



EXECUTIVE SUMMARY

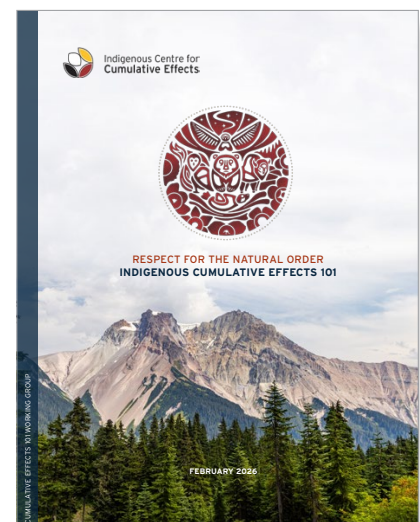
RESPECT FOR THE NATURAL ORDER INDIGENOUS CUMULATIVE EFFECTS 101

There is no direct word in the Nuu-chah-nulth language for cumulative effects, but *li-saak-sin-hi-in* carries a teaching that speaks to it deeply. It reminds us that we, as people, are inseparable from the environment around us and hold a responsibility to uphold and care for the natural order. To preserve and respect this natural order is also to preserve our culture, traditions, and language.

Indigenous peoples were the first stewards of these lands. Our knowledge transcends generations and shapes our ways of being. We rely on the waters, air, lands, and all beings for sustenance, shelter, food, trade, and economic opportunity. Maintaining the natural order has always been a core part of Indigenous governance and rights, taught by our ancestors and carried forward for future generations.

Indigenous understandings of cumulative effects are deeply relational and inherently intersectional to land, culture, governance, and spirituality. While environmental change affects everyone to a degree, it does not impact all people equally. For Indigenous peoples, the cumulative impacts of colonization, dispossession of land and traditions, environmental contamination, and systemic inequalities overlap with responsibilities to land, water, air, and all beings. The impacts are felt on our bodies, communities, culture, governance systems, and future generations.

This is why Indigenous knowledge of cumulative effects must be grounded in *li-saak-sin-hi-in*, in the understanding that everything is connected. The environment shapes our language, songs, and creation stories. These are not separate resources; they are our relations, teachers, and ancestors. As guests on these lands, none of us are merely observers. How we uphold our responsibilities now becomes the legacy we leave for future generations.



Download the full 28-page report
at icce-caec.ca/indigenous-cumulative-effects-101/

INDIGENOUS UNDERSTANDING OF CUMULATIVE EFFECTS

Self-Defining Indigenous Cumulative Effects

Cumulative effects are self-determined and defined by First Nations peoples and communities. Each jurisdiction and First Nation, Inuit, and Métis community in Canada has its own way of defining and explaining cumulative effects. From a regulatory lens, cumulative effects assessment focuses on identified changes, where these changes come from, and what impacts they have had or will have in the future. From the standpoint of the Indigenous Centre of Cumulative Effects, there are many definitions reflecting the diversity among First Nations, Inuit, and Métis peoples.

For example, the Metlakatla Cumulative Effects Monitoring Program defines cumulative effects as “changes to the environment or human well-being resulting from the combined impacts of past, present, and future development projects and human activities.” The Nunavut Impact Review Board describes cumulative effects as the accumulation of environmental changes caused by human activities when added to the effects of other past, present, and reasonably foreseeable future developments. Cumulative effects can also be described as “changes in the environment caused by multiple interactions among human activities and natural processes that accumulate across space and time,” often described as “death by a thousand cuts.”

Why are Cumulative Effects Important?

Cumulative effects analyses quantify the long-term assault on Indigenous well-being, ways of life, and traditional territories. For many Indigenous peoples, well-being is inseparable from the land. The aggregation of impacts from developments such as forestry, mining, and oil and gas destroys the ecological integrity of hunting, fishing, and gathering grounds.

Environmental degradation leads to loss of food security, compromised health from pollution, and cultural damage as the ability to pass on Indigenous knowledge, language, and ceremonial practices connected to the land is eroded.

Indigenous rights are affirmed through treaties and emerging case law that outline the duty to consult and accommodate. These rights recognize Indigenous peoples' well-being as inseparable from maintaining a sustainable land base.

Impacts of Settler Colonialism

Settler colonialism is a governing system where a foreign power seizes land and works to permanently replace Indigenous inhabitants while dismantling their political structures and ways of life. This project of dispossession is ongoing in Canada and forms the foundation for cumulative effects experienced by Indigenous communities today.

Colonial governance systems have disrupted Indigenous stewardship practices and limited Indigenous peoples' ability to access, use, and control their territories.

Indigenous Science in Cumulative Effects

Traditional ecological knowledge is a cumulative body of knowledge and beliefs about relationships among living beings and their environment, encompassing biophysical, spiritual, economic, social, and cultural dimensions acquired over many generations. Indigenous worldviews emphasize relationality and reciprocal responsibilities to protect and maintain balance with the natural world.



SUCCESS STORIES

Indigenous communities across Canada have established cumulative effects programs that involve community members in the protection, monitoring, and management of activities occurring on their lands and territories. Guided by Indigenous science, laws, values, and governance, these initiatives demonstrate effective stewardship and Indigenous-led approaches to cumulative effects work.

- **Lac La Ronge Indian Band's Community Environmental Monitoring Program** monitors and preserves the health of waterways essential to the community. Lands and Resources staff worked with community members to identify key water sampling locations, and the monitoring program has facilitated water sampling over several years while creating meaningful opportunities for Elders, youth, land users, knowledge carriers, and Indigenous-owned businesses.
- **Fort McKay Métis Nation's cumulative effects simulation modelling study** combined Indigenous knowledge and simulation modelling to develop indicators and baselines that document cumulative impacts on land and culture. The work describes the decline in access to land and cultural activities over a 120-year period, providing a counterweight to traditional project-focused environmental assessments.
- **Nuxalk Nation's Guardian Watchmen program** maintains a continuous on-the-land presence as the "eyes and ears of Nuxalk territory." The Guardians conduct patrols, monitoring, research, and data collection in accordance with Nuxalk Nation laws and authority, helping ensure that lands and waters are sustainably managed while passing knowledge to the next generation.
- **Tłı̨chǫ Government's Aquatic Ecosystem Monitoring Program** combines traditional knowledge with scientific sampling to monitor fish, water, and sediments, while Indigenous observations, oral histories, and Elder storytelling hold environmental baselines not recorded in scientific literature and help communities detect change.
- **Metlakatla First Nation's Cumulative Effects Management Program** ensures that Metlakatla values, needs, and priorities are reflected in cumulative effects management and decision-making. Through initiatives such as the Metlakatla Membership Census and environmental surveys, the Nation collects data that supports environmental assessments, treaty negotiations, and regional cumulative effects initiatives.



The Indigenous Centre for Cumulative Effects is a non-political, non-profit organization founded in November 2019 with a goal to create networks and share knowledge to support First Nations, Inuit, and Métis communities in culturally relevant cumulative effects assessment, monitoring, and management.

ICCE is governed by a fully Indigenous board of directors and supported by a technical advisory committee of cumulative effects practitioners (Indigenous and non-Indigenous).

In 2022-2023, ICCE conducted a national needs assessment by consulting Indigenous communities across Canada to identify their unmet needs in cumulative effects. The assessment informed this report and other current ICCE initiatives.

Learn more at icce-caec.ca

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