Guidance Document for Community Knowledge Protocols (CKP) and Data Sharing Agreements (DSA)

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Submitted To:

Indigenous Community-Based Climate Monitoring Program,
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DISCLAIMER

This Guidance Document contains some information about legal concepts, processes and agreements but it does not contain any legal advice, and it should not be taken as a substitute for legal advice. Indigenous communities are encouraged to seek independent legal and other professional advice as required to address their particular circumstances and concerns.

EXECUTIVE SUMMARY

The purpose of this Guidance Document is to offer assistance to First Nations, Inuit and Métis Peoples in Canada who are seeking information and guidance on sharing their Indigenous knowledge and related community information and data as part of environmental research and long-term environmental monitoring partnerships. The focus is on supporting Indigenous communities, Indigenous Nations and Indigenous governments who wish to develop written protocols for sharing their knowledge, information and/or data in the form of **community knowledge protocols** (CKPs) and **data sharing agreements** (DSAs).

Developing such tools can clarify rights, responsibilities, and processes to ensure Indigenous knowledge, and community information and data are shared in ways and forms that respect and protect the integrity of the community's Indigenous knowledge and protect the community's interests and rights. Background information and concrete examples are included to empower Indigenous communities, Indigenous Nations, and Indigenous governments to articulate in their own words and assert in their own ways their authority, responsibilities, and rights over their Indigenous knowledge and their community information and data.

This Guidance Document highlights key questions and considerations in undertaking environmental research and monitoring, whether community-led or in collaboration with external partners. It offers suggestions for how to address these questions and considerations as part of written protocols and agreements, and points to a diversity of illustrative examples, templates and references that are publicly available.

Brief introductory sections are followed by two substantive sections on developing CKPs and DSAs, respectively. The subsections are formatted as questions to facilitate inquiry and exploration of the many elements for a community to consider in sharing and protecting their Indigenous knowledge, and community information and data. Definitions and citations are found in footnotes, and supplemental information and suggested resources are included in an Annex.

While this Guidance Document focuses on the development of written tools, it is acknowledged that some Indigenous communities may prefer non-written processes and/or have additional oral processes or ceremonies that are involved in implementing their protocols and agreements. This Guidance Document does not provide advice in this respect but offers information, options and examples for Indigenous communities to consider, if useful and appropriate to support their interests and goals.

TABLE OF CONTENTS

CONTENTS (continued) PAGE

ABOUT THIS GUIDANCE DOCUMENT

This **Guidance Document for Community Knowledge Protocols and Data Sharing Agreements** has been developed at the request of the Indigenous Community-Based Climate Monitoring Program (Crown-Indigenous Relations and Northern Affairs Canada) to advance Indigenous community-based climate data management and data sharing. The Indigenous Community-Based Climate Monitoring Program provides funding across Canada to support the design, implementation, or expansion of long-term, community-based Indigenous-led climate monitoring projects. These projects are intended to:

- Inform efforts to adapt to climate change,
- Fill gaps in climate data,
- Provide capacity building opportunities for youth and others,
- Promote knowledge transfer between generations,
- Offer opportunities to connect with culture and the land.[1]

In the context of this program, community-based climate monitoring refers to tracking changes in climate[2] and climate impacts[3] using Indigenous knowledge systems and science led by Indigenous Peoples for the benefit and use of Indigenous Peoples and Indigenous communities. This Guidance Document acknowledges that these efforts must take place in ways that appropriately address community concerns related to sharing Indigenous knowledge and related community information and data, including protecting Indigenous knowledge and Indigenous intellectual and cultural property from unauthorized use or misappropriation.

This Guidance Document was created to assist Indigenous Peoples in Canada who are seeking general guidance on developing agreements and tools to clarify rights, responsibilities, and processes about sharing their Indigenous knowledge and related community information and data for environmental research and long-term environmental monitoring. Diverse kinds of information and data can emerge from Indigenous and western scientific knowledge systems, based on different approaches and priorities to what should be monitored and how. This Guidance Document focuses on supporting Indigenous communities who wish to develop written protocols for sharing knowledge (e.g., **community knowledge protocols**) and/or agreements for sharing specific data within an environmental research or monitoring partnership (e.g., **data sharing agreements**).

