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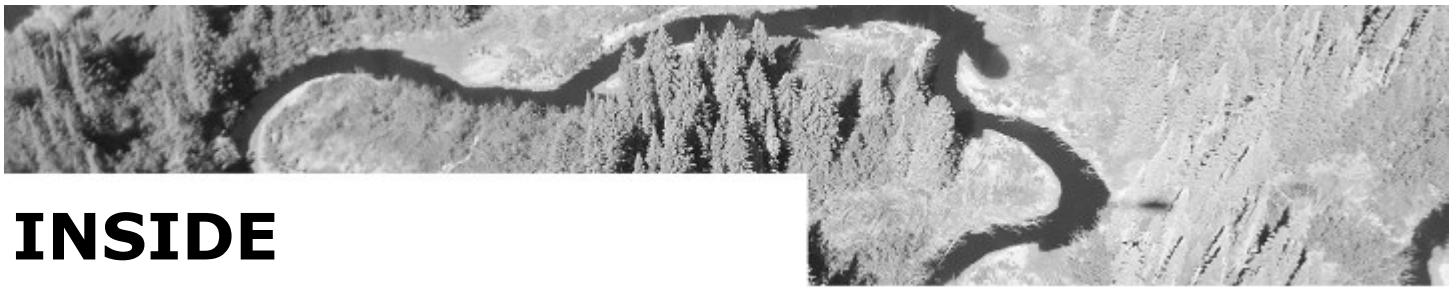

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Adapting forests to climate change

Glen Prevost, P.Eng., R.P.F., Ontario Woodlot Association

Forest managers and owners need good, practical information to make decisions to adapt their forests to climate change. To address this need, Natural Resources Canada is implementing a large adaptive silviculture research study at the Petawawa Research Forest (PRF). This study, called the Adaptive Silviculture for Climate Change (ASCC) Study, is the first of its kind in Canada. The study incorporates the latest research and methods for adapting forests to climate change. It is led by Dr. Trevor Jones (Research Scientist), Dr. Nelson Thiffault (Research Scientist), Michael Hoepting (Silviculture Research Forester), Jeff Fera (Forest Research Officer), and Liz Cobb (PRF Operations Manager). The outcomes will provide insight into how forests can be managed in the face of climate change.

The Petawawa Research Forest (PRF), located in Chalk River, Ontario, is a 10,000-hectare (24,711 acre) research forest. Operated by Natural Resources Canada's Canadian Forest Service, the PRF aims to be a living laboratory for innovative forest research as well as a hub for forestry knowledge transfer. The PRF was established in 1918 and has continued to build upon a rich history of data and observations to help researchers develop solutions for the challenges facing the forests of today.

Table 1. Adaptation Treatment Definitions and Goals.

	Adaptation Treatment Definition	Adaptation Treatment Goal
Treatment 1: Control	Since climate change impacts all forests globally, a true "control" or "do nothing" treatment cannot be maintained. An approach is taken where forests are allowed to respond to climate change in the absence of direct silvicultural interventions.	Allow forests to respond to climate change without direct management intervention.
Treatment 2: Business as Usual	The implementation of best practice silvicultural systems and methods typically used in the area to achieve forest management goals.	Maintain desired forest conditions using existing techniques.
Treatment 3: Resistance	Actions that improve the defences of the forest against anticipated changes or directly defend the forest against disturbance to maintain relatively unchanged conditions.	Maintain relatively unchanged forest conditions over time in relation to a reference condition.
Treatment 4: Resilience	Actions that accommodate some degree of change but encourage a return to prior condition or desired reference conditions following disturbance.	Allow some change in current conditions but encourage an eventual return to reference conditions.
Treatment 5: Transition	Actions that intentionally accommodate change and enable ecosystems to adaptively response to changing and new conditions.	Actively facilitate change to encourage adaptive responses.

Adaptive Silviculture for Climate Change Network

This research project is part of the Adaptive Silviculture for Climate Change Network and is the first research site in the network that is outside of the United States. The network is led by Linda Nagel from Colorado State University and Maria Janowiak and Chris Swanston from the United States Forest Service. The project consists of eleven research sites (nine in the United States and two in Canada — the first at PRF and a second in Northern British Columbia at the John Prince Research Forest). These sites have been established to investigate how forests can be adapted to climate change. Each site represents a different forest type. Site specific treatments are developed and implemented based on local conditions and knowledge. All sites maintain a consistent research and data collection structure so results can be compared between research sites.

Each site implements at least four different treatments: control; resistance; resilience; and transition (see Table 1). The PRF will have a fifth treatment type called business as usual that will act as a second type of control.

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Resistance and business as usual treatments aim to return the forest to its present condition after a disturbance, such as harvesting. Resilience has the same goal but accommodates some differing methods and successional pathways to achieve that goal. Transition allows the forest to move to a new condition that is not historically typical of that region but is adapted to climate change.

Climate Change and the Petawawa Research Forest

Framing the study required understanding some of the climate change impacts anticipated at the PRF. These impacts are similar to those expected elsewhere in southern and central Ontario and include:

- Continued snow and ice storms leading to tree crown damage and snow loading on seedlings;
- Warmer winter temperatures and increased evapotranspiration;
- Rain on snow events leading to rapid snow melt and fluctuating water tables; and
- Increasing summer moisture stress due to drought and the increased potential for wildfire concerns.

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An Adaptive Silviculture for Climate Change project research site has been established at the PRF. Part of an international network of research installations, it is one of two sites in Canada, the other located at the John Prince Research Forest in Northern British Columbia. These photos are from the harvest that started in November 2021 at the Petawawa Research Forest. Photo credit: Petawawa Research Forest – Natural Resources Canada.

This transition treatment is a clearcut with seed trees. It will be planted with red pine, pitch pine, red oak, and white oak. Photo credit: Petawawa Research Forest – Natural Resources Canada

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Climate change will present challenges and opportunities for accomplishing the management objectives of the Petawawa Research Forest and include:

- Increased drought stress leading to slower growth of established trees and increased mortality in regeneration;
- Shorter, milder winters could lead to challenges with the timing of vegetation management and harvest, but may also enable the establishment and growth of new, high-value species;
- Infrastructure on the PRF could be taxed by large storm events and heavy rains; and
- Changes in precipitation patterns and increased drought could increase stress and lead to increases in forest insects and diseases

Research Design

The ASCC research site at the PRF covers 189 hectares of land situated in stands with major components of white and red pine, and mid-canopy components of aspen, white birch, red maple, balsam fir, and white spruce. The control treatment will be situated in stands representing a future desired condition. These stands will serve as a benchmark of natural succession in the absence of management.

The business as usual treatment will use the standard uniform shelterwood silvicultural system used in pine forests in the Great Lakes-St Lawrence Forest. The goal is to regenerate a well-stocked productive, pine-dominated stand. Growing sawlogs and maintaining high-quality habitat will be key priorities in this treatment. A first harvest will reduce the basal area down to 12-14 m2/ha. Planting of white pine from local seed sources will occur after the first harvest and natural regeneration of pine will be encouraged. A second harvest will occur when the regeneration is six meters tall.

The resistance treatment has the same goals and treatment method as the business as usual treatment but includes the planting of white pine from within the local seed zone as well as seedlings from seed sourced from warmer climates that are anticipated to be optimized for a future climate.

The resilience treatment will use an irregular shelterwood system with expanding gaps. Goals include: creating a well-stocked, multi-aged stand that is white pine dominated but with components of red oak, aspen, and red pine; promoting low susceptibility to disturbance and fire; growing sawlogs; enhancing species and genetic diversity; and maintaining high-quality habitat.

Natural regeneration will be encouraged, and planting will occur in the gaps using white pine, red oak, and white oak, all from sources optimized for future conditions. White oak will be a new addition to the area as its natural northern range ends just north of Ottawa.

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The transition treatment will use a clearcut with seed tree system, leaving 16 to 35 stems per hectare after harvest. The goals include providing wood products, promoting a species mix that is adapted to drought, wildfire, storm, insects, and diseases, and maintaining wildlife habitat. Planting will occur after the harvest and will include local red pine stock as well as pitch pine, red oak, and white oak from sources optimized for future conditions. Pitch pine will be a new addition to the area as its natural northern range ends along the St. Lawrence River near Kingston and the Quebec-Ontario-New York border.

Implementation

The study is currently underway with harvests starting in November 2021 and ongoing as of this writing. Preparatory work was undertaken through 2020 and 2021. The researchers hope the site becomes a hub for other researchers who want to answer questions about climate change and its impacts on ecosystems and wildlife. This article is a brief description of what is a complex, leading-edge, and exciting project. Those who wish to know more can contact Dr. Trevor Jones (trevor.jones@canada.ca) project Lead Scientist at the Canadian Forest Service.

Acknowledgements

The Adaptive Silviculture for Climate Change Network (www.adaptivesilviculture.org) was instrumental in developing this study with particular thanks to Linda Nagel, Courtney Peterson, and Maria Janowiak. Jeff Fera and Michael Hoepting from the Canadian Wood Fibre Centre, Canadian Forest Service, Natural Resources Canada provided key information for this article.

References

Canadian Forest Service. (2021). Adaptive Silviculture for Climate Change at the Petawawa Research Forest: Project Overview. Unpublished report.

