

The Canadian Mountain Network's contributions to federal sustainable development and reconciliation commitments

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Introduction

Established in 2019 and funded by a 5-year research grant from the Government of Canada's Networks of Centres of Excellence program, the Canadian Mountain Network (CMN) is a national, not for profit organization that supports the resilience and wellbeing of mountain systems and beyond through research partnerships based on Indigenous and Western ways of knowing. With 17 research projects, 7 knowledge hubs, and 7 strategic initiatives, CMN is providing opportunities for researchers, knowledge holders, and community members across Canada to pursue place-based research, learn together, and contribute to holistic and inclusive sustainability initiatives. Initiatives that are Indigenous-led or co-led with non-Indigenous researchers demonstrate learning together in the spirit of reconciliation and wellbeing, through braiding knowledge between Indigenous and Western ways of knowing and doing.



Braiding knowledge refers to a continuous process of weaving Indigenous and non-Indigenous (or Western) ways of knowing in a way that maintains the integrity of both knowledge systems without compromising either or merging them togetherⁱ. Braiding knowledge is an exchangeⁱⁱ that is not intended to replace any ways of knowing, and can only take place with an established understanding of historical and systemic injustices, a shared, representative language, and a commitment and dedication to the long-term.

CMN funds initiatives that collectively support advancement of sustainability and human rights principles, namely, the Sustainable Development Goals (SDGs)ⁱⁱⁱ and the *United Nations Declaration on the Rights of Indigenous Peoples* (the *UN Declaration*)^{iv}. Implementation of the *UN Declaration* and compatible guidelines, including those outlined in the Truth and Reconciliation Commission of Canada's (TRC) Calls to Action^v, aid in perpetuating more ethical spaces for Indigenous-led research^{vi}. As such, these instruments are essential to foster greater wellbeing in Canada's present and future^{vii}. Prioritization of Indigenous knowledge and respect of traditional territories is imperative in advancing true sustainability and holistic reciprocity^{viii}. Further, honouring and uplifting Indigenous Peoples allows for co-collaboration and place-based methods in moving towards heightened sustainability, supporting initiatives such as the SDGs. As such, collaboration through braiding knowledge holds the capacity to simultaneously uphold and perpetuate the SDGs and the *UN Declaration*, inherently supporting Canadian contexts of each.



This document outlines the ways in which CMN aligns with the Government of Canada's current approaches to sustainability strategies and supporting the human rights of Indigenous Peoples, in both direct and integrated ways. Rather than a comprehensive review of all federal government strategies, this document addresses those with which CMN is currently most closely aligned and can support advancement of, including:

- *The United Nations Declaration on the Rights of Indigenous Peoples Act*^{ix}
- The Truth and Reconciliation Commission Calls to Action
- Setting New Directions to Support Indigenous Research and Research Training in Canada: Strategic Plan 2019-2022^x
- Towards Canada's 2030 Agenda National Strategy^{xi}
- The Federal Sustainable Development Strategy^{xii}
- The Sustainable Development Goals and the Canadian Indicator Framework for the Sustainable Development Goals^{xiii}

Indigenous Leadership in Research

CMN acknowledges Indigenous worldviews, knowledge, and perspectives as being on par with Western research by uplifting initiatives that are place-based, culturally and spiritually relevant, and consider the complex and inter-dependent relationships between humans and the natural environment. These initiatives are action-based, leading to on-the-ground change while advancing understandings of landscape change, mountain systems, and socioeconomic impacts. These factors, when operating in tandem, illustrate a commitment to reconciliation and decolonization of research by uplifting Indigenous knowledge and operating through Indigenous leadership.

The Setting New Directions to Support Indigenous Research and Research Training in Canada Strategic Plan 2019-2022 outlines four strategic directions to strengthen the capacity of First Nations, Inuit, and Métis Peoples in leading their own research initiatives. Based on CMN's purpose and its currently funded initiatives, the Network is making advancements on each of these strategic directions by prioritizing relationships between Indigenous Peoples and Western researchers (Table 1).