The primary goal of this Guidance Document is to provide information and examples that empower Indigenous communities, Indigenous Nations, and Indigenous governments in articulating and asserting their authority, responsibilities, and rights over their Indigenous knowledge and their

[1] For information about the Indigenous Community-Based Climate Monitoring Program, see: https://indigenousclimatehub.ca/indigenous-community-based-climate-monitoring-program/

[2] Monitoring climate involves collecting information on weather variables such as air temperature, rainfall, and wind. This can be done through observation and/or with scientific instruments.

[3] Monitoring climate impacts consists of tracking the effects of climate change on the environment including land, water, wildlife, and vegetation. This can be done through qualitative and quantitative observations, including Indigenous Knowledge, and by using scientific instruments or methods

community data. This Guidance Document includes general background information and highlights some key questions and considerations in undertaking research and monitoring, whether community-led or in collaboration with external partners. It offers suggestions for how to address these questions and considerations as part of written protocols and agreements, and points to a diversity of illustrative examples and references that are publicly available. This document is not legal advice and should not be construed as such.

The content of this Guidance Document is informed by a selective literature review of publicly-available resources that focus on the Canadian context. They include:

- Indigenous community policies, protocols, codes, and guidelines within Canada,
- Guidance for working with Indigenous communities developed by non-profit and academic institutions in Canada,
- Guides and toolkits created by Indigenous organizations in Canada, and
- Selective reports and academic publications that offer key background and are written in accessible language.

A diverse sample set of the references is highlighted as illustrative examples throughout the sections. This Guidance Document is also informed by some work not yet publicly-available[4] as well as the findings of a report produced for Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) by the Centre for Indigenous Environmental Resources (CIER) on *Advancing Indigenous Community-Based Climate Monitoring and Data Management.*[5] A key consideration discussed within the CIER report is how a community's Indigenous knowledge needs to be collected and managed differently than other types of climate data, which is a point also considered in the organization of this Guidance Document.

Since there are many tools already publicly available, this Guidance Document does not attempt to reinvent the wheel. Rather, it pulls together general information, highlights a diversity of existing examples, and offers some guidance to Indigenous communities on elements that may be worth considering. The two types of tools described in this Guidance Document are community knowledge protocols (CKP) and data sharing agreements (DSA). Working definitions for both are offered below:

> A **community knowledge protocol** (CKP) refers to a community-driven document that generally defines the community's rights, responsibilities and processes regarding appropriate access to and use of their knowledge in relation to their people, lands and waters, language, ceremonies, cultural practices and worldview. CKPs are a way for communities to set expectations, parameters, methods and approaches. They are understood as a form of outward-facing guidance that is consistent with a community's cultural protocols and practices for holding and sharing the community's knowledge. For the purpose of this Guidance Document, a CKP is a tool to clarify proper conduct that respects these rights, responsibilities and processes within an environmental research or monitoring collaboration with an external partner.

[4] First Nations Education Steering Committee (FNESC), 2019.
[5] Centre for Indigenous Environmental Resources (CIER), 2018.

A **data sharing agreement** (DSA) is a legally binding agreement to share data between parties, according to certain requirements and conditions. Within the context of this Guidance Document, a DSA is seen as a useful tool with legal status to implement the data-sharing aspects of a CKP between parties involved in a project or initiative. A DSA clearly specifies what data will be collected through a project or initiative, and how that data can and cannot be used and shared with whom and for what purposes. The special considerations and restrictions for data derived from a community's Indigenous knowledge may be an important part of a DSA. For the purpose of this Guidance Document, a DSA is considered a binding contract that outlines the agreed rules for sharing specific data between the parties who are involved in an environmental research or monitoring collaboration. All parties must be qualified to make a legal agreement and one party must hold the legal right to disclose the data.

While this Guidance Document focuses on the development of written documents, it is acknowledged that Indigenous communities may prefer non-written processes and/or have additional oral processes or ceremonies that are involved in implementing their CKP and/or DSA.

Every effort has been made to ensure the content and urls included in this Guidance Document are current and accurate at the time of writing. However, Readers should be aware that the nature of some of the content included continues to evolve and, as with any internet-based resources, specific links may change or be removed by their sources over time.