Nagel, L.M., Palik, B.J., Battaglia, M.A., D'Amato, A.W., Guldin, J.M., Swanston, C.W., Janowiak, M.K., Powers, M.P., Joyce, L.A., Millar, C.I., Peterson, D.L., Ganio, L.M., Kirscbaum, C., and Roske, M.R. (2017). Adaptive silviculture for climate change: A national experiment in manager-scientist partnerships to apply an adaptation framework. Journal of Forestry, 115(3), 167-178.

Prevost, G. (2020). Adaptive silviculture for climate change: An experimental installation at the Petawawa Research Forest. FPInnovations: Pointe-Claire, QC. Retrieved from https://www.cif-ifc. org/ascc/

Adapting forest operations to climate change

Mark Partington, R.P.F., Manager, Transportation and Infrastructure, FPInnovations, Pointe-Claire, Québec

The changes in climate experienced in recent years is forecasted to continue and these changes are expected to have significant impacts on forest operations management, such as restrictions on seasonal transportation schedules, increased demands on water crossing infrastructure, and decreased ability to utilize winter (frozen) roads.

Adaptation is needed to current forest operations strategies, planning, equipment, transportation and infrastructure so that historical practices can be transformed to create modernized Ontario forest operations that have the flexibility to react and respond to climate conditions that will be significantly different from the past.

Before adaptation practices are implemented a structured approach should be taken to consider questions such as: (1) Are new operational problems or challenges occurring, as compared to historical practices? (2) What types of weather events are occurring, or are forecast to occur, that may cause problems? (3) What aspects of forest operations are felt to possibly be the most critically impacted by changes to the climate? (4) What practices, tools, strategies, and policies are available that will be effective in creating resilient forest operations?

This structured approach can occur through a climate change risk and vulnerability assessment through which a risk and vulnerability profile can be built which indicates the probability of certain weather events occurring, and the potential consequences for forest operations can be recognized. This will allow for a focus of appropriate resources and attention, so that industry and government can get the best bang for their buck for any adaptation practices implemented, which is critical, given the limited time and financial resources available for significant changes to existing operations.

FPInnovations has supported many operationally focused vulnerability assessments across the country and most recently worked with a forest company in Ontario to understand their specific challenges and to identify short-long term actions to create resilient forest operations. In this project, the key challenge was the inability to reliably implement forest harvesting operations in the winter due to recent milder winter temperatures.

From this effort many critical changes in climate were identified including, significant delays of winter onset, organic soils not achieving frozen conditions until the end of January, spring conditions occurring earlier, winter season starting with wetter fall soils, amongst other conditions. These observational changes were then compared to forecasted climate conditions to validate these observations. The publicly available datasets used in this assessment indicated that the number of frost days (days below 0°C) is forecasted to reduce by 22% by the 2050s as compared to the period of 1976 -2005 and the length of the frost-free season is forecast to increase by 42% for the same period.

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The impacts of the changing climate to operations were identified which included inability to achieve targeted winter harvest levels, reduced inventory at the mills, unreliable working schedules for contractors, and increased road construction costs to upgrade winter-only roads to all-season roads, amongst many others. These impacts of course can have a significant impact on delivered fibre costs but also on the ability to provide reliable supplies of fibre to the mills.

From this assessment the forest company identified a series of 56 tools, strategies, and practices that could be considered to reduce the risk of climate change to the winter operating season. The next step in this assessment is to evaluate each of these adaptation options, develop a prioritized list that considers costs and benefits, and generate a roadmap to implementation.

Climate change in Ontario is having an immediate impact on forest operations throughout the province. Industry and governments must act to implement short- and long-term adaption practices to ensure that a reliable fibre supply can be provided through the creation of resilient forest operations. A structured climate change vulnerability assessment can be used to assist in validating field observations, identify areas for an initial plan to reduce risks, and implement an adaptive management strategy where continuous improvements to and evaluations of climate resilient forest operations can take place. Further delays in identifying and implementing climate change adaption cannot afford to occur, actions must be taken by all concerned for the long-term performance of forest operations in Ontario.

Forest carbon offsets and climate mitigation

David Stevenson, RPF (Alberta and Saskatchewan), Director of Canadian Operations, FiniteCarbon and

Laird Van Damme, R.P.F.

Magically, trees absorb carbon dioxide and via photosynthesis transform it into sugars and other complex chemicals. This basic sylvan chemistry is critically important as society faces the existential threat of climate change due to greenhouse gas emissions such as carbon dioxide. When a tree is growing it is actively sequestering carbon from the atmosphere at rates that can be described by the mean annual increment (MAI) - a term familiar to most foresters. The MAI (m^3/ha/yr) is larger at younger ages and slows over time to the point when the forest ecosystem is more about storage of carbon in trees, dead wood and soil than it is about rates of sequestration. Too keep things simple, one cubic meter of wood, when dried, is roughly equivalent to a tonne of carbon dioxide equivalent (CO_2e), and one tonne of CO_2e is equal to one carbon offset credit.

Two strategies emerge in climate change mitigation based upon sequestration and storage. Sequestration strategies typically manage the forest to increase MAI. This is already a common practice in intensively managed forests for timber production. Storage strategies typically favour management of forest lands that are conserved, deferred, or protected from harvesting and natural disturbances where possible. Those interested in conserving forest lands often subscribe to the storage strategy. Storage strategies, if exercised on a landscape level, can however impact the supply of forest products and affect regional economics. Forests cannot however deliver a permanent storage of carbon; they can only offer a stopgap solution. Indeed, companies are increasingly dividing their carbon offset strategies into purchases of non-permanent offsets (under 250 years permanence) and permanent offsets for which sequestration is measured in millennia. The Oxford Principles for Net Zero Aligned Carbon Offsetting (Allen *et al.* 2020) provides a structure around the desirability of project types to achieve meaningful long term carbon offsetting. Happily, forest carbon offset projects can deliver both storage offsets and sequestration offsets. Of the two, sequestration offsets command a price premium of 50-100% over the storage offset price.

Life cycle analyses help determine the net carbon benefit in circular economies as defined by European Union policies. Circular economies consider products and services through their life cycle and thus renewable resources that are easy to reuse and recycle such as forest products are preferred over other materials and energy sources such as oil, gas, concrete, and plastics. This is one reason forested EU countries such as Finland and Sweden have seen significant levels of investment in the bioeconomy (Herlevi 2020). Where circular economies are in effect the sequestration strategy tends to dominate thinking because a storage strategy can limit supplies of bioproducts from the forest.

In North America, there is yet to be agreement on a set of policies regarding a circular economy but there are interesting developments in carbon offset markets as part of a response to climate change mitigation and as a means of reconciling storage and sequestration of carbon opportunities. The current state of development has led to competing voluntary and regulatory offset programs not unlike forest certification efforts at conserving biodiversity and ecosystem services initiated in the 1990s.

The main idea behind carbon offsets is to put a price on carbon just as was done for other types of pollutant emissions. For example, sulphur dioxide emissions (mostly from coal energy sources) were addressed at lower costs and with greater efficiencies by cap-and-trade systems compared to strict regulation polices that limit emissions.

Critics of Canadian greenhouse gas mitigation policies argue that they allow polluters to continue polluting. Proponents of these systems point to past successes whereby the market forces encourage innovation, attract capital and allow time for polluters/emitters to adapt. The key element here is that emissions are regulated and are tied to a carbon price. There is a role for regulation and markets to interact with one another in dealing with the climate change challenges.

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The challenge facing foresters and society is that managing greenhouse gas emissions is inherently more complex than managing sulfur dioxide emissions from relatively few large emitters. Carbon life cycles comprise many sources of emissions and more importantly, and equally complex, multiple storage and sequestration opportunities. This complexity is a challenge but also an opportunity and one that will rapidly be of importance for foresters and land managers.

Forest management strategies for working forests are increasingly going to balance both traditional timber harvesting and maximization of carbon offset potential. As carbon prices rise there is a tipping point for forest owners where revenue from carbon will be more important than that from harvesting trees. Anecdotally, forest owners in the US are changing their behaviour and this is actively impacting industrial wood procurement strategies in the US. Given different tenure types in Canada and Ontario, forest carbon offsets are likely to be less disruptive but there is a coming impact to be understood and planned for.

Forest carbon – Public and private regulation of forest carbon and emerging markets

There has been much buzz about forest carbon of late as a source of offset credit supply for both regulated industry and corporate net zero and environmental social and governance (ESG) commitments.

To date North American forest carbon projects have been primarily located in the US to serve the California compliance market. In 2020, resulting from changes in California's regulatory system, a shift occurred to a greater number of forest carbon projects supplying voluntary carbon markets in North America. In Canada various pilots have led the way over the years but BC's forest carbon program has had the most success to date (FLNRO 2016). Saskatchewan for example began a 22 million tonne project in 1999 under the Greenhouse Gas Emission Reduction Trading (GERT) Pilot which is still running (Johnston 1999). This coming year however will see a rapid increase in the number of forest carbon projects being developed across Canada.

So how does this all work? Carbon offset systems have several common underlying principles (i.e., credibility, baselines, additionality, leakage). One way to understand these principles is the analogies found from forest certification experiences that most foresters will be familiar with. Forest certification programs help forest owners and mills market their sustainably managed wood through an auditable, verifiable, transparent program. Similarly, forest carbon regulatory and voluntary programs do the same for forest carbon storage and sequestration. The credibility of carbon offsets systems is based upon verifiable auditing and monitoring systems such as those described by ISO 14064. This is similar to the monitoring and reporting requirements described for environmental management systems under ISO 14001. Buyers in both regulatory and voluntary markets need to know that the offsets they are buying are credible and meet published standards. There have been scams in the carbon world, so credibility is a key attribute of a carbon offset (just google "World Wide Carbon" and "FBI" for a taste).

