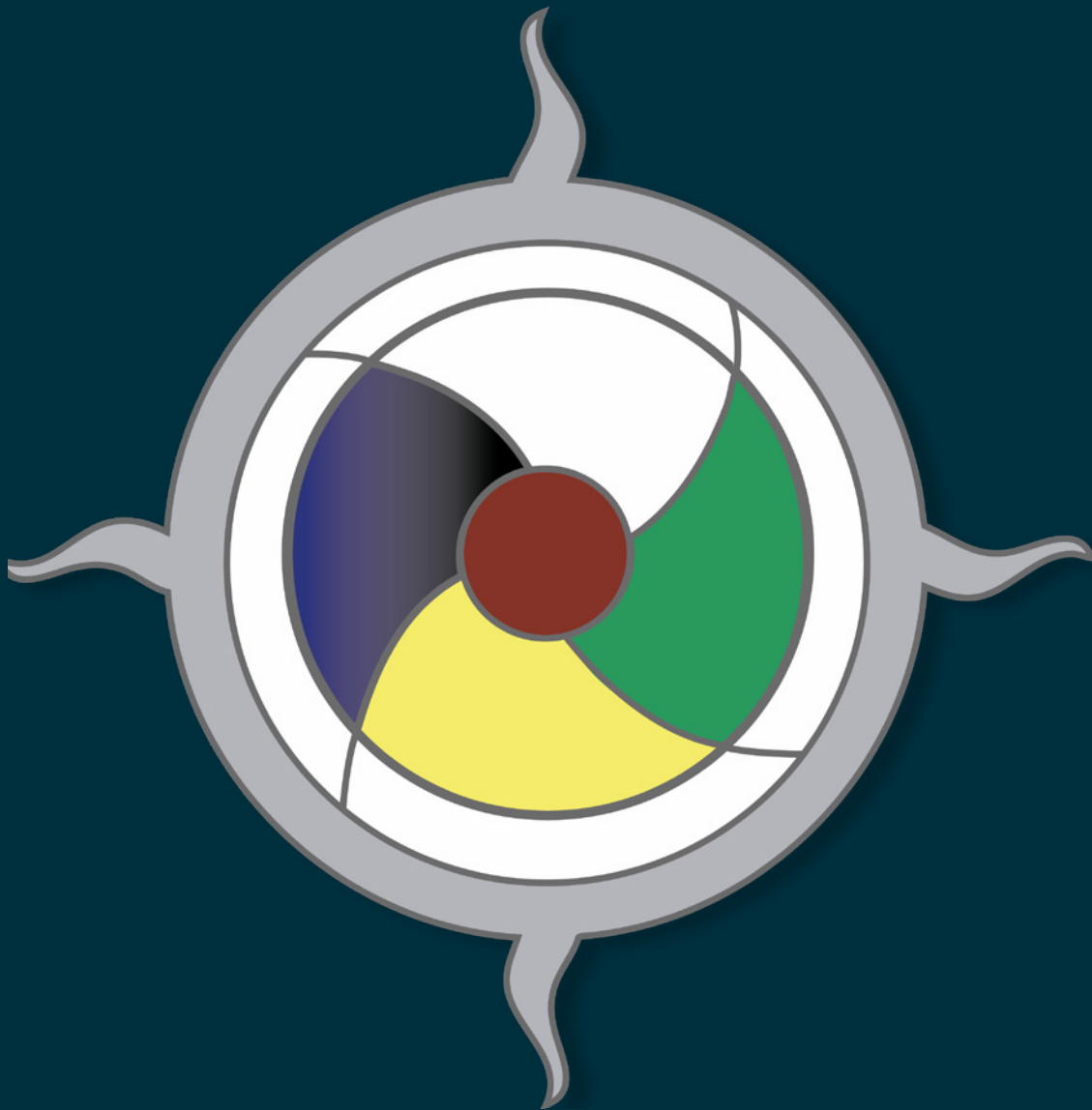


# Working with Indigenous Knowledge & Indigenous Knowledge Holders:

Guidance for Non-Indigenous Researchers,  
Decision-Makers, Proponents, and Allies  
of Indigenous Peoples in Alberta



by Leo Bruno, Elmer Ghostkeeper, Matthew Munson, Kyra Northwest, Ira Provost,  
Gleb Raygorodetsky & William Snow

November 2025

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# The Meaning of Indigenous Knowledge<sup>1</sup>

*Indigenous Knowledge is not just a way of life, but, more importantly, it is the intimate relations we have with the physical, mental, emotional, and spiritual dimensions of life and death around us. It is that very essence that embraces every facet of our daily lives. It is that which makes us breathe, smell, taste, feel, be happy, and cry. It is how we relate and connect to everything that surrounds our whole being. Our Creator and ancestors gifted it to us through songs, stories, dances, art, and ceremonies. These teachings are written in water bodies, landscapes, hillsides, dense forests, animal tracks, and spiritual quests.*

*The world is our classroom, the Creator our teacher, the Grandmother and Grandfather spirits are the assistant instructors. The animals and plants are our brothers and sisters. We all respect one another and together we all live in harmony, as one. We celebrate our victories, trials, and successes, with our medicines, sacred practices, and ceremonies.*

*Indigenous Knowledge is not to be read in books, but rather it is a teaching to be found underneath every rock, along every riverbed, in front of every blade of sweetgrass. Our educators whisper in the wind, howl at the Grandmother Moon, shout in the storms, laugh in the rain, and glisten in the snow. Our knowledge is imbedded in the tracks of our animal relatives and carried on the wings of eagles. Our teachings call us from the songs of the loon and the lessons hidden beneath the sound of flutter of the winged ones, on each new day. Our thoughts are charted in the silent whisper of leaves above the willow branches and marked beneath the reflection of the morning star. It is dawn that opens a new page of learning as our Grandmother Moon overlooks our progress. In every season — a change, a new chapter of understanding; every Grandmother and Grandfather spirit — an instructor of wisdom.*

— Kisikawasis (Mr. Leo E. Bruno, Samson Cree Nation)

Kisikawasis generously gifted<sup>2</sup> the above description of Indigenous Knowledge, based on his personal understanding of the gifts and teachings he has received from Indigenous Elders<sup>3</sup> and

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<sup>1</sup> Throughout the document, the term Indigenous Knowledge (also referred to as traditional knowledge) encompasses the diversity of place-based worldviews and knowledge systems held by Indigenous Peoples. According to Margaret Kovach, Plains Cree and Saulteaux scholar and professor, it “acknowledges both the shared commonalities and the diversity of many tribal ways of knowing” (in Kovach, M. 2010. *Indigenous Methodologies: Characteristics, Conversations, and Contexts*. University of Toronto Press).