ACRONYMS USED

CARE:	CARE principles for Indigenous Data Governance (**C**ollective benefit, **A**uthority to control, **R**esponsibility, and **E**thics)
CKP:	Community Knowledge Protocol
DSA:	Data Sharing Agreement
FAIR:	FAIR principles for scientific data management and stewardship (**F**indable, **A**ccessible, **I**nteroperable, and **R**eusable**)**
FPIC:	Free, Prior, Informed Consent
FOIPP	Freedom of Information and Protection of Privacy (provincial Acts)
IDS:	Indigenous Data Sovereignty
IPR:	Intellectual Property Rights
OCAP™	Ownership, Control, Access, Possession
RCAP:	Royal Commission on Aboriginal Peoples
TCPS2:	Tri-Council Policy Statement, Version 2
TRC:	Truth and Reconciliation Commission of Canada
UNDRIP:	United Nations Declaration on the Rights of Indigenous Peoples

1. INTRODUCTION

Looking back to pre-contact times, Indigenous Peoples in Canada had intact societies, institutions, protocols and governance. Since the time of contact, these Indigenous systems have been impacted by colonial pressures such as dispossession, assimilation, and oppression. Recent years have brought greater understanding and acknowledgment of many harmful practices of government policies, laws, and actions. The focus has shifted towards "reconciliation," with research and national commissions on healing, and commitments to righting past wrongs towards Indigenous Peoples. Of particular note in this regard are the principles, recommendations and guidelines of the report of the *Royal Commission on Aboriginal Peoples* (RCAP 1996)[6], the *Truth and Reconciliation Commission* Calls to Action (TRC 2015)[7] and the Government of Canada's *Principles Respecting the Government of Canada's Relationship with Indigenous Peoples.*[8]

In recent years, and with the widespread adoption of the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP 2007),[9] the focus of research, monitoring and other activities involving Indigenous Peoples has become more inclusive and community-led compared with the past. Previously, Indigenous Peoples were largely studied as "subjects" within western scientific paradigms rather than respected as participants and colleagues, and research was *about* Indigenous Peoples, not *with*, *for* or *by* Indigenous Peoples. Western scientific approaches have enabled and facilitated appropriation of cultural knowledge and traditional practices by external proponents of research, monitoring and other activities.

Over the decades, Indigenous Peoples have contributed information freely, often without due credit or compensation, in good-faith that the information would be used as intended and returned to benefit their communities, the landscapes and waterscapes supporting their traditional livelihoods and food security, and their Treaty rights-based traditional economies. However, in too many cases, the Indigenous Peoples directly involved did not hear if and how their contributions were characterized and used (or misused) by others, and to what ends.

It is increasingly understood that Indigenous knowledge is accompanied by inalienable Indigenous rights and responsibilities for protecting the integrity of the Indigenous knowledge system from which the knowledge arises. For example, Indigenous Peoples have inalienable rights and responsibilities associated with:

- Defining what constitutes their Indigenous knowledge in accordance with their worldviews,
- Owning, protecting, and controlling their Indigenous Knowledge in accordance with their traditions and protocols,

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[6] The full report of the *Royal Commission on Aboriginal Peoples* (RCAP), 1996 is available at: https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/royal-commission-aboriginal-peoples/Pages/final-report.aspx

[7] *Truth and Reconciliation Commission (TRC) Calls to Action*, 2015. Available at: http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf

[8] *Principles Respecting the Government of Canada's Relationship with Indigenous Peoples*. Government of Canada, 2018. Available at https://www.justice.gc.ca/eng/csj-sjc/principles.pdf

[9] *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP), 2007. Available at: http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

- Safeguarding the integrity of their Indigenous knowledge,
- Being recognized as the primary guardians and interpreters of their Indigenous knowledge,
- Authorizing the use of their Indigenous knowledge by others,
- Receiving culturally-appropriate redress for past harms related to non-permitted uses or misappropriation[10] of their Indigenous knowledge,
- Having culturally-appropriate attribution of the Indigenous knowledge holders connected with their respective Indigenous knowledge, as determined by the Indigenous Knowledge holders themselves,
- Preventing offensive, harmful and misleading uses of Indigenous knowledge,
- Controlling the documentation and transmission of their Indigenous knowledge.[11]

In recent years, Indigenous communities are taking the lead in directing their own environmental research and monitoring programs and projects, as well as working in collaboration with external partners and peripheral groups towards community-led initiatives. These collaborations are founded in long-held principles and traditions such as respect, good faith, integrity and reciprocity. Within such collaborations, partners are viewing each others' expertise, qualifications and subject knowledge as of equivalent value and comparable importance. It is increasingly acknowledged that reductionist western scientific methods (especially when interdisciplinary) and holistic Indigenous knowledge practices can complement one another and be combined in appropriate ways to enhance the relevance, reliability and usefulness of research and learning outcomes.