Forest carbon offset projects follow strict rulebooks that assess the project's additionality and therefore credibility. For an offset to be generated a forest owner must do something over and above how the forest could be managed for profit, or under applicable regulations. If a forest owner, for example, is required to leave buffers around a creek then you cannot claim those trees for a carbon project. All of these sets of rules are found in various "protocols" that can be used when developing a project. There are three basic flavours of forest offset protocol: improved forest management (IFM), afforestation/reforestation, and avoided conversion. By far the most widely used approach in North America is the IFM type project which works on the assumption that a forest owner could choose to harvest their property but doesn't or at least does but with a much lighter footprint. IFM offset credits are generated from the difference between what one could have done and what one is doing, and from annual growth in the forest. These are known as avoided emissions credits and removals credits respectively.

In Canada there are two protocols for Canadian forest carbon offsets that are being used in the voluntary markets under the American Carbon Registry (ACR) and the VERRA banners. Of the two carbon offset registries, the ACR protocols are by far the most widely adopted for forest carbon offset projects on working woodlands. For regulatory markets there are no forest carbon offset protocols to use. Yet, 2022 will likely see British Columbia, Alberta, Quebec and Canada release protocols to use in their respective provincial and national systems.

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On the regulatory side of things, the federal Greenhouse Gas Pricing Pollution Act (GGPPA) is driving provincial programs. The GGPPA has two parts to it, the carbon tax on fossil fuels and a regulatory system for large industrial emitters known as the Output Based Pricing System (OBPS) (Government of Canada 2022). This Act and associated regulations are known as the federal "backstop". Under the GGPPA, each province needs to have its own regulatory system that meets the standards of the federal "benchmark" or the federal government will impose the "backstop" on a province (Government of Canada 2021). This is what happened in Ontario in 2018 when the Ford government scrapped the provincial "Cap and trade" program which had previously been accepted by the federal government. Ontario industry was subject to the GGPPA until just recently when the federal government accepted the revised Ontario Emissions Performance Standards program in 2021 (MECP 2021).

The OBPS type regulatory programs can be found across Canada (AB, SK, ON, NB all have them for example). Another type of regulatory program, known as "Cap and Trade", exists in Quebec and Nova Scotia, but focus here will be on the OBPS programs. Under OBPS programs regulated facilities are not subject to the carbon tax on fuel inputs but are required to meet emission standards. When a facility cannot meet its emission standards it generates a compliance obligation. Facilities have the option of paying for each tonne of excess emissions at the carbon price into a provincial fund, purchasing emission credits from facilities that are over-achieving their standards, or by purchasing carbon offsets. Every province has different flavours of how carbon offset credits function in their program and (just like beer in the 70's) interprovincial trade of credits is not a feature of the programs. Importantly, the Ontario Emissions Performance Standards (EPS) program lacks carbon offsets as a compliance mechanism.

Regulatory markets are tied to the federal carbon price which is $50/tonne of CO_2e in 2022 and is scheduled to rise by $15/tonne until it reaches $170/tonne in 2030. In most systems the carbon price is a ceiling as opposed to a fixed rate, sellers of credits will likely get a bit less per credit sold. (One tonne CO_2e = one offset credit). By comparison, voluntary market pricing is currently around $12-$16/tonne. Forest owners understandably want to achieve the higher pricing but that is likely only to be available to forest owners in Alberta as it has the largest and most mature compliance market for offsets in Canada.

Market pricing in the voluntary markets has been on a tear in the past six months with a large run up in prices starting in November. Prices have fallen off their mid January peak, but most believe that prices will remain strong in the coming years due to increased demand driven by net zero and ESG commitments by corporations across North America. For those interested, voluntary forest carbon offset prices can be tracked on the CBL Nature Based Global Emissions market (Carbon Credits.com 2022).

Considerations for forest owners interested in a forest carbon project

Forest carbon projects are long term commitments that tie up forestry activities for decades. Forest owners need to know what they are getting into before jumping in with both feet but finding information about options for forest carbon offsets is difficult. Here are a few things one should consider:

- *Do you own the carbon?* On private freehold forest lands, there is clear title but on public lands carbon rights are retained by the Crown.
- *Do you want to continue to have a limited harvest in the forest?* Some protocols are better than others at balancing a limited harvest of forest growth with long term storage of carbon. The cardinal rule of forest carbon offsetting is that the amount of carbon that is in the forest on day one of the project needs to be there at the end of the project. You can harvest some or all the growth, but you cannot have less carbon at the end than you had at the start.
- *Is your forest too old?* A forest that is too old is more likely than not to lose carbon over the term of a project either through fire or through a loss of merchantability. Locking up a mature boreal forest for a century for example is likely impossible given the fire return intervals for most of northern Ontario. Not every forest is suitable for a carbon project.

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- *Is your forest currently merchantable?* IFM protocols work on the difference between what you could have harvested to maximize net present value and how you are currently managing your forest by reducing harvest intensity. If you have no merchantable wood, then you have no delta and no project. Similarly, if your merchantable wood is inaccessible, tied up in buffers, or simply too far from a mill to be merchantable, then your project viability is lessened.
- *Do you have enough forest for a project?* Project performance is based upon a variety of factors including stocking, species and market price. A forest typically needs several thousand hectares to be viable.
- *Are you ready to commit keeping your forest in a carbon project for decades?* A carbon project, depending upon the protocol used, can require a forest owner to commit to a management strategy for as little as 30 and as much as 125 years. Forest land in a carbon project is encumbered and penalties for leaving a carbon project before the term ends are steep.

Forest carbon projects can return significant revenue to forest owners but there are some important decisions to make in advance of making a firm commitment.

References

Allen, M. *et al*. 2020. The Oxford Principles for Net Zero Aligned Carbon Offsetting. University of Oxford. https://www.smithschool.ox.ac.uk/publications/reports/Oxford-Offsetting-Principles-2020.pdf

Herlevi, K. 2020. Finland's road map to a circular economy. https://www.greenbiz.com/article/finlands-road-map-circular-economy

(FLNRO) BC Ministry of Forests, Lands and Natural Resource Operations. 2016. Forest Carbon Emission Offsets. https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resources-climate-change/natural-resources-climate-change-mitigation/forest-carbon-emission-offsets

Johnston, M. 1999. SERM – Saskpower forest-based carbon offset agreement— project document. Saskatchewan Environment and Resource Management. https://www.csaregistries.ca/files/projects/prj_7602_681.pdf

Government of Canada. 2022. Output-Based Pricing System. https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system.html

Government of Canada. 2021. The federal carbon pollution pricing benchmark. https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/carbon-pollution-pricing-federal-benchmark-information.html

(MECP) Ontario Ministry of the Environment, Conservation and Parks. 2021. Emissions performance standards program. https://www.ontario.ca/page/emissions-performance-standards-program

Carbon credits.com. 2022. Live Carbon Prices Today. https://carboncredits.com/carbon-prices-today/

A forest is certified to an independent forest certification standard, what other external challenges to trade should foresters wish to be aware of?

Betty van Kerkhof, R.P.F., Chair, OPFA Editorial Board

Certified Forests in Ontario

Most of Ontario's public forests and some private forests are certified to an independent forest certification standard. For example, 74,670 hectares of private woodlots and community forests are certified to the Forest Stewardship Council (FSC) Great Lakes-St. Lawrence Forest standard under the Eastern Ontario Model Forest's group certificate (Eastern Ontario Model Forest 2022). Seventy-seven percent of Ontario's public lands and waters within forest management units were certified to an independent forest certification standard (December 31, 2021). Seventy-four percent of forest management units were certified covering 26.1 million hectares. This includes six management units certified to both the Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI), nine to SFI, and one to the Canadian Standards Association. (NDMNRF 2020)

Trade

Softwood Lumber Duties

The US is the largest market for Canadian softwood lumber. Canada supplies most of the shortfall not supplied by domestic American producers. Trade disputes between the US and Canada over softwood lumber have been ongoing for more than 25 years.

"On November 24, 2021, the U.S. Department of Commerce announced the final results of the second administrative reviews of its anti-dumping and countervailing duty orders regarding certain softwood lumber products from Canada. Following completion of any legal challenges under the Canada-United States-Mexico Agreement's (CUSMA) Chapter 10 or in U.S. courts, these new anti-dumping and countervailing duty rates will apply retroactively to softwood lumber exports to the United States from companies that were subject to the second administrative reviews." (Government of Canada 2021)

These new rates took effect January 10, 2022, as published in the U.S. Federal Register, and are retroactive. The new combined "all others" rate is 17.91%, except for Resolute Forest Products where the rate is 29.66%. This contrasts with the former 8.99% "all others" rate for most companies in Ontario. The U.S. has also initiated a third administrative review with a preliminary "all others" rate proposed at 11.64%. (Government of Canada 2021, 2022).

Definitions: "U.S. countervailing duty and antidumping laws – laws that allow the imposition of import duties when a U.S. industry is allegedly harmed by subsidies in the exporting country (countervailing duties), or by dumping, which is when a U.S. industry is allegedly harmed by imported products sold at prices that are lower than the cost of production or lower than prices in the domestic market (anti-dumping duties)." (Government of Canada 2017).

