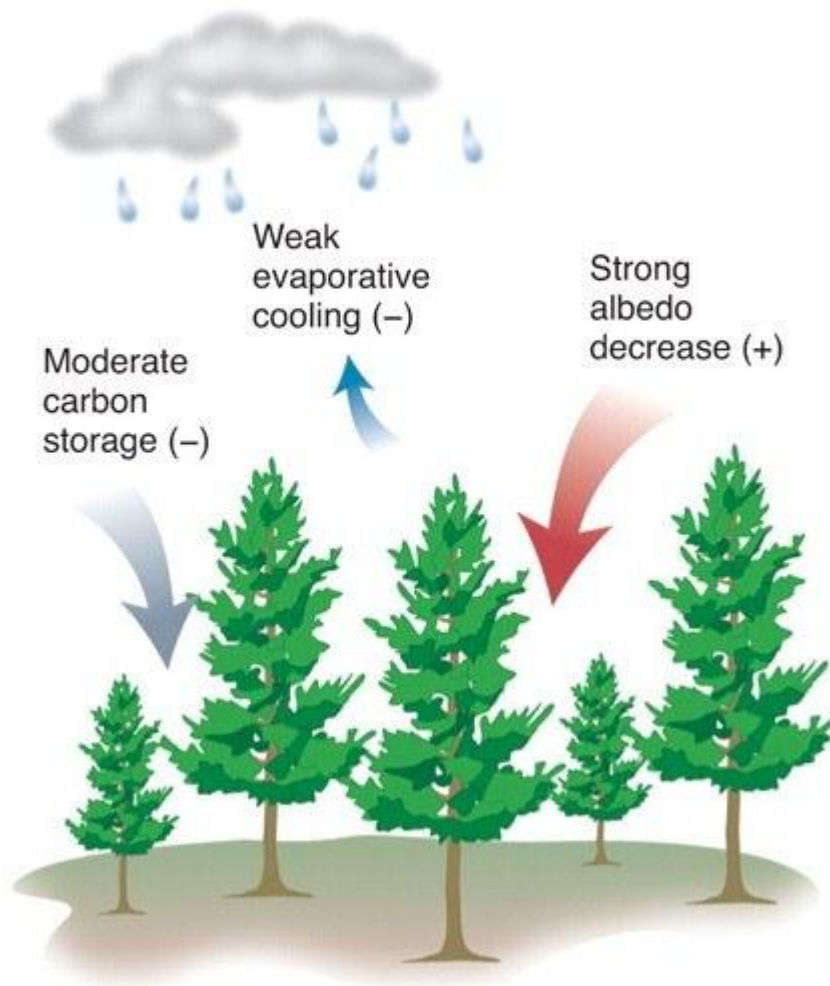


Carbon in the Boreal Forest

Disturbance, fires and aerosols



A. Our vast northern forest is always changing. Two reasons for these changes are:

a) *Severe changes* in the boreal forest from fire, insects, logging and other activities make openings in the often closed forest.

b) When openings are made in the forest floor and sunlight reaches it, different plants start to grow there. First grasses and small shrubs grow there.

Then hardwood trees begin to grow, followed by conifer trees. All this may take hundreds of years.

- B. A lot of carbon is stored in the boreal forest. The cold weather here lets dead plant material to gather. Because of the cold weather and peat lands (which have no oxygen) this dead plant material cannot break down and decay. So the carbon stays in the soil which comes from dead plant material and dead roots in the soil.
- C. When forests become dead because of insects, logging or land clearing, the boreal forest warms up. The carbon which is in the cold wetlands and the plants will begin to break down and decompose.
- D. *Global warming* happens because there are high levels of greenhouse gases. These extra gases in the atmosphere come from:
 - burning of fuels
 - methane gas from peat lands and garbage dumps
 - chemical fertilizers in agriculture

Verbatim and summaries were gathered from the following websites:

[http://www.borealforest.org/index.php?category=world boreal forest&page=overview](http://www.borealforest.org/index.php?category=world_boreal_forest&page=overview)
<http://www.inteboreal.org/globalwarming/ibcc-borealandclimate.pdf>
<http://www.environmentalsociety.ca/issues/forests/climate-change-boreal.html>
<http://www.environmentalsociety.ca/issues/climate/index.html>
<http://www.cwf-fcf.org/assets/pdf/en/cfa-boreal-kit-en-vol-8.pdf>
(This has activities on forest conservation influences)