

INDIGENOUS FIRE STEWARDSHIP

INFOSHEET

WHAT IS CULTURAL BURNING AND WHY DO COMMUNITIES ENGAGE IN IT?

Cultural fire, or cultural burning, refers to the practice of intentional fire lighting on the land at low-risk times of the year to achieve certain cultural objectives.¹ Motivations vary, but can include reducing wildfire risk and intensity, stimulating the growth of medicines and plants, opening up animal habitat, enhancing soil nutrients, reducing pests or invasive species, extending growing seasons, and promoting fire-adapted and drought-tolerant vegetation.^{2,3,4} Cultural fire supports intergenerational knowledge transfer and enhances overall community resilience.⁵

"CULTURAL BURNING IS BASICALLY WHEN INDIGENOUS PEOPLE USE FIRE ON THE LAND TO ACHIEVE SPECIFIC CULTURAL OBJECTIVES. THEY'RE TRYING TO IMPROVE BERRY PRODUCTION; THEY'RE TRYING TO IMPROVE A WILLOW PATCH. BUT IT ALSO HAS MANY ADDITIONAL BENEFITS. IT BRINGS IN GREEN GRASS THAT THEN OTHER ANIMALS CAN EAT. IT MAKES AREAS HEALTHIER, IT IMPROVES BIODIVERSITY. AND THEN BECAUSE IT'S REMOVING DEAD, DRY VEGETATION FROM THE LANDSCAPE IT ALSO REDUCES FIRE RISK."

- DR. AMY CARDINAL CHRISTIANSON, INDIGENOUS LEADERSHIP INITIATIVE ightarrow watch here

WHY NOW?

With unprecedented increases in wildfire scale and intensity in Canada, Indigenous People are increasingly taking a lead in fire response and risk mitigation, and revitalizing cultural fire in their communities. Support continues to grow as colonial fire suppression regimes fail to prevent, and are shown to have led to, uncontrolled wildfire.

Cultural burning is being revitalized against a backdrop of growing movements to strengthen Indigenous Nationhood and center Indigenous leadership in conservation, such as Indigenous Protected and Conserved Areas (IPCAs) and Indigenous Guardian Programs.

DID YOU KNOW?

Indigenous Peoples are 30% more likely to be displaced by wildfires.⁵

In 2023, approximately 15 million hectares of land were burned in Canada, over seven times the historic national annual average.⁶

From 1980-2021 wildfire evacuations cost Canada \$3.7 - \$4.6 billion with 576,747 people evacuated, increasing in frequency and duration.⁷

WHAT ARE THE BARRIERS & WHAT NEEDS TO CHANGE?



Indigenous fire stewardship has long been suppressed, beginning with the systematic displacement and forced removal of Indigenous Peoples from their territories and colonial policies outlawing cultural burning.^{5, 8} Today, First Nations retain the right to undertake cultural burning on reserve lands, but often not without significant wildfire agency oversight and control; beyond staterecognized Indigenous lands (a miniscule fraction of Indigenous traditional territories) the right to burn has yet to be fully realized.⁵ Capacity and finances also pose challenges for communities, as Nations must bear the costs of preparation, execution and liability insurance for cultural burns.

In recent decades fire management agencies have shifted from total suppression toward greater acceptance of applying fire to the landscape; however, Western "prescribed burning" techniques are favoured and Indigenous knowledge is largely devalued.⁸ Despite some progress, gatekeeping and power imbalances often preclude Indigenous participation in decision making.⁵

A CALL TO ACTION

In the 2022 publication, "The Right to Burn", Hoffman et al.⁵ identify key barriers to advancing Indigenous-led fire stewardship relating to: perceptions, authority and jurisdiction; governance, laws and management; access, accreditation and training; liabilities and insurance; and capacity and resources. They highlight the need to correct power imbalances, increase capacity, and reduce agency oversight, while upholding UNDRIP and attending to broader questions of governance and jurisdiction.

The authors provide five calls to action for advancing Indigenous-led fire stewardship in Canada:

- 1. Establish a National Indigenous Wildfire Stewardship working group, which includes regional hubs of Indigenous fire practitioners and resource managers across provinces and territories.
- **2. Introduce governance processes that equally prioritize Indigenous knowledge systems** to correct power imbalances.
- **3. Reduce wildfire science and management gate-keeping** by opening up prescribed fire training and accreditation outside of wildfire management agencies.
- **4.** Develop a network of Indigenous and non-Indigenous fire practitioners and researchers within each province and territory to identify key policy barriers for reintroducing cultural burning, including (but not limited to) jurisdiction, liability, and land governance.
- **5.** Increase financial support for Indigenous fire stewardship that preventatively and economically reduces wildfire risk within community interface areas and across territories.