Deforestation and Forest Degradation Free Procurement and Trade

2021 and 2022 saw the introduction of deforestation free procurement legislation in several U.S. states targeting deforestation and forest degradation. Limiting global deforestation and forest degradation is an important environmental concern. But Canada and Ontario should be acting to ensure that the legislation is not so broad or its terms so poorly defined that it eliminates access for Canadian products that are harvested in accordance with Canadian legislation and policy.

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California and New York State both introduced legislation targeting deforestation in early 2021 with California re-introducing it in February 2022 after the initial legislation was vetoed by California's governor. The proposed California legislation targets public works projects that deal with wood and wood products and requires a contractor "to certify that the commodities were not grown, derived, harvested, reared, or produced on land where tropical deforestation occurred on or after January 1, 2023" (California Legislative Information 2022).

The New York legislation is broader in scope as it targets both boreal and tropical forests. The proposed legislation highlights the role that existing extensive boreal forests play in regulating the climate including by storing more carbon per hectare than tropical forests. It indicates that industrial logging to make single-use tissue products, newsprint, and lumber is a large driver of boreal forest degradation and deforestation. It then labels products derived from industrial logging in the boreal forest as those derived from "forest-risk commodities". A forest-risk commodity is a term that has formerly been used to describe tropical forest risks. This new legislation will require "contractors that sell forest-risk commodities to state agencies or authorities to certify that they are not contributing to tropical or boreal intact forest degradation or deforestation directly or through their supply chains" (New York State Senate 2021).

The U.S. Senate has also been considering similar legislation in the form of the "Fostering Overseas Rule of Law and Environmentally Sound Trade Act of 2021" introduced by a senator from Hawaii (Congress.gov. 2021).

In November 2021, the European Commission also introduced a draft regulation that seeks to minimize the use of products derived "from supply chains associated with deforestation or forest degradation – and increase EU demand for and trade in legal and 'deforestation free' commodities and products". This draft regulation is driven by a concern for the effect of deforestation and forest degradation on exacerbating the effects of a changing climate and continuing biodiversity losses. One of the main reasons for this legislation are concerns about the expansion of agricultural land to produce products including palm oil and a broad array of wood products. One of the objectives of the European Commission is to protect and improve the health of 'primary forests' (European Commission 2021).

As foresters, I suggest that we support sustainable forest management practices that minimize losses of biodiversity, maintain soil quality, minimize permanent deforestation and degradation and so forth. However, the terms used by the above pieces of legislation potentially lead to the introduction of further non-tariff trade barriers and additional administration that must be met before Canadian products can be exported. It is important that foresters encourage Canada and the provinces to ensure that Canadian forest products are not unfairly impacted due to poorly defined terms and excessive administration. For example, how will 'boreal intact forest degradation' be defined in the case of the proposed New York legislation? In the case of the European legislation the focus will be on a due diligence statement combined with geo-location coordinates for the origin of the products. The draft European regulation defines several terms such as planted forest, deforestation-free, plantation forest, and sustainable harvest operations while also using a number of terms that are not defined, such as 'primary forest', a 'large clear-cut' or 'vulnerable soil'. What it is the intended meaning of a 'primary forest' given that sustainable harvesting operations are defined in part by those that avoid 'degradation of primary forests or their conversion into plantation forests'? How does a supplier prove that its products are deforestation and degradation free, and what does this mean, is a logging road included as part of a deforested or degraded area? Foresters are encouraged to increase their awareness of some of these potential challenges, such as by monitoring some of the sources below.

References

Eastern Ontario Model Forest. 2022. Forest Certification. https://www.eomf.on.ca/programs/certification

NDMNRF (Ministry of Northern Development, Mines, Natural Resources and Forestry). 2020. State of Ontario's Natural Resources. https://www.ontario.ca/page/state-ontarios-natural-resources-forest-2021#certification

Government of Canada, Global Affairs Canada. 2017. Background - Canada-United States softwood lumber trade. https://www.international.gc.ca/controls-controles/softwood-bois_oeuvre/background-generalites.aspx?lang=eng

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(Continued from page 14)

Government of Canada, Global Affairs Canada. 2021, 2022. Softwood Lumber. https://www.international.gc.ca/controls-controles/softwood-bois_oeuvre/recent.aspx?lang=eng

https://www.canada.ca/en/global-affairs/news/2021/11/statement-by-minister-ng-on-us-final-duty-rates-on-canadian-softwood-lumber.html

California Legislative Information. 2022. AB-1979 California Deforestation-Free Procurement Act: public works projects: wood and wood products. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB1979

New York State Senate. 2021. New York deforestation-free procurement act introduced. https://www.nysenate.gov/newsroom/press-releases/anna-m-kaplan/new-york-deforestation-free-procurement-act-introduced#:~:text=The%20New%20York%20Deforestation-Free%20Procurement%20Act%20will%20update,or%20deforestation%20directly%20or%20through%20their%20supply%20chains

Congress.gov. 2021. S.2950 - Forest Act of 2021. https://www.congress.gov/bill/117th-congress/senate-bill/2950/text?r=2&s=2

European Commission. 2021. Proposal for a regulation of the European parliament and of the council on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010 and Annexes 1 and 2. https://ec.europa.eu/environment/publications/proposal-regulation-deforestation-free-products_en

Naturalizing land in Ontario

Danijela Puri-Mladenovic, PhD., Assistant professor in the Daniels Faculty's forestry, University of Toronto
John H. Daniels Faculty of Architecture, Landscape, and Design

Southwestern Ontario (SWO) is the most southern tip of Canada. It is surrounded by water on three sides, Lake Huron on the north and west and Lake Erie shoreline on the south (Figure 1). On the east side, it is bordered by one of Canada's most populated, developed, and urbanized lands, the Toronto-Hamilton-Niagara Golden Horseshoe region. Due to its favourable environmental and soil conditions, the SWO area has been attractive to human inhabitation and agriculture for centuries. Indigenous communities have lived in this region for thousands of years. While they practiced agriculture and used fire to clear the forest to support food production, forest and natural vegetation were able to recover from their shifting land-use practices.

Figure 1. Southwestern Ontario (SWO) stream network (stream network data obtained from Ontario Government Open Data).

However, with the colonization and the first European settlement, the region experienced massive deforestation and loss of natural vegetation within a few decades. By the late 18th early 19th-century, forest cover was substantially depleted, and it was considerably below the existing 20%. The initial large-scale deforestation and expansion of agriculture have left permanent and irreversible marks on the land and forests in this area. Due to its agricultural productivity, deep soils, and longer growing periods, the SWO forest cover hasn't increased significantly since the colonial deforestation versus the recovery observed in less productive eastern Ontario. The subsequent exponential urban growth and associated infrastructure, their cumulative and adverse effects are many from low natural forest cover, forest and habitat fragmentation, threatened, and endangered species, to name a few. Yet, while we still struggle to deal with and respond to the old deforestation and forest degradation, the additional impacts such as invasive species and climate change continue to stress what little is left of natural cover in SWO, particularly in some of its parts.

While it is a predominantly agricultural region, SWO also has several major urban centers such as Windsor, London, St Thomas, Woodstock, Ingersoll, Kitchener-Waterloo, Cambridge, Guelph, Sarnia, Brantford, and Stratford, which all continue to grow and expand their boundaries. Urban and infrastructure development continues to encroach on natural and non-forested lands, degrading the best land and removing the potential for planting future forests. Several SWO urban centers are considered places to grow and accommodate future population growth, which will further impact the natural cover and the potential to restore it. Furthermore, due to agricultural intensification and enlargement of land parcels, the last forest remnants and hedgerows continue to be removed from the region to make room for agricultural machinery.

The fragments of natural cover in the area, forests, swamps, wetlands, and prairie savannah are remnants of natural vegetation that existed before the deforestation of the 1800s. The region lost its native vegetation, experienced land degradation (e.g., tillage, urban development, stream channelling, soil erosion) and associated habitats and biodiversity loss. SWO has the highest density of species at risk in Canada. At present, southwestern Ontario's 20% forest cover is comprised of a combination of mixed and Carolinian forest types and tree species. The existing cover is unevenly distributed across the region, as the municipalities within the mixed forest zone (e.g., Gray 45% and Bruce County 40%) have higher forest cover. In comparison, more southern counties such as Essex and Chatham-Kent have forest cover of 6% and 4.5%, respectively (based on SOLRIS data).

With 20% forest cover, the SWO region and its forests are not resilient to climate change, global or local impacts (e.g., invasive species). The existing forest extent is insufficient to protect the local biodiversity and provide the necessary ecological functions.

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While it is imperative to conserve existing forest cover and improve its structure, composition, and biodiversity, the region also needs strategic and broad-scale forest restoration. The potential for land restoration and reforestation lies across SWO landscapes. Some of the immediate needs and opportunities for land restoration are along streams, rivers, and watercourses.

Besides these, restoration opportunities exist within and around urban areas, parks, conservation lands, recreational areas (e.g., golf courses), but also on agricultural lands.