Table 1. Alignment between current CMN activities and Setting New Directions

Strategic Direction 1: Building relationships with First Nations, Inuit, and Métis Peoples	
CMN Alignments	Relationships are often fostered through a Two-Eyed Seeing approach, which refers to learning to see from one eye with the strengths of Indigenous knowledges and learning to see from the other eye with the strengths of Western knowledges, as well as learning to use both eyes together ^{xiv} . This is a process that can take many years to meaningfully develop, laying the foundation for respectful, reciprocal, and sustaining collaboration.
	Relationships are built with distinctions-based approaches. Non-Indigenous researchers acknowledge and respect that the capacity, needs, and priorities of First Nations, Inuit, and Métis Peoples are distinct, and that engagement may not be able to occur through Western constructs.
	CMN's currently funded initiatives collectively demonstrate that braiding knowledge systems support steps towards reconciliation in supporting Indigenous livelihoods, and inform Western researchers of how to be of service in supporting objectives of the <i>UN Declaration</i> in place-based research. This interplay between community and governmental scales lends to a more holistic approach in supporting Indigenous self-determination and advancement of reconciliation.
Strategic Direction 2: Supporting research priorities of Indigenous Peoples	
CMN Alignments	19 initiatives currently funded by CMN are Indigenous-led or co-led.
	Initiatives that are co-led with Western researchers have been carefully created to align with research and community priorities of Indigenous Peoples. This includes respecting the capacity of local First Nations, Inuit, and Métis communities, especially when the needs of research exceed a community's capacity to fulfill.
	In collaborative spaces, non-Indigenous researchers have reported being open to change through learning and unlearning. This includes rethinking research methodologies to align more with Indigenous culture and spirit and provide more flexibility within Western science.
	Researchers working within current CMN initiatives have commented that this is one of the first funding programs to provide more flexibility to eligible research activities, placing greater focus on Indigenous culture, language, and spirit.

Strategic Direction 3: Creating greater funding accessibility to granting agency programs

CMN Alignments

In June 2021, CMN launched 7 knowledge hubs across Canada as initiatives that are Indigenous-led and/or co-led with Western researchers. The call for knowledge hub proposals received a high volume of applications, far exceeding CMN's funding capabilities, highlighting an area for growth and future partnerships.

Currently, 50% of CMN's research grants support Indigenous-led research. CMN has an opportunity to collaborate with the Strategic Plan in creating greater accessibility to funding, as, in the future, CMN plans to expand and support initiatives that are place-based, considering the complex and interdependent relationships between humans and their non-human natural environment.

Areas of current CMN investment include: 2 of 4 Inuit settlement regions; 19 of 21 comprehensive First Nations and Métis agreements; 10 of 15 historic treaty regions; and multiple non-Treaty territories in Yukon, British Columbia, Quebec, and Labrador.

Strategic Direction 4. Championing Indigenous leadership, self-determination, and capacity in research

CMN Alignments

In many CMN initiatives, Indigenous Peoples are leading and determining how data is collected and shared. Non-Indigenous partners are considering ethics of intellectual property, including adherence to guidelines such as the *First Nations Principles of Ownership, Control, Access, and Possession (OCAP®)*^{xv} and the Collective benefit, Authority to control, Responsibility and Ethics (CARE) Principles for Indigenous Data Governance^{xvi}.

The emphasis that many CMN initiatives place on creating space for braiding knowledge helps to build capacity for Indigenous self-determination and leadership in research. This includes Indigenous researchers, community members, and organizations having control over decision-making and their level of involvement in research activities.

The launch of the 7 knowledge hubs is a unique funding opportunity that places focus on championing Indigenous leadership research priorities and commitment to long-term relationship building, supporting movements to decolonize research processes.

Sustainable Development and the Human Rights of Indigenous Peoples

THE UNITED NATIONS DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES

CMN supports partnerships based on equality between Indigenous knowledge and Western science to inform and enhance decision making and action for the health and resilience of mountain people and places in Canada. This is seen in action through the facilitation of ethical space in governance, management, and programs supporting Indigenous leadership, contributing to the spirit and intent of the *UN Declaration*. The human rights and self-determination of Indigenous Peoples outlined in the *UN Declaration* requires an all-of-society approach to uphold. Research and knowledge sharing initiatives funded by CMN demonstrate a shared commitment to strengthened relationships, prioritization of Indigenous self-determination, and movement towards advancement of sustainability and reconciliation.