<sup>2</sup> The verb “to gift” draws attention to an act of sharing and trust in reciprocal giving and receiving (e.g. information, wisdom, experience, stories).

<sup>3</sup> Indigenous Elders keep people connected to each other, their lineage, and histories. As Knowledge Keepers, Elders transmit customs and traditional practices that reveal a living culture and help individuals embody a sense of identity. In “Walking Together - First Nations, Métis and Inuit Perspectives in Curriculum.” <http://www.learnalberta.ca/content/aswt/elders/>

knowledge holders throughout his life. Kisikawasis served as a member of the Alberta Indigenous Knowledge Policy Joint Working Group, which convened in 2018 and 2019 to provide recommendations to the Government of Alberta on the application of Indigenous Knowledge, and he was a member of the Writing Group that developed this Guidance document.

Kisikawasis' explanation aligns well with the following internationally recognized description of Indigenous Knowledge provided by the United Nations Education, Scientific and Cultural Organization (UNESCO):

*[T]he understandings, skills and philosophies developed by [Indigenous] societies with long histories of interaction with their natural surroundings. [It] informs decision-making about fundamental aspects of day-to-day life. This knowledge is integral to a cultural complex that also encompasses language, systems of classification, resource use practices, social interactions, ritual and spirituality. These unique ways of knowing are important facets of the world's cultural diversity, and provide a foundation for locally appropriate sustainable development.*<sup>4</sup>

The right of Indigenous Peoples to maintain, control, protect, and develop Indigenous Knowledge is recognized in the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP).<sup>5</sup>

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<sup>4</sup>Available online: <https://en.unesco.org/links>

<sup>5</sup> UN General Assembly. 2007. United Nations Declaration on the Rights of Indigenous Peoples. Article 31. <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html>

## The Intent of the Guidance

The Guidance document is meant to assist non-Indigenous practitioners (e.g. researchers, decision-makers, proponents, and allies of Indigenous Peoples) in Alberta working with Indigenous Peoples,<sup>6</sup> communities, organizations, and experts to acknowledge, respect, honour, protect, and promote Indigenous Knowledge as a credible and valued living knowledge system.

The Guidance document acknowledges Indigenous Peoples of Alberta and their sacred obligations, protocols, customs, laws, standards, practices, languages, and cultural restrictions regarding Indigenous Knowledge. **This Guidance document is in no way intended to interfere with, provide guidance towards, supersede, or replace these sacred ways of being, knowing, and doing.**

This Guidance document recognizes and affirms the existing Aboriginal and treaty rights and must not be interpreted so as to abrogate or derogate from any Section 35 of the *Constitution Act of Canada, 1982* rights, or to be a stand-in, substitute, or replacement for any legal obligations, consultation requirements, or for obtaining free, prior, and informed consent.

The Guidance document is meant to help non-Indigenous practitioners implement all relevant aspects of their work with Indigenous Knowledge and Indigenous Knowledge holders in Alberta by:

- Supporting processes and mechanisms to cultivate respectful and sustainable relationships with Indigenous Peoples.
- Supporting the development and implementation of culturally appropriate approaches to mobilizing, sharing, and braiding Indigenous and scientific ways of knowing.

This Guidance document represents an emerging understanding, as captured in written English, of the significant values of orally transmitted Indigenous Knowledge held by diverse Indigenous Peoples with different languages,<sup>7</sup> customs, laws, standards, spiritual practices, and cultural norms in Alberta. As such, it is inevitable that some clarity of ideas, concepts, and descriptions that were originally expressed in Indigenous languages during the development of the Guidance document has been lost in translation from oral Indigenous narratives into written English.<sup>8</sup>

This is a living document that can be further refined as needed under the guidance of Indigenous Knowledge holders in Alberta to reflect evolving understandings and experiences. Over time, the principles may be revisited through culturally appropriate ceremony or dialogue.

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<sup>6</sup> Referring to all First Nations, Métis, Inuit, and other Indigenous Peoples, while recognizing that not all people self-identify using the term Indigenous.

<sup>7</sup> The primary Indigenous linguistic groups in Alberta are Nehiyawak (Cree), Dene, Blackfoot, Michif, and Iyârhe Nakoda.

<sup>8</sup> “The meaning of words lies in their sounds; through the translation process from an Indigenous oral language into English, the sounds of their Indigenous meanings are lost.” — Elder Elmer Ghostkeeper (Buffalo Lake Métis Settlement).

# The Origins of This Guidance Document

This Guidance document builds on a multi-year process led by the Government of Alberta's Ministry of Indigenous Relations from 2017 to 2019, with support from Alberta Environment and Parks (AEP) Office of the Chief Scientist. That process culminated in the development of a draft Indigenous Knowledge Strategic Guiding Policy (Draft Policy) in the spring of 2019.

The Draft Policy was designed by a Joint Working Group (JWG)<sup>9</sup> comprised of Indigenous Elders and experts from the primary Indigenous linguistic groups in Alberta (Nehiyawak (Cree), Dene, Blackfoot, Michif, and Iyarhe Nakoda) and senior managers of the Alberta public service who worked *in a good way*<sup>10</sup> during a co-created seasonal round of activities (Figure 1) that nurtured relationships, common understanding, and respectful collaboration.

Guided by the advice gifted by the Indigenous members of the JWG, the Draft Policy articulated four co-created principles — Ceremony, Awareness, Mutual Respect, and Shared Governance — that were affirmed through a pipe ceremony. In the fall of 2018, the JWG members gifted the Draft Policy, in ceremony, to the Minister of Indigenous Relations as part of a non-sacred *parfleche*<sup>11</sup> (bundle) embodying stewardship responsibilities to keep the co-developed principles alive through advancing their adoption and implementation. In March of 2019, the Minister of Indigenous Relations sent a letter to the JWG and contributing Indigenous organizations to acknowledge the Draft Policy and encourage its implementation.