For example, there are 51,630 km of streams across the SWO landscape. Though these watercourses are of a different order and have different channel morphology and riparian width zones, when a minimal 30-meter (m) buffer is considered, riparian areas cover 302,595 ha or about 8% of the land base. Of the 302,595 hectares (ha) of riparian zones (riparian zone based on 30m buffer), only one third (32%) are under forest cover. These forests along streams and watercourses also make up 12% of SWO's forest cover. By restoring the remaining 68% of the riparian buffers, forest cover in SWO could increase to 25%. This increase could happen in a relatively short period considering that riparian forest is characterized by tree and shrub species that grow relatively fast and are easy to establish. However, riparian areas and vegetation are more complex than a buffer of 30 m, or an undifferentiated "bottomland" or "riparian" vegetation class if mapped on forest resources and land use maps. Alongside streams and rivers, vegetation is diverse, and besides riparian forests, riparian thickets, shrublands include alluvial meadows or a semi-aquatic community. They are composed of diverse plant communities and native plant species responding to hydrological characteristics of riparian areas and are adapted to periodic flooding and consistent water flow. Riparian forests are of ecological and biodiversity importance due to their plant diversity from understory to over-story plants and are diverse ecologically (biodiversity conservation, wildlife habitat provisioning, fish habitat protection), and environmentally (e.g., water purification due to chemical and sewage runoff, sedimentation control, carbon sequestration, soil protection).

Considering the multiple benefits that riparian vegetation and forests provide and their ability to provide various ecological services, conservation and restoration of riparian forests are the most immediate, cost-effective, and highly sustainable ways to address environmental degradation, restore ecological functions, mitigate climate change impacts, and biodiversity loss. For example, flooding due to climate change has become an increasing management challenge in Canada, particularly in areas with low forest cover. Riparian vegetation helps to mitigate flood risks by stabilizing riverbanks, maintaining soil structures, and taking up excess water. It also plays a critical role in maintaining healthy river ecosystems. It acts as a buffer against chemical runoff from agricultural practices and sediment erosion deposition. Riparian vegetation and its roots filter out nutrients from runoff and prevent nutrient overload in rivers from nearby agriculture or development. It also lowers water temperatures by stabilizing riverbanks allowing for a deeper and narrower river channel to form, shading water, creating cool fish microhabitats, and maintaining the natural width and depth of the river. Riparian areas with native vegetation maintain lower water temperatures and promote aquatic species diversity and health. As transitional zones between fluvial and terrestrial ecosystems, riparian areas and vegetation also serve as critical habitats and wildlife corridors. Studies have also shown that dense closed-canopy riparian zones are less likely to undergo invasion by non-native plants, suggesting that maintaining, undisturbed riparian zones may prevent the widespread proliferation of invasive plants.

Community forest owners cooperative pilots are gaining traction!

Shan Shukla, Master of Forest Conservation, University of Toronto, York-Durham Chapter

Conifer plantations in Southern Ontario were introduced in the early 20th century to help improve the state of our rapidly eroding soils and restore lost forest cover. Plantations on crown lands have been effectively managed by the provincial government. Plantations on lands owned by Municipalities and Conservation Authorities have, in many cases, also been well-managed. However, plantations on private lands have been largely neglected and they exist now as thousands of hectares of fragmented and neglected stands. The main reason for this situation stems from the cost to perform forest management activities on these private woodlots, which are often small and economically unattractive to forest service providers. Lack of knowledge amongst landowners, as well as frequent changes in ownership are additional challenges.

An example of an approximately 70-year-old Red Pine plantation in the Fleetwood Watershed in need of a first thinning.

The Ontario Woodlot Association (OWA) has established two community forest owners cooperative pilot projects in Simcoe County and the City of Kawartha Lakes. The goals of the cooperatives are to reduce the costs and barriers to managing small woodlots and foster a more robust base of knowledge and understanding for these landowners. Economies of scale will be built around geographic clusters of properties where plantation thinning using best practices is applied to help bring down overall costs while improving forest health. By marketing small parcels of plantations as a single larger unit, the total area available to manage and harvest becomes more attractive and viable for forest service providers including RPFs, tree markers, harvesting contractors, and mills.

Being a widely connected non-profit organization, the OWA holds a wealth of forestry knowledge and skills within its staff, membership, and partner organizations. With these resources, the OWA is facilitating the management, harvesting, and subsequent sale of timber from private woodlots participating in the cooperatives. Eleanor Reed, RPF, is leading the Kawarthas group and Jim Eccles, Associate RPF is leading the Simcoe group. This leadership includes initial contact with landowners, writing prescriptions, tree marking, coordinating harvesting, and managing OWA volunteers who are helping with the project.

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Forest cooperatives have seen success internationally and domestically in Nova Scotia and Quebec. These cooperatives have served their communities for years, sometimes decades. Their mission statements include performing forest management in a sustainable fashion, with ecosystem resilience at the forefront. They also focus on supporting and advocating for local economies, community education, and democratic management.

The OWA has started with the most common type of plantation in southern Ontario: Red Pine. Established many decades ago, these plantations are now in need of, or overdue for, a first thinning. The pilot projects will help in strengthening existing and potentially develop new markets for fibre resulting from this initial thinning, while subsequent thinnings are expected to yield higher economic returns to landowners. If successful, there will be potential to create more of these markets in Ontario and include other key landowners such as Indigenous Landowners and Community Forests.

Ecologically, these projects will serve as the catalyst to initiate and sustain widescale improvement of woodlots through the transition from conifer plantations to natural mixedwood stands. As the forest responds to the treatments, the stands will exhibit better health, and resiliency to future climatic changes, invasive elements, and pests. In fact, the Kawartha Land Trust has partnered with the OWA to achieve increased biodiversity in their plantations

Equally valuable will be an educational component where the OWA will provide resources such as educational videos, and guidance from forestry professionals to educate landowners who may want to participate in the co-op. This will allow them to be better stewards of their lands.

(Continued on page 20)

Myself (left) along with Art Shannon (centre) and my colleague (Ben Gwilliam) on the right taking inventory of an overgrown plantation in Southern Ontario.

(Continued from page 19)

Harvesting has already been completed in the Kawartha's and harvesting in Simcoe is underway as of this writing. The thinned plantations in the Kawarthas look excellent. Great care was taken by Lavern Heideman and Sons and their contractors who undertook the harvest. Initial economic indicators look promising, and a full analysis will be completed once the harvest is done and all the bills have been paid. Expansion of the co-ops to other areas of the province and inclusion of other forest types is planned for the future.

As a student with the Master of Forest Conservation program at the University of Toronto, I participated in the pilot project as an impartial, third party to objectively evaluate the success of the pilot projects. My involvement will help the OWA assess whether the cooperative projects are sufficiently rigorous and viable to continue and potentially see adoption in other parts of Ontario. The result will be a publicly available paper discussing the results of the pilot projects and an overall evaluation.

2022 OPFA Annual Conference and Annual General Meeting

April 12 - 14, 2022

Join us virtually for the OPFA conference and annual general meeting.

The theme of this years conference is: **Supporting Resilient Forests and Growing Trust**

Learn more about topical issues in forestry, current OPFA Initiatives, Indigenous Forest Stewardship, forest carbon offsets and much more. Listen to current research from students and participate on a virtual tour exploring regreening efforts by Industry and the Municipality in Sudbury. Network with other forestry professionals, visit the virtual exhibitor booths and find out more about the conference sponsors.

Session topics include:

- The Practice of Forestry and its Perception Past and Present by the Public and Within the Media
- Nature Smart Climate Solutions in the Far North
- Update on OPFA Initiatives including the OPFA's Strategic Plan, Professional Foresters Act, Indigenous Jurisdiction Standard, Equity and Inclusion & more
- Indigenous Forest Stewardship
- Municipal Perspectives on the Value of Urban Forests

OPFA Members can register now to take advantage of the current Early Bird prices until March 28th. OPFA Member tickets will cost $60 after this date.

Note: Due to online voting and software capacity limitations the AGM tickets are currently restricted to OPFA Members to ensure that all members who wish to attend can do so. If you wish to attend the AGM but are not an OPFA Member, please contact registration.manager@opfa.ca

Highlights from presentations:

City of Greater Sudbury : Is our forest ready for climate change?

Although the City of Greater Sudbury has been working on climate action for decades (began participating in the ICLEI Partners for Climate Protection in 1997), there was a boost in immediacy and motivation when City Council declared a Climate Emergency in 2019. Since then, the City released a climate change mitigation plan "Community Energy and Emissions Plan" and is currently developing a climate change adaptation plan. Both mitigation (reducing GHG to avoid change) and adaptation (preparing for change) will affect our surrounding forests. Building compact communities may reduce encroachment into the natural landscape and building with lower carbon footprint may increase demand for timber products. Communities will have to prepare for increased wildfire, native insect infestations and invasive species. Dr. Jennifer Babin-Fenske, the Climate Change Coordinator for the City of Greater Sudbury will discuss these topics, share ideas and listen for solutions to upcoming challenges.

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Climate Change from a Municipal Perspective

The term climate change is often synchronous with terms like global warming, and discussions surrounding climate change can often become confusing, contentious or even combative. Regardless of where you position yourself on your opinion of the changes our planet is experiencing, scientific models indicate that we will continue to experience shifts in weather patterns over the coming centuries.

Sydney Clarysse, Project Lead, Energy and Facilities and Adam Biddle, Supervisor, Forestry, both of Norfolk County, will discuss how a rural municipality in southern Ontario is coming to grips with changing weather patterns and a changing climate.

