

# Ontario Forest Research Institute

## Climate related publications 2008 – early 2013

Applied Research and Development Branch • Science and Information Resources Division • Ministry of Natural Resources

Listed below are publications related to climate and climate change that were authored or co-authored by OFRI staff between January 2008 and April 2013, sorted by general subject area. Unless otherwise noted, these publications are available in English only via the contacts listed below.

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## Early 2013

**Effect of age and disturbance on decadal changes in carbon stocks in managed forest landscapes in central Canada.** Ter-Mikaelian, M.T., S.J. Colombo and J. Chen. *Mitigat. Adapt. Strat. Global Change* DOI 10.1007/s11027-013-9460-4

**Climate-diameter growth relationships of black spruce and jack pine trees in boreal Ontario, Canada.** Subedi, N. and M. Sharma. *Global Change Biol.* 19(2): 505-516.

**Analysis of Ontario and Canada's harvested wood products carbon stocks and carbon flows from harvest to disposal.** Chen, J., S.J. Colombo and M.T. Ter-Mikaelian. *Ont. Min. Nat. Resour., Appl. Res. Develop. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRR-33.*

**Modelling carbon dynamics and response to environmental change along a boreal fen nutrient gradient.** Webster, K.L., J.W. McLaughlin, Y. Kim, M.S. Packalen and C.S. Li. *Ecol. Model.* 248: 148-164.

## 2012

**Forest protection and forest harvest as strategies for ecological sustainability and climate change mitigation.** Colombo, S.J., J. Chen, M.T. Ter-Mikaelian, J. McKechnie, P.C. Elkie, H. L. MacLean and L.C. Heath. *For. Ecol. Manage.* 281: 140-151.

**An assessment of the vulnerability of forest vegetation of Ontario's Clay Belt (Ecodistrict 3E-1) to climate change.** Parker, W.C., S.J. Colombo and M. Sharma. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRR-32.* 28 p + append.

## 2011

**The carbon neutrality assumption for forest bioenergy for electricity production: A case study for northwestern Ontario.** Ter-Mikaelian, M.T., J. McKechnie, S.J. Colombo, J. Chen and H.L. MacLean *For. Chron.* 87(5): 644-652.

**Forest carbon management and carbon trading: A review of Canadian forest options for climate change mitigation.** Golden, D.M., M.A. Smith and S.J. Colombo. *For. Chron.* 87(5): 625-635.

**Opportunities and challenges for Ontario's forest bioeconomy.** Puddister, D., S.W.J. Dominy, J.A. Baker, D.M. Morris, J. Maure, J.A. Rice, T.A. Jones, I. Majumdar, P.W. Hazlett, B.D. Titus, R.L. Fleming and S. Wetzel. *For. Chron.* 87(4): 468-477.

**Forest bioenergy or forest carbon? Assessing trade-offs in greenhouse gas mitigation with wood-based fuels.** McKechnie, J., S. Colombo, J. Chen and W. Mabee and H.L. MacLean. *Env. Sci. Technol.* 45(2): 789-795.

**Carbon dynamics of North American boreal forest after stand replacing wildfire and clearcut logging.** Seedre, M., B.M. Shrestha, H.Y.H. Chen, S. Colombo and K. Jogiste. *J. For. Res.* 16(3): 168-183.

**Why we disagree about assisted migration: Ethical implications of a key debate regarding the future of Canada's forests.** Aubin, I., C.M. Garbe, S. Colombo, C.R. Drever, D.W. McKenney, C. Messier, J. Pedlar, M.A. Saner, L. Venier, A.M. Wellstead, R. Winder, E. Witten and C. Ste-Marie. *For. Chron.* 87(6): 755-765.

**The implementation of assisted migration in Canadian forests.** Pedlar, J.H., D.W. McKenney, J. Beaulieu, S.J. Colombo, J.S. MacLachlan and G.A. O'Neill. *For. Chron.* 87(6): 766-777.

**Assessment of assisted migration effects on spring bud flush in white spruce (*Picea glauca* [Moench] Voss) seedlings.** Lu, P. and R. Man. *For. Chron.* 87(3): 391-397.

**Assessing assisted migration as a climate change adaptation strategy for Ontario's forests: Project overview and bibliography.** Eskelin, N., W. C. Parker, S.J. Colombo and P. Lu. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRR-19.* 44 p.