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<sup>9</sup> The Joint Working Group (JWG) Indigenous participants were suggested during the Ministry of Indigenous Relations engagement sessions with First Nations and Métis communities. Each participant was invited to bring an additional participant (Elder, youth, land user, or knowledge holder) as a way of respecting as many perspectives as possible. Senior public servants were invited from Integrated Resource Management (IRM) System ministries based on expressions of interest or those with previous experience of working well with Indigenous Knowledge holders. The JWG members (2018-2019) were: Ira Provost and Elder Pat Provost (Piikani Nation); Kyra Northwest (Montana First Nation); Kaylyn Buffalo and Kisikawasis (Elder Leo E. Bruno) (Samson Cree Nation); Harry Cheecham and Elder Betty Woodward (Fort McMurray First Nation #468); Matthew Munson and Fred Didzena (Dene Tha First Nation); Elder Elmer Ghostkeeper and Mark Sinclair (Métis Settlements); Amy Quintal, Craig Latendre, and Elder Elmer Guillon (Métis Nation of Alberta); Bill Snow and Elder Alice Kaquitts (Stoney Nakoda Nations); Melinda Stewart (Fort McKay First Nation). Approximately eight participants at the Executive Director or Director level from the 2018-2019 IRMS and the Alberta Energy Regulator committed to participate in the JWG: Dawna Harden (Ministry of Indigenous Relations); Keith Beraska, Sarah Depoe, Gleb Raygorodetsky, Tracy Howlett (Ministry of Environment and Parks); Scott Duguid (Land Use Secretariat), Kevin Gagne (Ministry of Agriculture and Forestry); Arlette Malcolm (Alberta Energy Regulator); Valerie Knaga (Ministry of Culture and Tourism); Wade Clark and Hilary Faulkner (Ministry of Energy). Support staff included: Karin Smith Fargey (facilitator) (Ministry of Environment and Parks); and Kimmy Shade (facilitator), Kieran Maxwell, and Sabia Remtulla-Wilson (Ministry of Indigenous Relations).

<sup>10</sup> "In a good way" is an expression used by many Indigenous Peoples to denote participation that honours tradition and spirit, embodying the teachings of wisdom, love, respect, bravery, honesty, humility, and truth. From an Indigenous worldview, research done "in a good way" is a sacred endeavor carried out in full awareness of interconnectedness between the spiritual and physical realms. In: Flicker S, et al. 2015. Research Done in "A Good Way": The Importance of Indigenous Elder Involvement in HIV Community-Based Research. *Am J Public Health*. 105(6):1149-1154. <https://pub-med.ncbi.nlm.nih.gov/25880963/>

<sup>11</sup> The *parfleche* is a traditional container, made of natural materials, which may also serve as a cultural artifact and a physical representation of an oral mandate. Across the North American plains, a *parfleche* is considered by many Indigenous Peoples as a physical manifestation of the interconnectedness between Mother Earth and all beings, visions, and stories. Within the *parfleche*, often referred to as a bundle or a wrapped rawhide container, are items of symbolic, social, or spiritual importance that offer guidance on how to uphold the responsibilities connected to the bundle's purpose.

To help advance the application of the principles outlined in the Draft Policy, AEP's Office of the Chief Scientist initiated the development of a separate Guidance document, *Working with Indigenous Knowledge and Indigenous Knowledge Holders: Guidance for Non-Indigenous Practitioners*, based on the validated four principles co-created by the JWG. Just like the Draft Policy, the Guidance document was developed following a co-created seasonal round of activities (Figure 1). It was supported by a governance structure that included:

- An Executive Director Steering Committee from all divisions of the Alberta Ministry of Environment and Protected Areas (EPA)<sup>12</sup> to support the Guidance development through strategic decision making and approval process.
- An Advisory Circle made up of EPA champions from different divisions, as well as Indigenous members who participated in the original JWG process, to comment on draft Guidance for EPA.
- A Writing Group,<sup>13</sup> (a subset of Indigenous members of the Advisory Circle) to draft the Guidance document. Indigenous members of the Writing Group participated in the development of the Guidance as recognized experts in the field on Indigenous Knowledge mobilization, not as representatives of their respective First Nations and Métis organizations.

The Office of the Chief Scientist invited the Writing Group to present the draft Guidance to the Indigenous Wisdom Advisory Panel (IWAP) in the fall of 2021.<sup>14</sup> Based on the reflections shared by IWAP members, the Writing Group updated the draft Guidance document. In the spring of 2022, the Writing Group requested that the former Minister of Indigenous Relations return the non-sacred bundle holding the four co-developed principles to support the Writing Group in drafting the Guidance document. The final draft of the Guidance document was completed by the Writing Group and offered to the Advisory Circle in early 2023.

In the fall of 2024, the EPA decided not to release the Guidance document. The Indigenous members of the Writing Group, who hold the intellectual property rights over this material, agreed to publish this important document to honour their sacred responsibility to advance this vital work for the benefit of all Indigenous Peoples of Alberta.

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<sup>12</sup> The Alberta Ministry of Environment and Protected Areas (EPA) was formerly Alberta Environment and Parks (AEP). It was renamed in 2023. Both ministry names are used in this document.

<sup>13</sup> The Writing Group (2020-2024) included members from the original JWG that co-created the draft Indigenous Knowledge Policy document (2018). The Writing Team of the draft Guidance included Elder Leo Bruno Sr. (Kisikawasis) with support from Kyra Northwest (Montana First Nation), Ira Provost (Piikani Nation), William Snow (Stoney Nakoda Nations), Matt Munson (Dene Tha' First Nation), Mike Evans (Ft. McKay First Nation), Gleb Raygorodetsky and Karin Smith Fargey (Alberta Ministry of Environment and Protected Areas); and with support provided by Ashley Meek (Alberta Office of the Chief Scientist).

<sup>14</sup> The Indigenous Wisdom Advisory Panel advises the Office of the Chief Scientist to ensure that Indigenous knowledge systems, languages, oral traditions, understandings, natural laws and cultures are represented and respected equitably with the Alberta environmental science program under the *Environmental Protection and Enhancement Act*.  
[https://www.alberta.ca/AGS-directory/MR\\_1014\\_2017-05-31\\_MRD\\_IndigenousWisdomAdvisoryPanel\\_toPost.pdf](https://www.alberta.ca/AGS-directory/MR_1014_2017-05-31_MRD_IndigenousWisdomAdvisoryPanel_toPost.pdf)

In the fall of 2025, the authors worked through their affiliation with the POLIS Project on Ecological Governance, based at the University of Victoria's Centre for Global Studies, to publish this Guidance document.<sup>15</sup>

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<sup>15</sup> All links to source documents were active as of October 2025.