Indigenous and western scientific experts are finding respectful, appropriate and effective ways to draw upon both Indigenous knowledge and western scientific knowledge and to describe and predict the shared topic of concern – our place as human observers and participants within a larger biocultural and biophysical universe. There are many compatible pathways to understand and conceptualize information about the Earth and the place of humans within it. Recognizing that all life requires healthy and abundant water, soil, air, and a diversity of life forms, there should be no need for competition between ways of knowing, rather there is an opportunity for complementary views, approaches, and interpretations, particularly in climate and environmental monitoring.[12]

To date, many Indigenous communities have productive working relationships and data-sharing arrangements for a variety of specific and comprehensive, short and long term environmental

[10] Misappropriation is the act of stealing something that you have been trusted to take care of and using it for yourself.
[11] FNESC, 2019.
[12] For example, within the Indigenous Community-Based Climate Monitoring Program, climate indicators related to weather, land and water, wildlife and vegetation may be identified from both western scientific and Indigenous knowledge systems. Monitoring activities (data collection) and the analysis of results can include both qualitative and quantitative approaches, based on scientific instruments and methods and/or Indigenous ways of knowing, to best meet Indigenous community needs. Indigenous community members can also receive training to become environmental monitors to record data on biometrics, behavioral observations, GPS information and other parameters.

projects involving industry, government (provincial, territorial, federal and Indigenous), non-profit organisations, Tribal and Treaty associations and academic institutions. As discussed in a subsequent section, when projects are affiliated with a university or other public post-secondary institution in Canada, research directly involving Indigenous communities and their Indigenous knowledge (e.g., interviews with community members) is considered "research involving humans" and a comprehensive set of national ethical guidelines must be followed by the institution, called the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2)* (CIHR, NSERC and SSHRC, 2018).[13] The TCPS2 may be a useful source of information on ethics for Indigenous communities, whether or not projects include university-based research involving humans.

Regardless of the working relationships and partners involved, how the sharing, collection, use and safekeeping of community information and data is governed, administered and managed is pivotal to project success. Knowledge of cultural paradigms, protocols and practices have key roles in shaping approaches, methods and tools to ensure information and data are collected and treated appropriately, in ways agreed to by all partners, and in ways that inform any authorized third party access and use. Data sets derived from Indigenous knowledge systems may look quite different from data originating from western scientific knowledge systems. For example, an Indigenous community might want to record their knowledge of plant uses, traditional harvesting locations and calving grounds. Western scientific datasets might focus on water quality results, tissue samples, and species populations. In environmental research and monitoring, many Indigenous community knowledge datasets and archives are comprised of compilations of spatial and non-spatial traditional use study (TUS) information.

Data may be generated by a community in anticipation of sharing it with external parties, or it may be co-generated within a partnership arrangement. Similar questions arise, such as:

- What is the purpose and intention for generating the data or sharing information?
- Who are the intended recipients or audiences?
- What benefits will be gained by sharing with the intended recipients?
- What harms could occur if shared with non-intended recipients?

There are many different types of agreements in the form of legal and social contracts that could be useful to address such questions, ranging from general Memoranda of Understanding (MOU)[14] to Consent Forms[15] or comprehensive Research Agreements[16] or to Non-Disclosure Agreements (NDA)[17]

[13] Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2), 2018. Available at: http://www.pre.ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf

[14] An MOU is generally considered a non legally-binding agreement that articulates the shared will and common intention between two or more parties.

[15] Consent represents the ethical and legal expression of a person's right to have their autonomy and self-determination respected. A consent form is a common type of written evidence that indicates a party fully understands the nature, purpose and consequences of an activity and its impacts, and willingly agrees to participate in that activity. Note that consent is interpreted and implemented in various ways, and consent forms and processes can vary widely.

or specific Data Sharing Agreements (DSA).[18] Key is choosing the best-fit tool or set of tools to meet the information and data-sharing needs of the community in their relationship with the external parties or project partners.

CKP and DSA are the two specific tools that are described in subsequent sections of this Guidance Document. A CKP could be seen as an appropriate general and overarching tool to create internal clarity for an Indigenous community. A CKP could then guide programs and partnerships, especially when combined with a more specific DSA between parties to provide the external clarity and assurances needed for sharing specific project information and data for particular purposes.