**Wind damage in a partially harvested boreal mixedwood stand in northeastern Ontario.** Rice, J.A. and R. Man. *Ont. Min. Nat. Resour., Ont. For. Res. Inst., For. Res. Rep. No 175.* 13 p. + append.

## 2010

**Carbon budget of Ontario's managed forests and harvested wood products, 2001-2100.** Chen, J., S.J. Colombo, M.T. Ter-Mikaelian and L. Heath. *For. Ecol. Manage.* 259(3): 1385-1398.

**Current and projected future climatic conditions for ecoregions and selected natural heritage areas in Ontario.** McKenney, D.W., J.H. Pedlar, K. Lawrence, P.A. Gray, S.J. Colombo and W.J. Crins. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRR-16.* 24 p.

**Climate change and peatland research project.** McLaughlin, J. *Ont. Min. Nat. Resour., Far North IKM Proj. Tech. Note No. IKMP-028.* 9 p. (Int. rep.).

**Effects of thermal model and base temperature on estimates of thermal time to bud break in white spruce seedlings.** Man, R. and P. Lu. *Can. J. For. Res.* 40(9): 1815-1820.

## 2009

**Climate change and Canada's forests: From impacts to adaptation.** Williamson, T.B., S.J. Colombo, P.N. Duinker, P.A. Gray, R.J. Hennessey, D. Houle, M.H. Johnston, A.E. Ogden and D.L. Spittlehouse. *Nat. Resour. Can., Can. For. Serv., Northern For. Res. Centre, Edmonton, AB; Sustain. For. Manage. Network, Univ. Alberta, Edmonton, AB.* 112 p. (electronic only; download from [http://bookstore.cfs.nrcan.gc.ca/detail\\_e.php?recid=12589030](http://bookstore.cfs.nrcan.gc.ca/detail_e.php?recid=12589030))

**Forecasting carbon storage and carbon offsets for southern Ontario afforestation projects: The 50 million tree planting program.** Parker, W.C., G. Nielsen, J. Gleeson and R. Keen. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRN-10.* 8 p.

**Carbon offsets from afforestation and the potential for landowner participation in Ontario.** Gleeson, J., G. Nielsen and W.C. Parker. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRN-09.* 4 p.

**The role of planted forests in climate action.** Parker, B. *Silv. Mag.* Summer 2009. pp. 8-11.

**A case of severe frost damage prior to budbreak in young conifers in northeastern Ontario: Consequence of climate change?** Man, R., G.J. Kayahara, Q. Dang and J. Rice. *For. Chron.* 85(3): 453-462.

**An evaluation of site index models for young black spruce and jack pine plantations in a changing climate.** Subedi, N., M. Sharma and J. Parton. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRR-15.* 16 p.

**Boreal mixedwood watershed riparian zone cation cycling during contrasting climatic years.** McLaughlin, J. *Soil Sci. Soc. Am. J.* 73(4): 1408-1418.

## 2008

**Ontario's forests and forestry in a changing climate.** Colombo, S.J. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Rep. CCRR-12.* 21 p.

**Future carbon storage in harvested wood products from Ontario's Crown forests.** Chen, J., S.J. Colombo, M.T. Ter-Mikaelian and L.S. Heath. *Can. J. For. Res.* 38(7): 1947-1958.

**Fact and fantasy about forest carbon.** Ter-Mikaelian, M.T., S.J. Colombo and J. Chen. *For. Chron.* 84(2): 166-171.

**Managing tree seed in an uncertain climate: Conference summary.** Colombo, S.J., B. Boysen, K. Brosemer, A. Foley, and A. Obenchain. *Ont. Min. Nat. Resour., Appl. Res. Devel. Br., Sault Ste. Marie, ON. Climate Change Res. Info. Note CCRN-08.* 8 p.

**Ontario.** Chiotti, Q. and B. Lavender (with contributions from K. Abraham, J. Casselman, S. Colombo, P. Crabbé, B. Crins, R. Davis, A. Douglas, P.A. Gray, L. Ignace, C. Lemieux, R. McAlpine, M. Obbard, C. O'Hara, J. Richard, C. Sadowski, D. Scott, M. Taylor and E. Wall). Pp. 227-274 *in* D.S. Lemmen, F.J. Warren, J. Lacroix and E. Bush (eds). *From Impacts to Adaptation: Canada in a Changing Climate 2007.* Gov. Can., Ottawa, ON. 446 p.

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