## Guiding Principles

The four guiding principles emerged out of the themes and content that was developed and validated during the Draft Policy development process (2017-19). They must be considered and implemented as an interdependent, integrated, and indivisible whole. They highlight key considerations for non-Indigenous researchers, decision-makers, proponents, and allies of Indigenous Peoples working with Indigenous communities, organizations, and experts across Alberta. These guiding principles aim to help non-Indigenous practitioners to respectfully work with Indigenous Knowledge and Indigenous Knowledge holders on various initiatives, including, among others, environmental monitoring and assessment, land use studies, environmental stewardship, and wildlife management.

### CEREMONY

***Acknowledging, honoring, and respecting Indigenous spirituality, cultural protocols,<sup>16</sup> customs, and beliefs is fundamental to working with Indigenous Knowledge and Indigenous Knowledge holders.***

Indigenous Knowledge is not shared lightly outside Indigenous communities. Not all elements of Indigenous Knowledge may be shared and spoken about. When Indigenous Knowledge is shared, it is based on relationship-building rooted in the respect of cultural protocols and ceremonies within an ethical space<sup>17</sup> that create a safe space to work in a good way. The sharing of Indigenous Knowledge is rooted in ceremony and is guided and governed by Natural Laws,<sup>18</sup> community norms, protocols, and cultural restrictions.

### AWARENESS

***Cultivating awareness of Indigenous Knowledge is essential to working with Indigenous Knowledge and Indigenous Knowledge holders.***

Awareness of the nature of Indigenous Knowledge is critical to establishing and maintaining lasting and trustworthy relationships with Indigenous communities. Indigenous Knowledge is

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<sup>16</sup> Referring to appropriate procedures that provide a basis for relationship within a particular situation, community, or nation. In Terri, J. 2005. *Managing Indigenous knowledge and Indigenous Cultural and Intellectual Property*, Australian Academic & Research Libraries, 36:2, 95-107. <https://www.tandfonline.com/doi/abs/10.1080/00048623.2005.10721251>.

<sup>17</sup> Ethical space is a metaphorical “space of possibility” that exists between Indigenous and Western spheres of culture and knowledge. It invites us to respectfully embrace the diversity and complementarity of Indigenous and Western worldviews, knowledge systems, ethics, and values and offers an opportunity for deep ethical understanding and relating between cultures. In: Ermine, W. et al. 2004. *The Ethics of Research Involving Indigenous Peoples: Report of the Indigenous Peoples Health Research Centre to the Interagency Advisory Panel on Research Ethics*. Saskatoon, SK: Indigenous Peoples Health Research Centre. [https://achh.ca/wp-content/uploads/2018/07/Guide\\_Ethics\\_Indigenous-Health-Research-Centre.pdf](https://achh.ca/wp-content/uploads/2018/07/Guide_Ethics_Indigenous-Health-Research-Centre.pdf)

<sup>18</sup> Laws that govern the natural world and are unchanging and irrefutable. Knowledge of the Natural Laws was passed down from generation to generation, ensuring the survival of the people. In LaBoucane-Benson, P., et al. 2012. “Are We Seeking Pimatisiwin or Creating Pomewin? Implications for Water Policy.” *The International Indigenous Policy Journal*, 3(3). <https://ojs.lib.uwo.ca/index.php/iipj/article/view/7384/6028>

based on an evolving knowledge of place, practiced within healthy, sustainable, and living ecosystems. Indigenous Peoples have a sacred responsibility to ensure the integrity and protection of their knowledge systems and their languages. Indigenous languages and Indigenous language speakers are key to nurturing, renewing, transmitting and sustaining Indigenous Knowledge. They carry place-based, ecosystem-specific knowledge that gives voice to, and forms crucial connection<sup>19</sup> with, the lands, waters, ancestors, spiritual realms, and all their relations.<sup>20</sup> Sufficient suitable landscapes, including sacred places, are required to protect and maintain Indigenous Knowledge and Indigenous languages. On-the-land intergenerational knowledge transmission between Elders and youth is essential to sustain Indigenous Knowledge as a living, culturally rooted, place-based, and ecosystem-specific knowledge system.

## MUTUAL RESPECT

***Respecting Indigenous Knowledge and Indigenous Knowledge holders is critical during all phases of knowledge sharing and knowledge co-production.<sup>21</sup>***

Indigenous Knowledge is legitimate in its own right, and its integrity and credibility are independent of validation by Western science, or through approaches derived from other ways of knowing or worldviews. Indigenous Knowledge originates with, and is held by, Indigenous persons, communities, or groups of communities. The appropriate Indigenous Knowledge holders, identified by the relevant Indigenous community, decide whether and how to share Indigenous Knowledge, as well as provide guidance to its application in culturally appropriate ways. Sharing Indigenous Knowledge in a safe, ethical space, founded on mutual respect, trust, and reciprocity, is essential for working with Indigenous Knowledge and Indigenous Knowledge holders.

The work with Indigenous Knowledge and Indigenous Knowledge holders should be carried out with transparency, humility, clear intentions, and without bias. Interpretation, documentation, recording, and application of shared Indigenous Knowledge should be consent-based and discussed with the Indigenous Knowledge holder(s) on an ongoing basis.

Indigenous Knowledge should be protected and maintained for its intended purpose(s), while being mindful of community and knowledge holder interpretations. Indigenous Knowledge

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<sup>19</sup> The unbreakable and sacred relationships with the land, air, water, sun, plants, animals, and human communities are the material and spiritual basis for Indigenous Peoples existence. "Elders' Statement of the Advisory Committee on Climate Action and the Environment (ACCAE)." Assembly of First Nations.

<https://afn.bynder.com/m/23d891bdca6e78f3/original/National-Climate-Strategy-Discussion-Paper.pdf>

<sup>20</sup> "[T]he web of kinship to animals, to the birds, to the fish, to the plants, to all the animate and inanimate forms that can be seen or imagined." In King, T., 1992. *All my relations: An Anthology of Contemporary Canadian Native Fiction*. Norman: University of Oklahoma Press. Harvard (18th ed.).

<sup>21</sup> Knowledge co-production braids Indigenous, local, and scientific knowledge systems to respectfully share, interpret, and evaluate data and information for a better understanding of the natural world. In Robards, M., et al. 2018. "Understanding and adapting to observed changes in the Alaskan Arctic: Actionable knowledge co-production with Alaska Native communities." *Deep-Sea Research Part II*. <https://bit.ly/305RiXR>.

should be applied only in the same context for which it was requested from, and gifted by, Indigenous Knowledge holders. Indigenous Knowledge holders need to guide the development of a mutually agreed upon understanding and defined responsibilities for mobilizing, interpreting, protecting, sharing, and applying the gifted Indigenous Knowledge in knowledge sharing and co-production processes.