2. COMMON COMMUNITY CONCERNS AND PRIORITIES

Identifying and understanding the underlying priorities and concerns of an Indigenous community are important to determine what needs to be addressed within a CKP or DSA. Some general concerns about knowledge, information and data sharing within environmental research and monitoring collaboration that have been raised by Indigenous communities relate to:

- **Trust** (*e.g.,* historical lack of trust, not being given enough information to understand the technical aspects of a project),
- **Communication** (*e.g.,* language limitations in communicating about Indigenous knowledge in English or French rather than in the Indigenous language of origin),
- **Misunderstanding, misuse, and exploitation of Indigenous knowledge** (*e.g.,* knowledge being taken out of the context in which it was shared and used in unauthorized ways),
- **Consent** (*e.g.,* ensuring community consent is in place for collecting, accessing and using community data, information and knowledge),
- **Protecting data within western legal systems** (*e.g.,* determining what should be considered proprietary, private or confidential; understanding opportunities and limits of western legal tools such as contracts, determining what qualifies as intellectual property and what protections are/are not possible through intellectual property rights law),
- **Data access, control and security** (*e.g.,* understanding *Freedom of Information and Protection of Privacy Acts (FOIPP)* and the full implications of public disclosure of data and information).[19]

Some ways to address the concerns noted above are by ensuring projects and programs are strongly

[16] A research agreement is a contract entered into between parties to specify all the aspects, activities, roles and responsibilities involved in the conduct of a research project or program.
[17] A NDA is a legal contract between two or more parties that creates a confidential relationship between the parties to protect any type of confidential or proprietary information**.** It is used when the parties wish to share confidential material, knowledge, or information with each other for certain purposes while protecting it from wider use or dissemination. If the information is leaked, the injured party can claim breach of contract.
[18] As noted previously, a DSA is a contract between parties that outlines the specific agreed rules for sharing data between parties. See Section 4 on DSA.
[19] Each province and territory in Canada has its own access to freedom of information legislation.

community-driven and specifically designed to meet community information and data needs. Considering the role of Indigenous knowledge and community information and data from the onset of a project will help identify priorities, design research questions and inform data analysis. Clarifying with Indigenous Knowledge Holders what aspects of their knowledge should be shared, and ensuring an Indigenous knowledge steward is designated if the identity of the Indigenous Knowledge Holder is protected are ways to proactively address some of the issues in sharing Indigenous knowledge. Additionally, data ownership and management concerns can be somewhat addressed by identifying data management principles and putting in place mechanisms to implement them in all aspects of the data lifecycle, including data collection, storage, access, management and interpretation.

It is important to note that **data, information** and **knowledge** are terms that are not used consistently and do not have universally agreed definitions. In whatever way they are defined, these terms need to be clearly understood by all the parties involved in a given project or program. A common understanding is especially important when developing an agreement, such as a DSA. Broad understandings of these terms may be useful to consider, but specific understandings will depend on the particular context and parties involved. One system of defining data, information and knowledge, called the **Data-Information-Knowledge-Wisdom (DIKW) pyramid** is included as an appendix, as an example and source of further information to support Indigenous communities in considering and determining for themselves what definitions will best meet their needs.

In general, it may be necessary to document and manage Indigenous knowledge differently than community information and data, through developing a variety of mechanisms such as protocols, permission or consent forms and DSAs. As noted by interviewees in the CIER report (2018: 17):

> *[Indigenous knowledge] is more than a type or source of data, but rather a way of thinking that is more relevant to communities and reflective of their wide ranging interests, knowledge and experience. [Indigenous knowledge] complements other data in that it provides context in a way that respects the source of the data. Western science is significantly enhanced by the addition of [Indigenous knowledge]; local knowledge and stories greatly enrich data interpretation by providing historical context and real-time updates on current climate conditions.*

Likewise, it may be important to store Indigenous knowledge separately from other kinds of data, employing enhanced and customized privacy, confidentiality and information-sharing agreements (CIER, 2018).

There is a wide-ranging spectrum of potential community applications for Indigenous knowledge and community information and data, such as:

- Community research or educational initiatives,
- Establishing Aboriginal and Treaty Rights,
- Traditional Territory boundary and assertion,
- Crown consultation or proponent delegated project-specific consultation,
- Federal and provincial/territorial environmental assessments.

Many of these applications could be aided by development of CKPs and DSAs by Indigenous communities. Section 3 (below) offers guidance on developing a CKP for sharing Indigenous knowledge, information and community data. Section 4 provides guidance on data sharing and developing a DSA.