Norfolk County is relatively new in planning for climate change, having just approved a Climate Change Adaptation Plan in December 2020. The pair will briefly highlight Norfolk County's forestry and urban forestry programs and how they are being modified in consideration of climate change predictions. The presentation will also delve deeper into what sort of planning is being done at the municipal level with respect to climate change. Topics will include covering what steps in planning for climate change Norfolk County has taken thus far, assessing energy usage and emissions of the corporation, assistance and resources available to municipalities including training opportunities, working groups, and funding opportunities.

There will be opportunity for questions and discussion at the end of the presentation.

1) Introduction to Norfolk County
2) What is Climate Change?
3) Municipal Policy- Supporting Climate Change Initiatives (examples from Official Plan)
4) Municipal Forestry Programs- Forest Management and Urban Forestry
5) Snapshot of Norfolk County's Urban Forest
6) Addressing Climate Change- What has Norfolk County done so far?
    a. Discuss CCAP
    b. Discuss GHG Inventory
    c. Energy Efficiency (e.g., energy star)
    d. Renewable Energy (e.g., solar panels)
    e. Charging stations at CAB
7) What has assisted Norfolk County in research and implementation?
    a. Training Programs
    b. Communities of Practice
        i. Energy
        ii. Climate Change
    c. Grants and Funding
    d. Committees
    e. Commitments? (i.e., in the energy plan)
8) Climate Change resources to support municipalities and communities

NOTICE OF THE ANNUAL GENERAL MEETING FOR THE 2021 FISCAL YEAR

Notice is hereby given of the Annual General Meeting of Members of the Ontario Professional Foresters Association for the 2021 Fiscal Year to be held virtually using video conference technology at 6 p.m.–8:00 p.m. (EDT) Wednesday, April 13, 2022, for the purpose of conducting the affairs of the Association, including:

Agenda Items (may be subject to change):

1. Call to order

   Notices, Members, and proxies
2. President's remarks
   - Virtual AGM procedures
   - Who can vote?
   - Accessing the 2021 Annual Report
3. In memoriam
4. Recognition of new Members
5. Approving the minutes of the Annual General Meeting for the 2020 fiscal year
6. Resolution updates
7. Receive Annual Reports
   - Receive and consider reports of the President, Executive Director & Registrar, Auditor, and Committee Chairs for the fiscal year December 1, 2020, to November 30, 2021
8. Auditor's Report and Financial Statements
   - Receive the audited Financial Statements as of November 30, 2021
9. Appointment of Association Auditor
   - Report Council's appointment of the Auditor for the fiscal year ending November 30, 2022
10. Concluding the Annual Report
    - Thank you to the sponsors and exhibitors of the 2022 Annual Conference.
11. Confirming and approving the acts and procedures of Officers and Councillors
12. Confirming proposed 2022 Bylaw changes
    - Includes a summary of changes
13. Business highlights in 2021
14. Considering and, if desirable, approving resolutions, if any are received
15. 2023 Annual Conference
    - Location
    - Acknowledging the conference organizing team
16. Termination of the Annual General Meeting

If you are eligible to vote and are unable to attend this meeting, please complete the Instrument of Proxy (below) and return it to the OPFA office.

All Resolutions must be submitted before the start of the Annual General Meeting, in the approved Resolution Form format (see form), with a Mover and Seconder. Please note that only those Resolutions submitted to the OPFA office by 2:00 p.m. (EDT) on Friday, April 8, 2022, will be presented and discussed at the Annual General Meeting.

Fred Pinto, R.P.F., Executive Director and Registrar

INSTRUMENT OF PROXY

I, _____
(Name of Member) (Member number)

of

_____
(address of Member)

Being a Member of the Ontario Professional Foresters Association hereby appoint:

Chris McDonell, R.P.F., of Callander, Ontario
WHOM FAILING
Peter Nitschke, R.P.F., of Stirling, Ontario
OR

_____, (_____) of _____
designation

as my proxy to vote on my behalf at the
Annual General Meeting of the Members of the Association
to be held virtually at 6 p.m. (EDT) Wednesday, April 13, 2022.

Dated this _____ day of _____, 2022 at _____

_____
(signature of Member)

IF YOU ARE NOT ABLE TO ATTEND THE ANNUAL GENERAL MEETING, PLEASE RETURN THIS PROXY TO THE OPFA OFFICE by 2:00 p.m. (EDT) Friday, April 8, 2022.

Email: opfa@opfa.ca, Fax: (905) 877-6766, Mail: 201 - 5 Wesleyan St., Georgetown, Ont. L7G 2E2

Professional networking task team

Francisco Murphy, R.P.F.,

The purpose of this Task Team is to develop a program for OPFA registrants to engage interested employers and new OPFA members so that aspiring professional foresters can connect with practising OPFA registrants. It is the intent of the Task Team to find volunteer employers to mentor and support OPFA members in their desired area of practice who are looking to develop professional forestry skills.

As a recent graduate and an immigrant, I know firsthand how hard it can be to obtain relevant experience to be successful in applying for forestry jobs. Job shadowing gave me essential knowledge and experiences to build my resume and to also narrow down which jobs in forestry I would like to apply for. I am hopeful this Task Team will similarly help recent domestically trained graduates and internationally trained individuals to develop their professional experience, improve their access to mentors, and increase their awareness of opportunities in professional forestry.

In order to form the Task Team, an invitation to serve was sent to all OPFA registrants who were asked to send in a resume and answer certain questions posed in an expression of interest form. The OPFA is lucky to have engaged and supportive registrants as a large number of applications were received from well qualified individuals. This made the job of selecting the members for the Task Team difficult but also encouraging. The Task Team is composed of OPFA registrants from different backgrounds and with a variety of forestry specializations and experiences including industry, government, urban, contractors, among others.

The members of the Task Team are:

Francisco Murphy, R.P.F. (Chair)

Daniel Berchard, R.P.F.

Julia Ieropoli, R.P.F.

Kerry McLaven, R.P.F. in Training

Arben Pustina, R.P.F.

Geordie Robere-McGugan, R.P.F.

Joseph Welch, R.P.F.

Mark Zhang, R.P.F.

March newsletter note from Chair

In the December newsletter I included a brief note on the long history of urban forests and urban tree planting in many non-European cultures in Asia, the Americas and Africa. I indicated that the Newsletter would benefit from articles on forests and tree planting in non-European cultures. I am following up on that note to encourage foresters who are internationally trained or who are familiar with innovative current or historic forest practices in other parts of the world to consider submitting an article to the Newsletter. This information exchange can help increase our awareness and improve our overall practices on a diverse range of topics, such as community engagement, invasive species, Indigenous use of fire, etc. For example, readers may be interested in the following work exploring Indigenous forest gardens in western Canada: https://www.sfu.ca/sfunews/stories/2021/04/ancient-indigenous-forest-gardens-promote-a-healthyecosystem--s.html.

Forests and trees in the urban and village environment in Africa, Asia and the Americas have a long history of sophisticated management, especially when it comes to valuing biodiversity, for its own value but also for human uses such as maintaining soil fertility, food production and shade. Many of the articles published in research journals are simple descriptive reports of the species found in farms and urban settings. A few examples are list below: Sri Lanka -- Perera and Rajapakse, 1991; Tanzania -- Hemp, 2006; Central America -- Ross, 2011. This subject area, exploring current and past management practices, where the focus was primarily on values other than timber production is missing or not well described in the scientific literature.

References

Hemp, A. 2006. The Banana Forests of Kilimanjaro: Biodiversity and Conservation of the Chagga Homegardens. Biodivers Conserv 15, 1193–1217. https://doi.org/10.1007/s10531-004-8230-8

Perera, Ajith H. and R.M.Neville Rajapakse, 1991. A baseline study of Kandyan Forest Gardens of Sri Lanka: Structure, composition and utilization, Forest Ecology and Management, Volume 45, Issues 1–4, Pages 269-280, ISSN 0378-1127,

Ross, N.J. (2011), Modern tree species composition reflects ancient Maya “forest gardens” in northwest Belize. Ecological Applications, 21: 75-84. https://doi.org/10.1890/09-0662.1

A forest garden in Goa, India. Forest gardens in cities, villages and farms are common in southern India. Forest gardens are not a monolith, they take a number of forms with various spacing and distribution of trees, shrubs, vines and other plants in space and time. Photo credit: Fred Pinto.

Grey Areas
SML Steinecke Maciura LeBlanc Barristers & Solicitors
A COMMENTARY ON LEGAL ISSUES AFFECTING PROFESSIONAL REGULATION

A New Approach by Regulators to Intimate Partner Violence?

by Erica Richler
February 2022 - No. 263

The way in which regulators respond to sexual abuse of clients has evolved over the years. A traditional approach viewing the conduct as unbecoming evolved into a new approach viewing the conduct as a fundamental abuse of power and trust.

The evolving understanding of how regulators should respond to intimate partner violence by practitioners is on the cusp of a rethink.