## **SHARED GOVERNANCE**

***Indigenous Knowledge and Indigenous Knowledge holders must be included in land and natural resource management and decision-making in equitable ways.***

Grounded in Indigenous worldviews and spirituality, Indigenous Knowledge informs Indigenous governance. Natural Laws and Indigenous worldviews govern a way of life and the unique sacred relationships of Indigenous Peoples with Mother Earth.<sup>22</sup> As a gift received from the Creator, Indigenous Knowledge is deeply connected and important to Indigenous Peoples. It defines their relevant roles and responsibilities to protect Mother Earth and human well-being. Indigenous Peoples have a cultural responsibility to maintain their unique sacred relationship with Mother Earth through Indigenous languages, spirituality, and stewardship.

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<sup>22</sup> Mother Earth, as a living being, is the source of life, nourishment, and learning and provides everything we need to live well. *Universal Declaration on the Rights of Mother Earth*. April 22, 2010. World People's Conference on Climate Change and the Rights of Mother Earth. Cochabamba, Bolivia. <https://www.garn.org/wp-content/uploads/2021/09/FINAL-UNIVERSAL-DECLARATION-OF-THE-RIGHTS-OF-MOTHER-EARTH-APRIL-22-2010.pdf>

## From Principles to Practice

When working with Indigenous Knowledge systems and Indigenous Knowledge holders, non-Indigenous researchers, decision-makers, proponents, and allies of Indigenous Peoples in Alberta must implement the Guidance principles in all relevant aspects of their work to:

- Support the respectful access and application of Indigenous Knowledge.
- Develop and maintain culturally appropriate approaches to sharing and bridging of Indigenous and Western scientific ways of knowing.
- Cultivate respectful and sustainable relationships with Indigenous Peoples.

Non-Indigenous practitioners must acknowledge Indigenous Knowledge as a living knowledge system vital to sustaining Indigenous ways of knowing, being, and doing. It is critical for achieving the well-being of Indigenous Peoples and communities, as well as wise stewardship of Mother Earth. According to the advice gifted to EPA by the Indigenous Wisdom Advisory Panel (IWAP), respectful and appropriate inclusion of Indigenous Knowledge must be carried out with kindness, humility, respect, good intentions, and in the spirit of reconciliation.

Non-Indigenous practitioners must recognize the sacred nature of Indigenous Knowledge and regard it respectfully, while striving to include Indigenous Knowledge and Indigenous Knowledge holders in all relevant aspects of implementing their work.

Non-Indigenous practitioners must commit to co-creating and supporting Indigenous-led processes to ensure implementation of the Guidance, including, but not limited to, creating an Indigenous stewardship body to advise them on working with Indigenous Knowledge and Indigenous Knowledge holders.

When working with Indigenous Knowledge and Indigenous Knowledge holders, non-Indigenous practitioners must:

- **Engage in cross-cultural awareness training and land-based learning** by spending time on the land with Indigenous Knowledge holders to enable meaningful dialogue and knowledge-sharing.
- **Participate in appropriate cultural customs and ceremonies**, as guided by Indigenous Knowledge holders, to respectfully acknowledge the role of Indigenous Knowledge systems, including Indigenous languages, in supporting respectful relationships and informing natural resource management and decision-making.
- **Recognize and address the capacity needs (e.g. human, time, financial)** of Indigenous Knowledge holders to enable cultural protocols, linguistic needs, customs, ceremonies, practices, and processes to support the respectful mobilization, translation, interpretation, and application of Indigenous Knowledge.

- **Co-develop, with Indigenous Knowledge holders, the Guidance implementation tools (e.g. frameworks, strategies, workplans)** to advance the mobilization and sharing of Indigenous Knowledge in all relevant aspects of their work by acknowledging, promoting, protecting, respecting, and honoring Indigenous Knowledge.
- **Implement mutually agreed-upon data and information management approaches<sup>23</sup>** at the inception, during, and after the implementation of any Indigenous Knowledge-related initiative to ensure Indigenous Knowledge is protected and custodianship is sound.
- **Respect the Indigenous rights recognized by the *United Nations Declaration on the Rights of Indigenous Peoples*,<sup>24</sup> particularly Article 31 on “the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions,” as well as the Truth and Reconciliation Commission of Canada’s Calls to Action.<sup>25</sup>**

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<sup>23</sup> For instance, The First Nations Principles of OCAP™ (ownership, control, access, and possession). <https://fnigc.ca/ocap-training/>

<sup>24</sup> Available online: <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html>

<sup>25</sup> Available online: [http://nctr.ca/assets/reports/Calls\\_to\\_Action\\_English2.pdf](http://nctr.ca/assets/reports/Calls_to_Action_English2.pdf)

## Examples of Good Practice<sup>26</sup>

The following examples, offered by the relevant project champions, describe ways of acknowledging, promoting, protecting, and honouring Indigenous Knowledge and Indigenous Knowledge holders that align well with the Guiding Principles described in the previous section.

### **THE DRAFT INDIGENOUS KNOWLEDGE GUIDING POLICY FOR ALBERTA (2018-2019)<sup>27</sup>**

Members of the Alberta Public Service and Indigenous Elders and Knowledge holders came together in 2018 and 2019 to co-develop a document to guide the respectful consideration for and application of Indigenous Knowledge in land and natural resource management by the Government of Alberta (GoA). Based on a GoA analysis of Indigenous Knowledge policies in other jurisdictions and initial outreach to First Nations, Métis, and Indigenous organizations across Alberta (over 40 meetings were held from summer 2017 to spring 2018), the Ministry of Indigenous Relations and other relevant GoA ministries followed a seasonal round of ethically co-creating a Draft Indigenous Knowledge (IK) Guiding Policy (Figure 1).