3. QUESTIONS AND ELEMENTS TO CONSIDER IN DEVELOPING A COMMUNITY KNOWLEDGE PROTOCOL

A CKP is just one of many tools that Indigenous communities could consider developing and using to clarify and guide research, monitoring and other activities and applications where Indigenous knowledge or community information and data are shared with external parties or partners. As mentioned, CKPs may be written or held orally within a community, as determined by the preferences of each community. This Guidance Document is oriented to development of written CKPs.

While acknowledging there is no single agreed definition or format of a CKP, as indicated, this Guidance Document uses the following working definition:

> *A **community knowledge protocol** (CKP) refers to a community-driven document that generally defines the community's rights, responsibilities and processes regarding appropriate access to and use of their knowledge in relation to their people, land, language, ceremonies, cultural practices and worldview. CKPs are a way for communities to set expectations, parameters, methods and approaches. A CKP is understood as a form of outward-facing guidance that is consistent with a community's cultural protocols and practices for holding and sharing the community's knowledge. For the purpose of this Guidance Document, a CKP is a tool to clarify proper conduct that respects these rights, responsibilities and processes within an environmental research or monitoring collaboration with an external partner.*

Some key questions embedded within this working definition are:

- What are the community's rights and responsibilities regarding their knowledge?
- What are the community's cultural protocols and practices for holding and sharing knowledge?
- What is appropriate access to and use of community knowledge (e.g., by who and for what)?
- What processes are in place or need to be in place to facilitate appropriate access and use?
- What is the best way to clarify and clearly communicate with partners and external parties about these questions, to facilitate the desired relationships and outcomes for collaborative projects and programs?

Given that environmental research and monitoring can take many forms, it may helpful to consider the questions posed above within the context of a project or program, to support the goal of developing a CKP. The following sections highlight some considerations and offer further questions

and examples that many be useful in this regard. In addition, a CKP Worksheet is included in the Annex as a practical tool to assist in navigating these sections.

3.1 Would providing guiding principles offer a helpful starting foundation?

Articulating guiding principles for sharing and accessing Indigenous knowledge is one way of laying a foundation to build respectful relationships and partnerships that honour community values and priorities. Guiding principles could draw from general principles that are already widely used, for example, the **Four R's** of Indigenous Education (**Respect, Relevance, Reciprocity**, and **Responsibility)**,[20] or the **OCAP™** principles (**Ownership, Control, Access and Possession**) developed and trademarked by the First Nations Information Governance Centre[21] for conducting research involving Indigenous Peoples**.**

Well-established principles in research ethics are found in the TCPS2,[22] which include:

- **Respect for Human Dignity** (being sensitive to the inherent worth of all human beings),
- **Respect for Persons** (recognizing the intrinsic value of human beings and ensuring free. informed and ongoing consent),
- **Concern for Welfare** (considering physical, mental and spiritual health, including things like physical, economic and social circumstances; preventing harms, minimizing foreseeable risks of harms),
- **Justice** (the obligation to treat people fairly and equitably, including fair distribution of benefits and burdens of participation, including benefits of information and knowledge that is generated from research).

In many cases, guiding principles are created or customized by Indigenous communities or governing authorities to reflect their unique priorities and address their specific concerns. One example is the *Guiding Inuit Qaujimajatuqangit Principles* as set out by the Government of Nunavut and adopted by the Nunavut Impact Review Board (NIRB):[23]

- *Inuuqatigiitsiarniq* - Respecting others, relationships and caring for people,
- *Tunnganarniq* - Fostering good spirit by being open, welcoming and inclusive,
- *Pijitsirniq* - Serving and providing for family and/or community,
- *Aajiiqatigiinniq* - Decision making through discussion and consensus,
- *Pilimmaksarniq* - Development of skills through observation, mentoring, practice, and effort,

[20] Kirkness, V. J., R. Barnhardt, 2001.
[21] OCAP™ principles are available at: https://fnigc.ca/sites/default/files/docs/ocap_path_to_fn_information_governance_en_final.pdf
[22] *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS2), 2018. Available at: http://www.pre.ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf
[23] *Guiding Inuit Qaujimajatuqangit Principles* are available at: https://www.nirb.ca/inuit-qaujimajatuqangit or https://www.gov.nu.ca/sites/default/files/iq_brochure_draft_1.pdf

- *Ikajuqtigiinniq* - Working together for a common cause,
- *Qanuqtuurniq* - Being innovative and resourceful,
- *Avatittinnik Kamatsiarniq* - Respect and care for the land, animals and the environment.