The Recent Approach

The recent response by professional regulators to intimate partner violence has been an increasing concern that the conduct is highly unethical and brings the profession into disrepute. Thus, even though the conduct usually occurs outside of the practice of the profession, a meaningful response is called for. A recent example where this approach was taken, perhaps with more force than in the past, is found in *Kang (Re)*, 2021 LSBC 23 (CanLII), https://canlii.ca/t/jg7ff. In that case the practitioner disagreed with the characterization that the behaviour was "criminal and violent conduct" because the criminal charges were stayed in the face of a peace bond, which was protective in nature. The tribunal said:

> The conduct in question is the Respondent's actions in forcefully grabbing AB's arms and legs and striking AB in the back of the head two or three times. This Panel characterizes this conduct as intimate partner violence.
>
> Canadian courts have censured intimate partner violence, noting that it occurs in the privacy of one's home, where one expects to be safe and often away from the assistance of the public (see for example, *R. v. Donnelly*, 2010 BCSC 1786 at paras. 28 and 29). The seriousness of such acts is also reflected in legislation, for example, s. 718.2(a)(ii) of the *Criminal Code*, which mandates that abusing an intimate partner is an aggravating factor on sentence.
>
> This Panel has no hesitation in finding that, in participating in an act of intimate partner violence, the Respondent engaged in conduct unbecoming the profession.

Given a number of mitigating factors in that case, the tribunal found that a two-month suspension was fair and reasonable.

However, other discipline cases involving intimate partner violence have resulted in only a fine: *Clarke (Re)*, 2021 LSBC 39 (CanLII), https://canlii.ca/t/jjkfk.

Under this recent approach, in addition to disavowing the conduct, the regulator also wishes to ensure that the conduct does not replicate itself in the practice of the profession. As such, courses and therapy may be added to deterrence sanctions in order to protect clients and colleagues from future harm.

For example, in *Law Society of Ontario v. Al Zahid*, 2021 ONLSTH 89 (CanLII), https://canlii.ca/t/jglpn the practitioner had been convicted of criminal harassment for repeated communications and threats trying to persuade his former intimate partner to obtain an abortion. The threats included providing copies of recordings of intimate acts with a threat to use them to further harass the former intimate partner. In that case, the tribunal imposed a reprimand plus a requirement to continue in treatment for his behaviour.

In a case involving a health profession, *Ontario (College of Physicians and Surgeons of Ontario) v. Mukherjee*, 2019 ONCPSD 16 (CanLII),

FOR MORE INFORMATION
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Grey Areas

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A COMMENTARY ON LEGAL ISSUES AFFECTING PROFESSIONAL REGULATION

https://canlii.ca/t/hzwcc the practitioner broke a door into the intimate partner's residence, deliberately drove into her car and sent death threats by text message. The tribunal concluded:

> Dr. Mukherjee exploited the power imbalance in his relationship with Ms. B, an intimate partner and employee, by threatening to withdraw the monetary support he was providing her. He did so in a manner that was aggressive and violent, leading to criminal convictions.
>
> The penalty reflects the Committee's and public's expectation that physicians lead by example, including in matters of intimate partner violence and abuse. The six-month suspension and reprimand will serve as deterrents to Dr. Mukherjee and the profession, and send a strong message that such conduct will not be tolerated. Instruction in anger management will provide for Dr. Mukherjee's further rehabilitation. The six month suspension and instruction in anger management also satisfy the need to protect the public, which remains a paramount principle in determining an appropriate penalty.

The six-month suspension in that case indicates the increasing seriousness with which such conduct is being treated by some regulators.

Perhaps a case demonstrating the transition to the new approach is *Ontario (College of Physicians and Surgeons of Ontario) v. Dhanoa*, 2020 ONCPSD 28 (CanLII), https://canlii.ca/t/j8dzd. Part of the allegations related to making death threats and illegal possession of a knife "in a family setting". There were also concerns about substance abuse, for which the practitioner was being treated, and failing to disclose the charges and findings. In imposing a five-month suspension and professionalism courses, the tribunal said:

> Aggravating factors include that violence was a component of the criminal conviction. Dr. Dhanoa was convicted of assault and given a conditional sentence and probation. The assault occurred in a family setting, which was particularly egregious. The fact that this was male violence against a female augments the egregiousness of the misconduct. As a physician, Dr. Dhanoa may be called upon to treat patients who have been subjected to domestic assault. He needs to be approachable and open to doing that. A conviction of this sort does not inspire confidence that he will fulfill his duty in that regard.

The case is significant for explicitly recognizing both the frequent gender dynamics of the conduct and the impact of the conduct on future patients who have experienced intimate partner violence, albeit as aggravating factors on sanction.

An Emerging New Approach?

In *B.M.D. et al. v. HMTQ*, 2021 ONSC 5938 (CanLII), https://canlii.ca/t/jhz3p a practitioner was charged and then pleaded guilty criminally to offences that involved intimate partner violence. The regulator was required by legislation to post the charges and, later, the findings, on the public register. The issue was whether the summary of the charges and findings should mention that they involved intimate partner violence. Even without using the intimate partner's name, many people would be able to identify her. The intimate partner filed an affidavit identifying the harm that she would experience if the posting mentioned the subject of the findings as being related to intimate partner violence.

Ultimately the Court concluded that the information should be posted and that the posting should refer to intimate partner violence:

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> I have concluded that the countervailing public interest in the College investigating and reporting on the criminal actions of one of its professional members outweighs [the intimate partner's] privacy interests. Further, I accept that the physician's commission of an intimate partner assault would be an important matter for his current patients and any potential patients to know about in choosing whether to accept him as their medical treatment provider. Such a choice is intimate to each person. Sadly, too many of a physician's patients may themselves be victims of intimate partner violence. Those individuals, if armed with information that their doctor had committed such an offence, should be afforded an opportunity to choose not to be treated by that physician."

The reasoning in this case suggests that a regulator's function when dealing with intimate violence goes beyond disavowing the conduct, protecting the reputation of the profession, and preventing the conduct from encroaching into the practice context. The regulator also has an ongoing obligation to recognize the harm that can occur to clients and colleagues of the practitioner. Clients and colleagues who have experienced intimate partner violence should have the choice of avoiding dealing with a practitioner with a history of such conduct. Clients and colleagues who share their history of intimate partner violence with a practitioner may legitimately feel that their trust has been violated if they later learn that the practitioner has a history of that very behaviour.

The implications of this new approach remain to be developed. Are all professions equally affected, or is this new approach primarily applicable to professions in which disclosure of intimate partner violence may be anticipated in the course of the professional relationship?[1] Will this approach result in more frequent disqualification from the profession like there is for frank acts of sexual abuse? How meaningful is the distinction between intimate partner violence involving touching compared to conduct that does not involve touching (like there often is for sexual abuse)? How relevant is the distinction between clients and non-clients (like there sometimes is for sexual abuse)? Will there be an assumption of vulnerability on the part of the recipient of the violence (as there is for sexual abuse) or will the vulnerability have to be proved on a case-by-case basis?

Finally, will a full implementation of the new approach require practitioners to notify, proactively, future employers, colleagues and clients of their history of intimate partner violence?

While not specifically related to professional regulation, the federal House of Commons Standing Committee on the Status of Women is currently studying the issue of intimate partner and domestic violence in Canada and will release a report with recommendations.

This is an important area for regulators of professions to monitor carefully.

[1] For example, lawyers practising family law are expected to screen for family violence with their clients.

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External Review of Regulators by the Auditor General

by Natasha Danson
March 2022 - No. 264

There are proposals circulating that will expand the mandate of the Auditor General of Ontario to include auditing self-governing professions. It appears that such reviews will not be limited to the financial integrity of regulators. Given the recent audits of other arms-length regulators of professions and industries, the scope of those reviews will extend to questioning the regulatory approaches and philosophies of regulators.

Five of the more recent reviews by the Auditor General for non-government regulators have been for the following regulators:

- Ontario Motor Vehicle Industry Council
- Ontario Securities Commission
- Alcohol and Gaming Commission of Ontario
- Bereavement Authority of Ontario
- Electrical Safety Authority

By analyzing these reports one can obtain a sense of how the Auditor General perceives its role in such reviews.

Some aspects of those reports deal, as expected, with financial revenue and spending issues, including:

- The accumulation of large surpluses rather than using the resources to enhance regulation;
- Whether appropriate investment strategies were used for surplus funds;
- Whether the regulator's meal and hospitality reimbursement policy was appropriate;
- Compensation levels for staff compared to other regulators; and
- The percentage of compensation fund claims recovered from the offending registrants.

However, many aspects of those reports contain a much broader analysis of the regulators, including policy preferences for the approaches and philosophies of regulators. For example, below is a partial list of the points of scrutiny by the Auditor General.

Inspections and Related Compliance Monitoring

- The number of inspections, etc., conducted, including comparison to past years;
- The use of checklists for inspections, etc., and whether those checklists were made public so that practitioners and the public could better understand the expectations of the regulator;
- Public reporting of inspections, etc., and the accuracy of those public reports;
- The use of risk analysis and selection criteria for scheduling inspections, etc.;
- The necessity of inspections, etc., conducted;
- Whether inspections, etc., could be effectively and safely done remotely;
- The frequency of follow-up inspections, etc., where violations were found and whether they were prioritized on the basis of risk;
- Whether inspectors and enforcement staff were rotated so that they would not repeatedly be in contact with the same registrants;
- Whether regulators used "undercover investigators" or "mystery shoppers" to monitor compliance with the rules by registrants;
- Whether regulatory activities were coordinated with other regulators with overlapping mandates;
- The adequacy of information technology and analytical tools to monitor regulatory performance and to identify patterns of concerns within the profession or industry;
- Whether the regulator monitors the length of time to complete inspections, etc., and whether those timeframes are reasonable;

FOR MORE INFORMATION
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- Whether the difference in enforcement action rates among enforcement staff was reasonable; and
- The rate of enforcement action flowing from complaints and the criteria used for evaluating complaints.

