

Climate change and clearcutting

Key Issues

The “inconvenient truth” that CO₂ and related “climate pollutants” cause global warming is well established. Through the Paris Agreement, nations have adopted targets for reducing production of climate pollutants to limit global warming. In 2020, the Covid-19 pause reduced human production of greenhouse gases by 7% relative to 2019, yet a recent NASA study shows that 2020 tied with the previous record holder, 2016, as the warmest year recorded. Once in the atmosphere, CO₂ takes centuries to be absorbed by biological and geological processes. Thus both reduction of CO₂ emissions and removal of CO₂ from the atmosphere are essential to fight climate change.

Background

Forests are nature’s most effective means of removing CO₂. Biological carbon sequestration is more rapid than geological processes. Photosynthesis allows plants to use light energy to incorporate CO₂ and water into sugars. These are then used as building materials. Carbon is stored both above and below ground. Mature, mixed species forests fix and retain more carbon than tree plantations. Old forests fix more carbon than young.

Damon Matthews at Concordia University has shown that deforestation accounts for 25% of carbon emissions globally – thus increasing global warming.

Given that:

- 1) Deforestation stops photosynthesis, hence less CO₂ is removed from the atmosphere. Lands regenerating from a clear cut sequester less CO₂ than a forest.
- 2) Clearcutting exposes forest soils and leads to the liberation of carbon stored in the soil. In Acadian forests, as much carbon is stored under ground as above ground. Forest management policies that retain forest canopy and structure decrease carbon emissions.
- 3) Clear cutting increases risk of wildfires, due to the large amounts of dead, sun-exposed, flammable biomass left behind. Wildfires liberate vast amounts of CO₂ and particulate matter, accentuating the greenhouse effect. Increased erosion on clear cut lands enhances seasonal water shortages that further increase wildfire risk.

Forestry operations must ensure that the forest continues to capture carbon, making sustainable harvesting essential. Clear cutting should be avoided like the plague!

Recommendations

In light of the role of forests in the fight against climate change, the Province of Nova Scotia must:

- 1) End clearcutting and overharvesting. Tree removals should not exceed 30 percent of a stand at any time. The frequency of logging should be based on our forests’ rate of regeneration, approximately 1% a year. Thus 30 years would pass between such harvests.
- 2) Implement ecological forestry as set out by Dr. Lahey in his *Independent Review of Forest Practices in Nova Scotia*

Helga Guderley, PhD. Healthy Forest Coalition.