Another example is the *Gwich'in Tribal Council Traditional Knowledge Policy*,[24] which sets out guiding principles for managing Indigenous knowledge in the Gwich'in Settlement Region. The principles include requirements such as:

- Future generations benefit and learn from the community's Indigenous knowledge,
- Informed consent occurs,
- The community maintains control and stewardship over the use of their Indigenous knowledge and cultural heritage resources,
- Communities participate in research activities and results are reported back,
- Indigenous Knowledge Holders are respected and their knowledge is given equal standing with western scientific knowledge,
- The use and preservation of the Indigenous language is supported,
- The communities' Indigenous knowledge is ethically applied in heritage, renewable and non-renewable resource management within the Indigenous territory.

3.2 Is the choice of language(s) a consideration?

The choice of language(s) can influence how Indigenous knowledge is understood or misunderstood when shared. Indigenous languages embody Indigenous worldviews and carry place-based and ecosystem-specific knowledge. Misunderstandings and mistakes can arise when documenting, interpreting, translating, representing and communicating Indigenous knowledge in a language other than the language of origin (e.g., when translating from an Indigenous language to English or French) and in forms other than the original method of transmission (e.g., when knowledge shared through oral stories by Elders is transformed into field notes or a written report by a researcher). The inclusion of language requirements in a CKP may be of interest to Indigenous communities as part of supporting language revitalization.

It is important to understand what are the culturally-appropriate ways to document, interpret and communicate Indigenous knowledge when it is shared in the original language and form (e.g., oral storytelling, song, ceremony). It may be helpful to consider how and to what extent Indigenous language can be included as an integral part of activities through the direct and meaningful involvement of Indigenous language speakers and cultural experts themselves. When community language experts are available, it may be desirable to use the appropriate orthography and written

[24] *Gwich'in Tribal Council Traditional Knowledge Policy*, 2004. Prepared by Gwich'in Social & Cultural Institute for adoption by Gwich'in Tribal Council. Available at: https://gwichin.ca/sites/default/files/gtc_final_tk_policy_2004.pdf

symbols identified by the community when writing their Indigenous language. Involvement of language experts will require that sufficient time and resources are available to enable their participation.

Whether written or spoken, communication across languages is also an important consideration, particularly when the work involves technical or specialized terms. This necessitates communicating scientific goals and terms using plain, clear, language that is understandable and meaningful to non-scientists and to those whose first language is not the dominant language used by western scientists (e.g., English or French). Likewise, it may be helpful (when appropriate) to translate Indigenous concepts and terms into the predominate language used and/or build capacity of non-Indigenous language speakers to understand key Indigenous words and concepts. Communication across languages will require putting in place appropriate processes to share back and confirm (or cross-validate) shared understandings. These processes need to be resourced with sufficient time, funds and cultural expertise.

The *First Nations of Quebec and Labrador Research Protocol* developed by the Assembly of the First Nations of Quebec and Labrador (2005)[25] recommends that projects "use a popularized language all participants can understand" while ensuring that communications and research reports intended for the community are offered in the local language. It also requires that project consent forms are written in both English and the local Indigenous language.

The *Mi'kmaq Research Principles & Protocols***,** developed by Mi'kmaw Ethics Watch (in association with Unama'ki College of Cape Breton University)[26] require that Indigenous community participants be informed "in their own language" about all aspects of data gathering and how data will be used, as well about anonymity or confidentiality and other aspects of participation. The complementary *Mi'kmaw Research Principles and Protocols: Conducting Research With and/or Among Mi'kmaw People*[27] is a fillable application form requiring project details that are consistent with *Mi'kmaq Research Principles & Protocols*, with a requirement to **"**describe accommodations for Mi'kmaw language, culture and community protocols in the proposed study, including how Mi'kmaw people will be accommodated in communicating or deriving consent."