Governance

- The percentage of Board members who are from the regulated profession or industry;
- Whether there were term limits for Board members;
- The adequacy and completeness of the performance indicators and targets for the regulator;
- The length of time it took for the regulator to develop and implement key policy changes.

Registration

- The percentage of applicants for registration processed within the target timelines;
- The appropriateness of the registration criteria for applicants (e.g., financial responsibility);
- Whether the regulator follows up quickly with registrants who file incomplete information with their renewal applications;
- Whether the regulator follows up on practitioners who do not renew their registration to ensure that they are not acting illegally; and
- Whether the regulator effectively deters illegal practice by checking advertising and posing as consumers to see the prevalence of illegal practice.

CPD and Quality Assurance

- Whether registrants are required to complete continuing professional development in order to renew their registration.

Public Awareness Activities

- Consumer awareness of their rights and whether the regulator publishes the results of surveys measuring consumer awareness;
- Whether the regulator answers technical questions or has a meaningful way for members of the public to obtain answers to those questions; and
- Whether prices for similar services charged by practitioners was within a reasonable range.

Legislation and Government Role

- The appropriateness of the limits on the compensation fund criteria established in the legislation;
- Whether practitioners should be required to post specified consumer information (e.g., prices for services) online;
- The lack of Ministry oversight related to governance concerns within a regulator;
- Whether the legislation permits the regulator to issue "tickets" and administrative monetary penalties;
- Whether the regulator should be regulating additional categories of practitioners or transactions; and
- Whether the regulator was consulted by government on policy issues or pandemic strategies in which the regulator had expertise.

This broader mandate for the Auditor General is justified under the "value for money" principle, despite the fact that most of these regulators do not receive public funds. As the Auditor General frequently conducts follow up reviews to ascertain whether its recommendations were implemented, these reports can have a significant impact on the future priorities of the regulators subject to the reviews.

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Commentary

While one can see the value in holding regulators accountable, a number of questions arise as to the appropriateness of using the Auditor General to assume this role. Does the Auditor General have the expertise to assess these matters? Is it fair to assess a regulator on criteria that are not established in advance? Are the assumptions behind the Auditor General's assessment valid (e.g., Should the regulator be the source of casual advice for members of the public as to the content of technical standards? Should the regulator directly address prices charged by practitioners?)?

Will these reports have the effect diminishing the role of a regulator's Board setting regulatory priorities (e.g., a shift from "right-touch regulation" principles to ticking off timely follow-up boxes)? Does the regulatory cost of participating in the review constitute value for money?

External scrutiny of regulators is a trend that is taking hold in Canada. For example, in British Columbia the Office of the Superintendent of Professional Governance has an oversight role for a number of professions. In Ontario the Office of the Fairness Commissioner is already conducting a similar role for the registration practices of most professions, duplicating the proposed role of the Auditor General.

Ultimately, assuming that external monitoring is valuable, is having the Auditor General periodically conduct intensive reviews of some selected regulators the best way of conducting such oversight?

Regardless of the answers to these questions, regulators should consider whether the general recommendations made by the Auditor General in previous reviews warrant reconsideration of some of their own processes.

The reports of the Auditor General can be found at: https://www.auditor.on.ca/.

In Memoriam

John Randolph Cary, R.P.F. (Ret.)

August 28, 1942 - January 20, 2022

John Cary was known and respected throughout the forestry community. He was in the first graduating class in Forestry for Lakehead University. John then started a long career with the Ontario Ministry of Natural Resources (MNR). He worked as a forester in northwest Ontario and then in a planning and policy capacity at the Whitney Block in Queen's Park. From 1988-1994 he was a witness representing the Ministry of Natural Resources on the landmark Class Environmental Assessment of Timber Management on Crown Lands in Ontario. John served under many Ontario governments and was involved in contentious issues such as the softwood lumber disputes, and creating parks and conservation areas.

After retiring from the MNR, John worked as a consultant on sustainable forestry by helping to conduct Independent Forest Audits in Ontario. He was the first President of Trees Ontario that later merged with the Ontario Forestry Association to form Forests Ontario where he helped in afforestation in southern Ontario.

John is remembered by registrants of the OPFA as the President in 2003 and for his extensive volunteer service on OPFA committees.

https://www.legacy.com/ca/obituaries/theglobeandmail/name/john-cary-obituary?pid=201263754

Member News

New Full (R.P.F.) Members:

Julie Antler
Derian Caron
Jacqueline DeSantis
Sarah Grubb
Natalie Heyblom
Jaime Jacques
Brendan Ross
Joseph Silva
Deborah Weedon

New Associate (Associate R.P.F.) Members:

Shawn Bloom
Colin Huebert

Please welcome and support the following people who have been admitted into the OPFA but are not yet entitled to practice professional forestry in Ontario:

New Provisional Members (R.P.F. in Training) (may practice if under the direct supervision of a qualified member):

Laura Curran
Rainer Dinkelmann
William Greaves
Mary Grunstra
Cole Miller
Vanessa Nhan
Tyler Rea
Christopher Reinhart
Verna Valliere

New Student Members:

Shannon Bassi
Claire Binette
Aditi Chanda
Nathan Drummond-Stoyles
Aileen Duncan

Deceased Members:

John Cary

The following registrants are not entitled to practice professional forestry in Ontario but remain a registrant of the OPFA:

New Inactive Member-R.P.F. (Non-Practising):

Jacqueline Hamilton
Corrinne Nelson

New Life Members-R.P.F. (Ret.):

Judy Sewell

The following people are not entitled to practice professional forestry in Ontario and are no longer a registrant of the OPFA:

Resigned, Associate Members:

Rob Arnup
Bob Baker
Tom Bryson
Rod Seabrook

Resigned, Full Members:

Samuel Asirifi
Al Corlett
Dan Duckert
Steven Duffus
Dean Johnson
Dave Legg
John Parton
Jason Suprovich
Don Trudeau

Resigned, Non-Resident Members:

Adam Anderson
Steven Hills
Andrew Penney

Resigned, Inactive Members:

Alan Brailsford
Ralph Horn
Mona Wiltshire

Resigned, Provisional Member:

Kenneth Anyomi
Stacey Bowman
Rebecca Merritt
Breanne Neufeld

Continuing Education

Webinars and Other Resources

Websites that offer free webinars to earn CEUs for your membership maintenance.

- Canadian Institute of Forestry (CIF-IFC) - Offers considerable resources and ongoing lecture series https://www.cif-ifc.org/e-lectures/
- Ontario Ministry of Natural Resources and Forestry. MNRF Science Insights, contact Kristy Mckay, Science Transfer Specialist at Kristy.McKay@ontario.ca
- Forestry and Natural Resources Webinars http://www.forestrywebinars.net/
- Conservation Webinars http://www.conservationwebinars.net/
- Urban Forestry Today http://www.urbanforestrytoday.org/
- Climate Webinars http://www.climatewebinars.net/
- Cornell University http://blogs.cornell.edu/cceforestconnect/subscribe/
- Forestry Chronicle http://pubs.cif-ifc.org/journal/tfc
- Canadian Journal of Forest Research http://www.nrcresearchpress.com/journal/cjfr
- FPInnovations https://web.fpinnovations.ca/blog/ https://wildfire.fpinnovations.ca/index.aspx
- Tree Research and Education Endowment Fund (TREE Fund) https://treefund.org/webinars
- Eastern Ontario Model Forest LDD Moth Webinar Link to the recording on YouTube Channel: https://youtu.be/U4BZOM8GtyU
- Ontario Woodlot Association Oak Wilt Webinar Link and passcode to the recording: https://us06web.zoom.us/rec/share/1xAH8qHGgwVV9ki-78A83oQMbcIlZKbH5uHqHtP7xLfEJ8l8mNJE7U4iGx2nZuFp.3LYLtY_SIGeCzRor Passcode: 8Mnwb+@J
- Ontario's Centre for Research & Innovation in the Bio-economy (CRIBE) - Forest EDGE. Decision support tools, projects and case studies. https://www.nextfor-forestedge.ca/
- Canadian Partnership for Wildland Fire Science (Canada Wildfire). Partnership members include: the Canadian Forest Service, Alberta, BC, Northwest Territories, Saskatchewan and the University of Alberta. Originally focused on western Canada, it has expanded and includes information and research of interest to forest managers elsewhere in Canada. https://www.canadawildfire.org/

Coming Events

ISC Webinar Series: Buckthorn Management
March 23, 2022 12:00 pm - 1:00 pm

Rhoda deJonge, PhD, Technical Manager of Urban Forestry at Lallemand Plant Care will discuss research findings from 2021 and previous trials to share a new non-glyphosate herbicide for buckthorn control
https://www.invasivespeciescentre.ca/event/isc-webinar-series-buckthorn-management/

2022 OPFA Virtual Conference & Annual General Meeting - Supporting Resilient Forests and Growing Trust
April 12 - 14, 2022
https://opfa.ca/about-us/event-list/#!event/2022/4/12/2022-annual-conference-annual-general-meeting

CIF-IFC 2022 National Conference and 114th Annual General Meeting - Connecting Research, Policy and Practice - Making It Work
Sault Ste. Marie, Ontario
September 10 - 15, 2022
https://www.cif-ifc.org/2022-conference-agm/

Please send any upcoming events to opfanewsletter@gmail.com