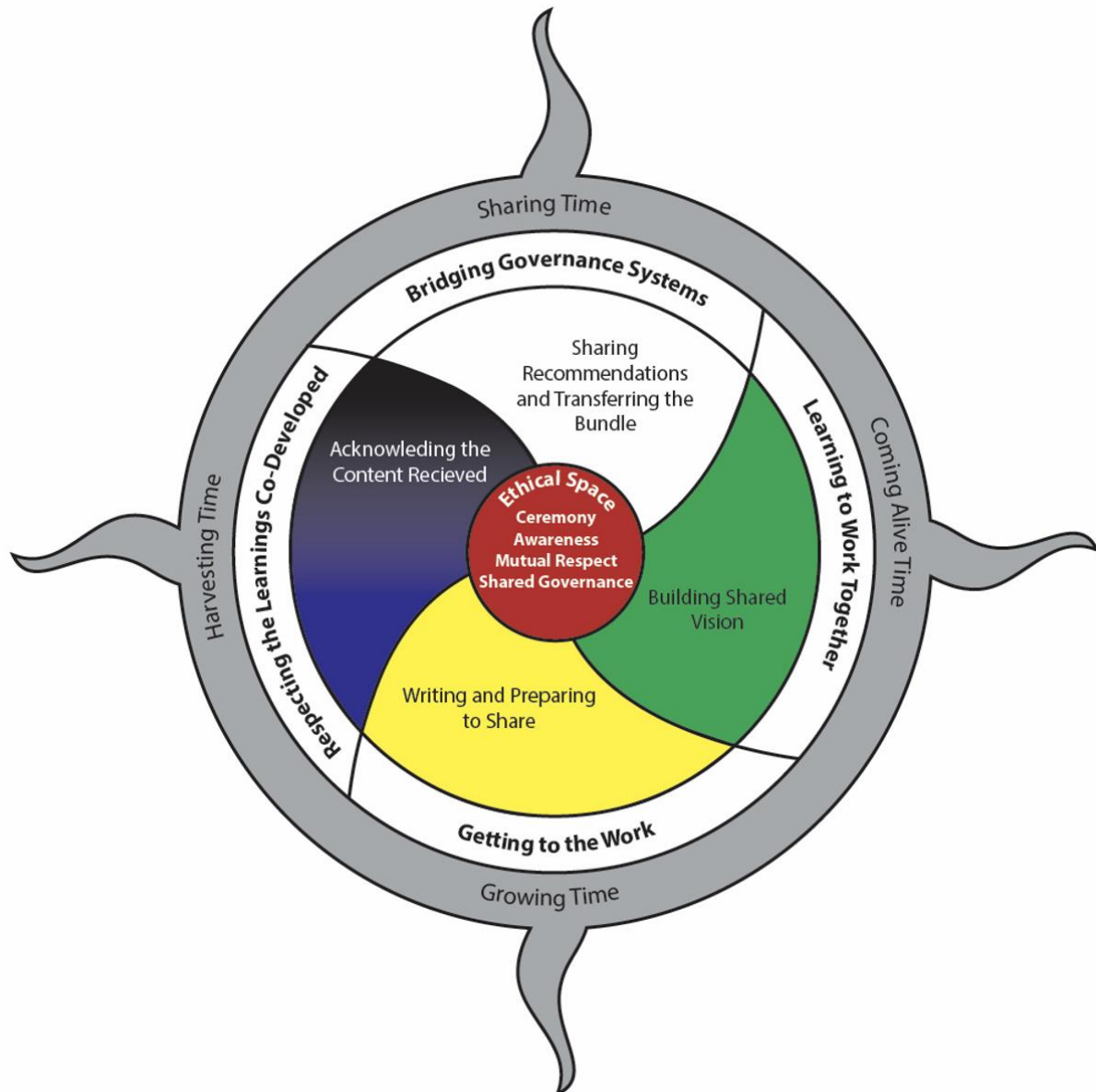
Early in the spring of 2018 the GoA invited Indigenous Elders and knowledge holders from six Indigenous linguistic groups in Alberta (Blackfoot, Dene, Michif, Nakoda, Plains Cree, and Woodlands Cree) and senior staff from ministries across Alberta's 2018-2019 Integrated Resource Management System (Energy, Agriculture, Forestry, Environment and Parks, Culture and Tourism, Indigenous Relations, and the Alberta Energy Regulator) to launch the process. This initial meeting was heavily influenced by Western approaches. It had a rigid agenda, was held in an office tower removed from Mother Earth, and was contradictory to Indigenous ways of knowing, doing, and being. The invited Indigenous Knowledge holders explained that, according to Indigenous worldviews, a shared understanding of purpose and action would not emerge without a close connection between the participants and to Mother Earth. They requested that a pipe ceremony be conducted for the JWG and the overall process to be meaningful to the participants. The smudge and pipe ceremonies were critical for establishing a safe, respectful space for Indigenous worldviews to guide the process of co-developing the content of the Draft IK Guiding Policy. To further help facilitate dialogue and sharing, all other meetings took place at a location connected to Mother Earth (i.e. at ground level), where all participants could gather in a circle. As a result, the development of the Draft IK Guiding Policy followed culturally appropriate protocols during different phases of the seasonal round: Coming Alive, Growing, Harvesting, and Sharing Times (Figure 1).

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<sup>26</sup> Contact the footnoted authors or leads if you seek additional information regarding any of the examples of good practice described in this document.

<sup>27</sup> For additional information on the status of draft Indigenous Knowledge Guiding Policy, please contact Alberta's Ministry of Indigenous Relations. <https://www.alberta.ca/first-nations-relations.aspx>

During the *Coming Alive* phase, the JWG came together in spirit and intention to embark on a shared journey following the ceremonies and culturally appropriate protocols. Throughout the *Growing* phase, the Writing Group of JWG co-created written content to share with the larger group. As the seasonal round continued, the *Harvesting* phase focused on acknowledging, reviewing, and enhancing the co-created document. During the *Sharing* phase, the bundle transfer ceremony was held to offer the bundle, containing the Draft IK Guiding Policy for Alberta, to the Minister of Indigenous Relations to signify the transfer of responsibility for and care of this co-developed work.



**Figure 1. Seasonal Round for the Development of the Draft Indigenous Knowledge Policy, including Ethical Space and Four Principles.**

## THE INDIGENOUS WISDOM ADVISORY PANEL<sup>28</sup>

The Indigenous Wisdom Advisory Panel was established under the *Environmental Protection and Enhancement Act*, which sets the panel's mandate to "provide advice to the Chief Scientist and Minister about how to incorporate traditional ecological knowledge into the environmental monitoring and science program."<sup>29</sup>

The panel's Mandate and Roles Document (MRD)<sup>30</sup> was collaboratively created by panel members and EPA's Chief Scientist to frame a relationship of mutual respect based on the recognition of Indigenous and Western worldviews, knowledge systems, and governance processes. The MRD outlines a model that honors both oral (Indigenous) and written (Western) traditions and is guided by principles of good faith, sharing, mutual respect and honour, kindness, generosity, trust, and humility. The MRD was validated by the founding panel members, Chief Scientist, and 2017 Minister of Alberta Environment and Parks (AEP) through ceremonies led by the Elders and signatures of the panel members and minister. The signed MRD was placed in a parfleche as a physical manifestation of IWAP's mandate.