Indigenous Leadership Initiative (ILI) also advocates for Indigenous Fire Guardian Programs and plans to work with Nations to develop fire stewardship plans for IPCAs in alignment with community values and visions for a healthy landscape.

Read: "<u>The Role of First Nations Guardians in Wildfire Response &</u> <u>Management: A Proposed National Strategy</u>" (ILI, 2022) → LINK

WHAT ABOUT CLIMATE CHANGE?

Canadian forests are a globally important carbon sink (i.e., a net positive impact on the climate by absorbing CO₂); however, climate projections and increasing wildfires raise concerns that this won't last.⁹ As human-caused climate change leads to increasingly dry and hot conditions each Summer, we begin to see a vicious cycle: wildfires are increasing due to climate change and, in turn, they accelerate climate change by releasing emissions.

Indigenous fire stewardship can support both climate adaptation (i.e., responding to climate impacts and building resilience) and mitigation (i.e., reducing emissions from wildfires). Any time vegetation is burned emissions are released; but cultural burning has a net positive impact by mitigating massive emissions that would otherwise result from megafires.

In this new era, Indigenous knowledge is critical to restoring balance and preventing out of control fires through a holistic approach. And while climate change is shifting natural cycles and indicators for cultural burning, Indigenous knowledge systems are highly adaptive.¹

DID YOU KNOW?

Between May-September 2023, extreme forest fires in Canada released about 640 million metric tonnes of carbon. That's comparable to India's fossil fuel annual emissions and 4x more than Canada's annual emissions.⁹

.......

CASE STUDY: CAN CULTURAL BURNING BE FINANCED THROUGH CARBON MARKETS?

In Australia, rules and guidelines have been established for measuring the effect of Indigenous fire practices on emissions and Indigenous-led savanna burning generates millions of dollars per year through carbon markets.^{10,11} Similar opportunities may be on the horizon in Canada.

The Yunesit'in and Xeni Gwet'in First Nations are actively investigating whether the Australian carbon financing model could be applied to their initiative, the Chilcotin Indigenous Fire Management program.¹¹ Since 2018, the two First Nations have partnered with Gathering Voices Society to revitalize fire stewardship practices, with a crew of 15 fire stewards participating in bi-annual cultural burns.¹² Since 2022, they've been collecting baseline data and modeling wildfire behaviour, probability and emissions. Gathering Voices Society is looking to build an Indigenous fire stewardship carbon-credit framework in the Canadian context, which could generate revenue for First Nations.¹²

LISTEN → "Fire and Carbon with Russell Myers Ross and William Nikolakis", Good Fire Podcast

Fire-related emissions mitigation is not an eligible activity under the Federal Greenhouse Gas Offset Credit system; however, emerging protocols for Improved Forest Management may include pathways for Indigenous-led wildfire risk reduction, such as incentives for implementing "FireSmart treatments" on reserves.¹³ In B.C., the British Columbia Forest Carbon Offset Protocol version 2 (FCOPv2) covers emissions from fire, offering promise for generating verified credits.¹⁰ Other opportunities may exist via voluntary carbon markets and growing support is available through public and philanthropic grants.

WANT TO LEARN MORE?



Watch:

Film: Climate Change & Fire | Indigenous Leadership Initiative, 2021-2025 | LINK

ightarrow Short video summaries and interviews relating to Indigenous fire stewardship

Film: "Fighting Fire with Fire: Rebuilding the Art of Indigenous Fire Keeping" | Gathering Voices Society, 2022 | LINK

Listen:

"Good Fire" podcast by Amy Cardinal Christianson & Matthew Kristoff | LINK

→ Stories of Indigenous fire stewardship, cultural empowerment and environmental integrity.

"Right Country, Right Fire" podcast by Firesticks, Mulong and The Importance of Campfires | LINK

→ Cultural Burning and Indigenous fire practice in Australia.