Through the collective impact of funded initiatives and the Network's overall strategic operations, CMN contributes to the overarching spirit

and intent of the *UN Declaration* through its support of the self-determination of Indigenous Peoples. Prioritizing support for Indigenous-led research contributes towards leveling out the imbalance of Western scientific research that has historically dominated the landscape since colonization. This is demonstrated across currently funded research and knowledge sharing initiatives in a variety of forms, including: an emphasis on free, prior, and informed consent; opportunities for non-Indigenous researchers to advance collective wellbeing by taking steps towards reconciliation; supporting Indigenous leadership; increasing capacity of Indigenous research by prioritizing community needs and local knowledge; encouraging openness to learning and unlearning together; supporting the protection and preservation of Indigenous cultures and languages; taking distinctions-based approaches towards decolonizing research methodologies; and creating safe and ethical spaces for meaningful knowledge co-production.

THE TRUTH AND RECONCILIATION COMMISSION OF CANADA: CALLS TO ACTION

The TRC outlined 94 Calls to Action as a means to begin the journey of reconciliation following Canada's dark legacy of residential schooling. In order for the Government of Canada to redress the legacy of residential schools and further reconciliation efforts across the country, a multi-scale effort must be made to ensure that all levels of society are positively impacted. The TRC identified that the standards and principles necessary for reconciliation in Canada are contained in the *UN Declaration*, as the framework for reconciliation at all levels and across all sectors of Canadian Society. CMN contributes towards the TRC Calls to Action through initiatives that uphold the spirit and intent of the *UN Declaration* within community and research landscapes. Through its funded

initiatives, CMN works to improve conditions that foster cultural revitalization and Indigenous self-determination, which are key facets to advancing the healing, wellbeing, and human rights of Indigenous Peoples. This is especially crucial following the historic wrongdoings and legacies of the residential schooling system. Further, CMN's research program has begun approaching decolonized research by navigating away from being dominated by Western science. In allocating funds to various initiatives, CMN does not direct activities to occur in any certain way; instead, space is created for research and knowledge sharing to occur in ways that are most meaningful and beneficial to Indigenous Peoples involved.

THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The Government of Canada has affirmed its commitment to the 2030 Agenda for Sustainable Development and the SDGs. Research projects, knowledge hubs, and strategic initiatives supported by CMN align with the SDGs in ways that overlap and interconnect with other human rights based instruments, including the *UN Declaration* and the TRC Calls to Action (Table 2). For the purpose of this report, CMN initiatives have been aligned with the global calls to action, allowing for subsequent alignment with complementary instruments, such as Towards Canada's 2030 Agenda National Strategy, the Federal Sustainable Development Strategy and the Canadian Indicator Framework.



Table 2. CMN's Alignment to the SDGs, the *UN Declaration*, and the TRC Calls to Action.

SDG Theme	<i>UN Declaration</i> Articles	TRC Calls Referencing the <i>UN Declaration</i>	CMN Alignment
People (SDGs 3, 4, and 5)	14, 15.1, 20.1, 21.1, 22.1, and 24	24, 44	CMN-funded initiatives have an overarching focus on strengthening holistic wellbeing, including respecting the value of Traditional Knowledge as it draws on interconnectedness of physical, emotional, spiritual, and environmental wellbeing, supporting SDG 3 and Article 24. Numerous CMN initiatives have allocated resources to revitalizing connection to traditional plants, foods, and medicines, with an aim of improving physical and mental health conditions.
			Relating to SDG 4, CMN-funded initiatives provide ample opportunities for youth, students, community members, and Elders to be directly involved with research through training, capacity building, knowledge sharing, educational initiatives, and employment. This also includes supporting self-determined, land-based learning for Indigenous Peoples by allocating resources to initiatives such as ceremonial practices that foster intergenerational knowledge sharing and cultural and linguistic education and revitalization, relating to Articles 14, 20.1, and 21.1.
			CMN is a signatory of Canada's 50-30 challenge and has met or exceeded specific EDI-related performance measures set by CMN's Board, contributing to SDG 5. Among members of the Board and senior management, 70% identify as women, 37% as Indigenous, and 7% as LGBTQ+. Further, CMN initiatives make space to appropriately respect and support the unique needs of Indigenous Elders, women, and children when undertaking research and knowledge sharing activities, relating to Articles 22.1 and 44.
Planet (SDGs 6, 12, 13, 14, and 15)	11.1, 12.1, 18, 25, 26, 29, 31, and 32		At least 7 of CMN's currently funded initiatives directly relate to freshwater systems, including through gathering data on aquatic health and working to enhance species populations that inhabit freshwater systems (SDG 6). Additionally, as 60-80% of freshwater resources around the world come from mountain headwaters, CMN's focus on the health and resilience of mountain systems has far-reaching impacts.