Guided by its MRD principles, the founding panel members and the Chief Scientist co-designed processes to gift, receive, respond to, and implement the panel's strategic advice. Since 2017, the panel has advised the Chief Scientist and AEP (renamed to Environment and Protected Areas (EPA) in 2023) on how to respectfully share and braid Indigenous and scientific ways of knowing through the development and implementation of culturally appropriate approaches, methodologies, sacred protocols, validation practices, ceremonies, and good practices of assembly.

## INDIGENOUS CLIMATE CHANGE OBSERVATION NETWORK<sup>31</sup>

Guided by advice of the Indigenous Wisdom Advisory Panel, the Indigenous Climate Change Observation Network (ICCON) was launched in 2018 to enable Indigenous Knowledge holders and scientists to respectfully work together to co-produce knowledge of climate-induced change to enhance the resilience of Alberta's Indigenous communities.

Working in partnership with Kainai First Nation and Samson Cree Nation throughout 2018 and 2019, a network ICCON pilot projects tested participatory video (PV)<sup>32</sup> methodology for mobilizing Indigenous Knowledge and co-creating culturally relevant climate change indicators. PV

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<sup>28</sup> For additional information on IWAP, please contact Office of the Chief Scientist. <https://www.alberta.ca/office-of-the-chief-scientist.aspx#iwap>

<sup>29</sup> *Environmental Protection and Enhancement Act* (EPEA), Section 15.3(1). 2025. [https://kings-printer.alberta.ca/1266.cfm?page=E12.cfm&leg\\_type=Acts&isbncln=9780779857371](https://kings-printer.alberta.ca/1266.cfm?page=E12.cfm&leg_type=Acts&isbncln=9780779857371)

<sup>30</sup> Available online: [https://www.alberta.ca/AGS-directory/MR\\_1014\\_2017-05-](https://www.alberta.ca/AGS-directory/MR_1014_2017-05-31_MRD_IndigenousWisdomAdvisoryPanel_toPost.pdf)

[31\\_MRD\\_IndigenousWisdomAdvisoryPanel\\_toPost.pdf](https://www.alberta.ca/AGS-directory/MR_1014_2017-05-31_MRD_IndigenousWisdomAdvisoryPanel_toPost.pdf)

<sup>31</sup> For additional information on ICCON, please contact Office of the Chief Scientist. <https://www.alberta.ca/office-of-the-chief-scientist.aspx#iwap>

<sup>32</sup> Lunch, N., and C., Lunch. 2006. « Insights into participatory video: a handbook for the field. <https://sgp.undp.org/images/Insights%20into%20Participatory%20Video%20-%20A%20Handbook%20for%20the%20Field%20English1.pdf>

is a community-focused methodology that supports local people in documenting, monitoring, and sharing observations through the creation of participatory videos to empower community-led and owned storytelling.

In the pilot project, PV workshops were guided by Elders from each participating Indigenous community. During these workshops respectful dialogue, grounded in ceremony, nurtured trustworthy relationships among the pilot participants, AEP staff, and Elders. Project activities honored local culturally appropriate sacred protocols and governance to support Indigenous Knowledge mobilization (e.g. video production, editing, interpretation, sharing).<sup>33</sup> Participating Indigenous communities own the created multi-media knowledge archive and PV-based materials and follow locally established sacred protocols for providing consent to sharing this material. The participatory videos have been shared and are available for viewing through the Climate Atlas of Canada.<sup>34</sup>

The second phase of ICCON, the Fire with Fire project, focused on developing new insights and innovative practices to enhance local, regional, and provincial climate change resilience through respectful knowledge sharing and knowledge co-production between Indigenous and scientific understandings of fire regime changes. Through 2021, Fire with Fire had partnered with Kainai First Nation, Piikani First Nation, Samson Cree Nation, and Dene Tha' First Nation to develop and deliver capacity-building workshops, mobilize best available knowledge using PV, and organize knowledge-sharing events.

## **THE SOUTH SASKATCHEWAN REGIONAL PLAN “WATCHING THE LAND” WORKING GROUP<sup>35</sup>**

The South Saskatchewan Regional Plan (SSRP) First Nation Sub-Table (the Table) was established in 2015 as a forum for representatives from 13 First Nations with traditional territories in Southern Alberta to share information and discuss land use planning with multiple Government of Alberta ministries and agencies. Over several years, the Table members from First Nations across Southern Alberta co-created an ethical space for open dialogue and mutual respect, inclusion of ceremony and guidance of Elders, creative sharing of ideas, and considered feedback to identify areas of shared interest. In early 2017, the *Skska' tomo / taki - ki tawashin* “makocha awiyagay” “ekanawapahtamak kitaskinaw” or “Watching the Land” Working Group co-chaired by Indigenous and EPA members, was established to develop a shared understanding of community-based monitoring (CBM) in Southern Alberta. To address collectively identified objectives, the Working Group co-created a survey and gathered information from Table members about CBM in order to:

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<sup>33</sup> *Focusing on Climate Change: Reflection on the Indigenous Climate Change Observation Network Participatory Video Pilot Project*. <https://climateatlas.ca/sites/default/files/FocusingonCC.pdf>

<sup>34</sup> Available online: <https://climateatlas.ca/focusing-climate-change>

<sup>35</sup> Kummer, J., de Koninck, V., Wang, Z., Smith-Fargey, K., Tremblett, K., and Raygorodetsky, G. 2020. State of Indigenous Community-Based Monitoring (2015-2018) in Alberta. Government of Alberta, Ministry of Environment and Parks. Available online: <http://bit.ly/4nptyoy>

- Gain awareness of community capacity and interest in participating in and/or delivering community-led environmental monitoring programs.
- Seek input that could help shape future environmental monitoring training initiatives and partnerships.
- Identify potential barriers to the design, delivery, and participation in CBM activities.

The Working Group collaboratively developed a summary report<sup>36</sup> that identified a series of recommendations for advancing CBM within the Table. These included three steps for developing environmental monitoring programs with First Nations in Southern Alberta:

- Building mutual understanding.
- Enhancing community capacity.
- Building information management systems and tools.

The report was endorsed by the Table and is co-owned by the First Nation members who shared information and the provincial government staff who were directly involved in supporting this work. The result was a co-created information gathering process and mutually developed recommendations. Since 2017, several First Nations participating at the SSRP Table have been implementing recommendations outlined in the report.