Read:

Report: "The Role of First Nations Guardians in Wildfire Response & Management: A Proposed National Strategy" | ILI, 2022 | LINK

Report: "Forest Restoration, Carbon Offsets and Indigenous Cultural Burning: Jurisdictional Review for Xeni Gwet'in First Nation - Tintowh" | Stefanuk, 2023 | LINK

Comic: "Prescribed Burn" - Featuring Pierre Krueger | Xulin - The Nib, 2019 | LINK

Journal Article: "The right to burn: barriers and opportunities for Indigenous-led fire stewardship in Canada" | Hoffmen et al., 2022 | LINK

Journal Article: "Centering Indigenous Voices: The Role of Fire in the Boreal Forest of North America" | Cardinal Christianson et al., 2022 | LINK

Explore:

"We Are Fire" | Muskrats to Moose Project | LINK

 \rightarrow A Toolkit for Applying Indigenous-Led Fire Practices and Western Fire Management in the Saskatchewan River Delta



Connect with RAD



radnetwork.ca radpartners

radpartnership@gmail.com

Restore, Assert and Defend (RAD) Network @radnetwork_

Bibliography

- Indigenous Leadership Initiative [Internet]. [cited 2024 Jul 24]. "Indigenous Relationship to Fire Is All Year Long" Q&A with Dr. Amy Cardinal Christianson. Available from: https://www.ilinationhood.ca/blog/ indigenousrelationshiptofireisallyearlong
- 2. Dickson-Hoyle S, Ignace RE, Ignace MB, Hagerman SM, Daniels LD, Copes-Gerbitz K. Walking on two legs: a pathway of Indigenous restoration and reconciliation in fire-adapted landscapes. Restoration Ecology. 2022;30(4):e13566.
- 3. Kimmerer R, Lake F. Maintaining the Mosaic: The role of indigenous burning in land management. Journal of Forestry. 2001 Nov 1;99:36–41.
- 4. Lake FK, Christianson AC. Indigenous fire stewardship. Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires [Internet]. 2019 [cited 2024 Jul 2]; Available from: https://research.fs.usda.gov/treesearch/58212
- 5. Hoffman KM, Christianson AC, Dickson-Hoyle S, Copes-Gerbitz K, Nikolakis W, Diabo DA, et al. The right to burn: barriers and opportunities for Indigenous-led fire stewardship in Canada. FACETS. 2022 Jan;7:464–81.
- 6. Jain P, Barber QE, Taylor S, Whitman E, Acuna DC, Boulanger Y, et al. Canada Under Fire Drivers and Impacts of the Record-Breaking 2023 Wildfire Season. [cited 2024 Jul 9]; Available from: https://www.authorea.com/users/747500/ articles/719254-canada-under-fire-drivers-and-impacts-of-the-record-breaking-2023-wildfire-season
- 7. Christianson AC, Johnston LM, Oliver JA, Watson D, Young D, MacDonald H, et al. Wildland fire evacuations in Canada from 1980 to 2021. Int J Wildland Fire [Internet]. 2024 Jun 18 [cited 2024 Jul 24];33(7). Available from: https://www.publish.csiro.au/wf/WF23097
- 8. Christianson AC, Sutherland CR, Moola F, Gonzalez Bautista N, Young D, MacDonald H. Centering Indigenous Voices: The Role of Fire in the Boreal Forest of North America. Curr Forestry Rep. 2022 Sep 1;8(3):257–76.
- 9. Byrne B, Liu J, Bowman KW, Pascolini-Campbell M, Chatterjee A, Pandey S, et al. Carbon emissions from the 2023 Canadian wildfires. Nature. 2024 Sep;633(8031):835–9.
- Nikolakis W, Welham C, Greene G. Diffusion of indigenous fire management and carbon-credit programs: Opportunities and challenges for "scaling-up" to temperate ecosystems. Front For Glob Change [Internet].
 2022 Sep 16 [cited 2024 Jul 11];5. Available from: https://www.frontiersin.org/journals/forests-and-global-change/ articles/10.3389/ffgc.2022.967653/full
- 11. Cardinal Christianson A, Kristoff M. Fire and Carbon with Russell Myers Ross and William Nikolakis [Internet]. [cited 2025 Feb 17]. (Good Fire). Available from: https://open.spotify.com/episode/5i8orjFZxQzMLWeTrl1G4V
- 12. Gathering Voices Society | Indigenous Led Environmental Stewardship Canada [Internet]. [cited 2025 Feb 17]. Indigenous Fire Stewardship Program — Gathering Voices Society | Indigenous Led Environmental Stewardship Canada. Available from: https://www.gatheringvoices.com/partnerships-and-projects/indigenous-fire-stewardshipprogram
- Stefanuk M. sustain.ubc.ca. 2023 [cited 2024 Sep 4]. Forest Restoration, Carbon Offsets and Indigenous Cultural Burning. Available from: https://sustain.ubc.ca/about/resources/forest-restoration-carbon-offsets-and-indigenouscultural-burning

Funding Support from:



WWF[®] and ©1986 Panda Symbol are owned by WWF. All rights reserved.