Planet (SDGs 6, 12, 13, 14, and 15)	11.1, 12.1, 18, 25, 26, 29, 31, and 32		<p>Climate change is one of the main priorities in CMN's program. Although mountain systems are uniquely resilient, they are also extremely vulnerable to climate change, with impacts that disproportionately affect those living in northern, remote, and rural regions. Many of CMN's initiatives prioritize an integrated, continental scale understanding of the impacts of climate change and human activities on mountain systems, with an emphasis on uplifting Indigenous knowledge as it demonstrates a deep-seated connection to the land. By braiding together Indigenous and Western ways of knowing to enhance understanding of climate change impacts, foster resilience, plan for adaptation, and practice sustainable development in harmony with nature, CMN contributes to SDGs 12 and 13.</p>
			<p>Among Indigenous communities involved in current CMN initiatives, marine ecosystems and wildlife are highly valuable in providing cultural and spiritual connection, in addition to supporting livelihoods and sustenance. Some of these initiatives include working to enhance wild salmon populations and revitalize cultural connections, and studying the health of aquatic ecosystems that have impacts on marine systems. Collectively, the scope of these initiatives contribute to SDG 14 and Articles 25, 26, and 29.</p>
			<p>As the current focus on CMN's research program is around mountain systems, connection to SDG 15 is inherent through a variety of initiatives, several of which focus specifically on enhancing wildlife populations. Successfully increasing populations of species such as bison and caribou through these initiatives can be considered to directly advance the FSDS 2019-22 target with attention required: "Ensure species that are secure and remain secure, and populations of species at risk listed under federal law exhibit trends that are consistent with recovery strategies and management plans by 2020."</p>
			<p>Collectively, CMN's contributions to SDGs for the planet (6, 12, 13, 14, and 15) are strengthened by interlinkages to <i>UN Declaration</i> Articles 11.1, 12.1, 14, 18, 25, 26, 29, 31, and 32. Place-based research occurs with free, prior, and informed consent, providing opportunities for Indigenous communities to lead and inform decision-making related to their traditional territories, as well as prioritize research priorities that align with traditional values and customs.</p>