### **THE STONEY NAKODA NATIONS CULTURAL STUDY ON GRIZZLY BEARS IN KANANASKIS<sup>37</sup>**

As traditional stewards of the lands and waters, the Iyarhe (Stoney) Nakoda Nations hold Indigenous Knowledge that can support the protection of grizzly bears and improve the understanding of key issues and concerns from a cultural perspective. Building on this knowledge, the Stoney Nakoda Nations developed a project in 2015 that used cultural monitoring as a tool to expand upon grizzly bear conservation and recovery efforts in an area of cultural importance, Kananaskis Country.

The Stoney Nakoda Nations project “Cultural Assessment for enhancing grizzly bear management programs through the inclusion of cultural monitoring and traditional ecological knowledge” was part of a human-wildlife conflict prevention program and ecological research to understand the interaction between recreational use and grizzly bear movement and habitat needs.

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<sup>36</sup> “Skska’ tomo / taki - ki tawashin” “Makocha awiyagay” “Ekanawapahtamak kitaskinaw.” “Watching the Land” Cultural Based Monitoring Situational Analysis and Recommendations: A Summary Report for the South Saskatchewan Regional Plan.” First Nation Implementation Sub-Table. Report submitted to the South Saskatchewan Regional Planning First Nations Table 2018. Unpublished.

<sup>37</sup> Available online: <https://canadianmountainnetwork.ca/wp-content/uploads/2016/10/Stoney-Nakoda-Nations-Cultural-Assessment-for-the-%E2%80%9CEnhancing-grizzly-bear-management-programs-through-the-inclusion-of-cultural-monitoring-and-traditional-ecological-knowledge.%E2%80%9D-2016.pdf>. Corresponding author: bills@stoney-nation.com

The goal of the project was to expand upon conservation and recovery efforts for grizzly bears and use cultural monitoring as a tool for integrating Indigenous Knowledge into existing research in areas of cultural importance. Cultural monitoring provides the means of developing a variety of tools and knowledge to increase community capacity for environmental problem-solving, while providing a broader set of data upon which land management decisions can be made.

In collaboration with Alberta Environment and Parks and the Foothills Research Institute, project activities included documentation of traditional knowledge through interviews with Elders and Traditional Knowledge holders, monitoring fieldwork by Stoney Nation Cultural Monitors at locations of cultural conservation interest, and the development of recommendations for grizzly conservation planning and public outreach. As of 2021, the following recommendations have been implemented:

*Recommendation #1 – Ceremony:* A ceremony was conducted by the Stoney Nakoda, in the Kananaskis area, to assist grizzly bears, with the help of the local community, to continue their relationship with those areas that are culturally significant for grizzly bears.

*Recommendation #6 – Cultural Awareness:* Parks Canada and Alberta Parks began a program of Stoney Cultural Awareness, where wildlife policy, programs, and regulations are discussed through an Indigenous Knowledge perspective.

## **THE FRESHWATER CLAM STUDY WITH FORT MCMURRAY MÉTIS COMMUNITY<sup>38</sup>**

In recent decades, Fort McMurray Métis Elders and land users have observed a decrease in the population density of freshwater mussels (known locally as clams) in the lower Athabasca region. The Freshwater Clam Study — a partnership with Fort McMurray Métis, Alberta Environment and Protected Areas, and Environment and Climate Change Canada through the Oil Sands Monitoring Program — is a community-based participatory research initiative. Based on braiding Indigenous and scientific ways of knowing, the Freshwater Clam Study has facilitated partnerships, respected ceremony, and created meaningful dialogue across diverse knowledge systems to address questions about freshwater mussel health in locally relevant and culturally appropriate ways. This study has provided opportunities for Elders and land users to travel along the Athabasca and Clearwater rivers in search of freshwater mussels to allow for the renewal of personal and cultural relationships with the lands and waters, while carrying out scientific research on specific environmental variables.

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<sup>38</sup> Corresponding author: [debra.hopkins@gov.ab.ca](mailto:debra.hopkins@gov.ab.ca). Hopkins, D., T. L. Joly, H. Sykes, A. Waniandy, J. Grant, L. Gallagher, L. Hansen, K. Wall, P. Fortna, and M. Bailey. 2019. "‘Learning Together’: Braiding Indigenous and Western knowledge Systems to Understand Freshwater Mussel Health in the Lower Athabasca Region of Alberta, Canada," *Journal of Ethnobiology*, 39(2): 315-336.: <https://bioone.org/journals/journal-of-ethnobiology/volume-39/issue-2/0278-0771-39.2.315/Learning-Together--Braiding-Indigenous-and-Western-knowledge-Systems-to/10.2993/0278-0771-39.2.315.full>

Through project co-design, shared on-the-land experiences, and collaborative data collection and interpretation, the goal of the Freshwater Clam Study is to co-produce knowledge about environmental change in the oil sands region based on the respectful braiding of Indigenous and scientific knowledge systems.

The Freshwater Clam Study reflects how “learning together” is essential to developing a shared understanding of the state of freshwater mussels in the Lower Athabasca Region. This framework of “learning together” demonstrates that complex problems, such as cumulative effects studies, can be understood in ways that are more meaningful and insightful than they would be if Indigenous communities, government scientists, or research consultants studied them separately. The project includes the concept of “Métis space,” previously developed by the McMurray Métis, which relates to the physical and social places that are required for the maintenance and renewal of Métis ways of life.<sup>39</sup>

The Clam Team is in the process of collaboratively analyzing the clam tissues, sediment, and water contaminant data from the Clearwater and Athabasca rivers, as well as impacts on Métis space, and community-identified components of Métis culture related to that space, to further share the story through co-authored, publicly available, peer-reviewed publications.

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<sup>39</sup> Clark, T. D., and McMurray Métis. 2017. “Cultural Impact Assessment of the Suncor Voyageur South Project.” Willow Springs Strategic Solutions, Inc. for Fort McMurray Métis Local 1935. Available from [reception@mcmurraymetis.org](mailto:reception@mcmurraymetis.org)

## ABOUT THE POLIS PROJECT ON ECOLOGICAL GOVERNANCE

The POLIS Project on Ecological Governance is a hub for collaborative and action-oriented research, policy practice, and education and an integral part of the Centre for Global Studies at the University of Victoria. Since being founded in 2000, the work of POLIS has encompassed a number of initiatives, each embodying the principles of ecological governance and working towards a responsible present that supports a sustainable future. Current POLIS initiatives include the POLIS Water Sustainability Project, the POLIS Wildfire Resilience Project, and the POLIS Biocultural Ethics Initiative.

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