



THE WORLD BANK

Environment, Natural Resources & Blue Economy

Boreal forests and Climate Change

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Importance of Boreal Forests

- 30% of the world's most densely forested area
- 70% of boreal forest are in Russia
- soil C in boreal ecosystems account for about five times the total C in the standing biomass ⁽¹⁾
- Forest more than 70 years-old maintain most soil C after fires
- About 33% of lumber and 25% of paper exports ⁽²⁾

(1) Malhi, Y., Baldocchi, D.D. and Jarvis, P.G. 1999 The carbon balance of tropical, temperate, and boreal forests. Plant Cell Environ. 22, 715–740.

(2) S. Gauthier, P. Bernier, T. Kuuluvainen, A.Z. Shvidenko, D.G. Schepaschenko. Boreal forest health and global change. Science, 349 (2015), pp. 819-822

Considerations about Boreal Forests: Risk to change from C sink to source

- Climate change:
 - creating new areas for forests further north
 - Increasing number and intensity of fires
 - Increasing incidence of pests

Considerations about Boreal Forests:

Possible alternatives to mitigate the that risk

- Adopt a landscape approach with a mosaic of land uses
- Adjust harvesting practices
- Plant trees/ ecosystem
- Adjust species mix



Thank you