Peace (SDG 16)	18, 20.1, 21.1, 32.1, and 35	43, 45ii, 46iii, 48i	<p>At an operational level, as well as within individual initiatives, CMN strives to ensure inclusive, participatory, and representative decision-making. CMN's Indigenous Circle of Advisors informs the Network's decision-making to ensure respectful and reciprocal partnerships with Indigenous communities are maintained. Many CMN-funded initiatives are Indigenous-led or co-led, allowing Indigenous Peoples to self-determine their involvement in research and inform and lead decision making to align with Indigenous priorities and values. With these structures of participatory governance, along with protecting fundamental freedoms and maintaining transparency, CMN contributes to SDG 16 and <i>UN Declaration</i> Articles 18, 20.1, 21.1, 32.1, and 35.</p>
Prosperity (SDGs 8, 9, 10, and 11)	3, 7.1, 11.1, 12.1, 20.1, 21.1, 31.1, and 32	43, 45ii, 46iii, 48i	<p>Each of CMN's initiatives have provided gainful and meaningful employment opportunities to both Indigenous and non-Indigenous youth, students, community members, and early career researchers. In many instances, these employment opportunities also support capacity building for local communities and expand possibilities for economic sustainability, supporting SDG 8 and <i>UN Declaration</i> Articles 20.1 and 21.1.</p>
			<p>CMN supports SDGs 9 and 11 by providing opportunities to enhance research capacities, promote innovation, and foster research partnerships that support the resilience and health of Canada's mountain systems and communities.</p>
			<p>The values of mutual respect and positive reciprocity are built into CMN's foundation, guiding a commitment to decolonized research, learning and unlearning together, and moving toward reconciliation. Inherently, these values support SDG 10 and <i>UN Declaration</i> Articles 3, 7.1, 11.1, 12.1, 31.1, and 32. Among individual initiatives funded by CMN, research teams have implemented a variety of approaches to maintain equity and equality within their work, including fair representation of leadership, providing space for all voices to be heard, acknowledging biases, and addressing the needs of those most vulnerable.</p>
Partnerships (SDG 17)	39		<p>CMN emphasizes the value and significance of research through braiding Indigenous knowledge with Western science, contributing to a more holistic landscape for research and knowledge sharing. These partnerships for knowledge mobilization play a role in learning together in movements towards reconciliation and heightened sustainability in mountain environments and beyond, contributing to SDG 17 and Article 39.</p>

Conclusion

The Government of Canada has made commitments to bolster human and environmental wellbeing, as illustrated in support for the *UN Declaration* and the SDGs, as well as supporting nationally-relevant contexts, such as Towards Canada's 2030 Agenda National Strategy, the Federal Sustainable Development Strategy, the Canadian Indicator Framework for the Sustainable Development Goals, the Truth and Reconciliation Commission's Calls to Action, and Setting New Directions to Support Indigenous Research and Research Training in Canada: Strategic Plan 2019-2022. In order for the spirit and intent of these instruments to be woven into all levels of society, sustained and compatible



In order for the spirit and intent of these instruments to be woven into all levels of society, sustained and compatible action on a community level is imperative.

action on a community level is imperative. CMN is an exemplary demonstration of the ways in which advancement of the SDGs (including nationally compatible instruments such as the Federal Sustainable Development Strategy and the Canadian Indicator Framework) and the *UN*

Declaration can interplay through the braiding of Indigenous and Western knowledge systems in community-led initiatives. In particular, support for the human rights of Indigenous Peoples is being demonstrated by CMN with a movement away from sole reliance on Western science by prioritizing, making space, and amplifying Indigenous voices in research and decision-making. In this way, CMN provides opportunities for place-based, self-determined research and land guardianship, aiding in reducing vulnerabilities and supporting underpinning messages of further complementary instruments, including the TRC Calls to Action. These underpinning themes include linguistic and cultural preservation and revitalization, wellbeing in human-environmental relationships, and land-based learning.

Research and knowledge sharing approaches taken by CMN-funded initiatives demonstrate examples of unique beginnings in the journey towards reconciliation. Partnerships are continuously growing between educational institutions, Indigenous organizations and communities, non-government organizations, government institutions, and business and community partners. Through these partnerships and initiatives, participating individuals and groups work to create space that is ethical and safe for research and knowledge sharing activities. Space for Indigenous-led research creates opportunities for cultural revitalization, knowledge sharing, and safe spaces for truth. In initiatives funded by CMN, Indigenous Peoples often have roles of knowledge leaders, and are determining the ways in which data is collected and shared. The inclusion of community in research improves

capacity for place-based knowledge sharing, fosters transparency in operations, and encourages discussions and protocols around information sharing. In this way, braiding knowledge undertaken in CMN-funded initiatives aligns with all four Strategic Directions outlined in the Setting New Directions to Support Indigenous Research and Research Training in Canada Strategic Plan 2019-2022 by prioritizing respectful partnerships between Indigenous Peoples and Western

researchers. As such, CMN is exemplary in supporting community-based initiatives operating in holistic and intersectional manners with intent to advance reconciliation by braiding knowledge. The applications of this approach are far reaching, and serve as examples of how commitments can intersect in advancement of more holistic and sustainable outcomes.



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