The *Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of yúndíit'õh (traditional knowledge)*[28] states that **"**Yúndíit'õh is closely linked with, and dependent on, the

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[25] *First Nations of Quebec and Labrador Research Protocol***,** Assembly of the First Nations of Quebec and Labrador, 2005 (p. 34, Article 2.17). Available in English and French at:
English: http://fnqlsdi.ca/wp-content/uploads/2013/05/protocole_recherche_en.pdf
French: http://iddpnql.ca/wp-content/uploads/2017/03/161006_APNQL_protocole_recherche_PN_2014.pdf

[26] *Mi'kmaq Research Principles & Protocols*, Mi'kmaw Ethics Watch (in association with Unama'ki College of Cape Breton University). Available at:
http://mikmaki.ca/wp-content/uploads/2016/07/Mikmaw-Research-Principles.pdf

[27] *Mi'kmaw Research Principles and Protocols: Conducting Research With and/or Among Mi'kmaw People***,** Mi'kmaw Ethics Watch N.D. Available at:
https://achh.ca/wp-content/uploads/2018/07/Form_Ethics_Mi%E2%80%99kmaw-Ethics-Watch.pdf

[28] *Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of yúndíit'õh (traditional knowledge)*. Sambaa K'e Dene Band, 2003. Available at:
https://nwtresearch.com/sites/default/files/sambaa-k-e-dene-band.pdf

language in which it is rooted and must therefore be documented and shared to the greatest extent possible in the Sambaa K'e Dene Yatie dialect."

It is worth noting that Canada's *Bill C-91* recognizes that Indigenous rights include Indigenous languages and encourages federal institutions to translate documents into Indigenous languages and offer interpretation services to facilitate the use of an Indigenous language in the institution's activities.[29] Indigenous communities and Nations are in a position to hold federal institutions that involved in funding or implementing projects accountable to this legal commitment.

3.3 Is there special guidance for working with Elders, Knowledge Holders, women, youth or other groups?

Best practices or specific guidance for engaging with community members, such as Elders, knowledge holders, women or youth may be helpful to include in a CKP. There may be specific protocols for how Elders and Knowledge Holders are identified and invited into a project. There may be legal considerations or special precautions to protect under-aged youth participants. A community may have established rates for honoraria or remuneration, and requirements for other forms of compensation that could be included in a CKP.

A variety of examples exist of specific guidance for working with Elders and Knowledge Holders, such as:

- The National Aboriginal Health Organization's *Interviewing Elders: Guidelines from the National Aboriginal Health Organization*[30] offers general protocols and explanations for reporters wishing to cover their conferences, regional gatherings, and other events involving Fist Nation, Métis and Inuit Elders' teachings. The information touches on topics such as tobacco and other offerings, ceremonies, general behaviours and permissions.

- The University of Regina's *Respectful Engagement with Elders, Traditional Knowledge Keepers, and/or Old Ones Policy*[31] informs general interactions and educates about local First Nation and Métis protocols and ceremony. The purposes are to establish protocol and guidelines for working with Elders, Traditional Knowledge Keepers, and/or Old Ones to ensure consistency, respectful invitations and interactions, and to provide recommended rates and guidelines for honoraria and related costs.

[29] *Bill C-91 An Act respecting Indigenous languages*, 2019. Available at: https://www.parl.ca/DocumentViewer/en/42-1/bill/C-91/third-reading

[30] *Interviewing Elders: Guidelines from the National Aboriginal Health Organization*. National Aboriginal Health Organization, N.D. Available at: https://icwrn.uvic.ca/wp-content/uploads/2013/10/InterviewingElders-FINAL.pdf

[31] *Respectful Engagement with Elders, Traditional Knowledge Keepers, and/or Old Ones Policy*: GOV-040-025 (University of Regina, 2018). Available at: https://www.uregina.ca/policy/browse-policy/policy-GOV-040-025.html

- The University of Manitoba's Protocols and Policies are to help determine steps to take when working with Elders and when planning ceremonies.[32] Included are *Cultural Protocols & Policies for Working with Elders*,[33] *Smudging and Pipe Ceremonies*,[34] and *Honorariums and Travel Costs for Elders.*[35]

- Carleton University has *Guidelines for Working with First Nations, Inuit and Metis Elders*[36] for their students, faculty, and staff to consistency support at the university in extending invitations, communicating effectively, showing respectful care, and supporting timely follow-up. Carleton University also has a *Tobacco Offering Protocol*[37] that briefly explains why and when a tobacco offering is appropriate and how to make a tobacco tie.

3.4 Are there key terms, phrases or concepts that should be defined or explained?

It may be helpful in a CKP to define or explain key terms, phrases and concepts that are used, to ensure they are correctly understood. This is especially important if there is not a single agreed definition, if multiple terms are used interchangeably, or if a concept arises from a specific cultural setting that is not widely understood outside that setting.

One example of such a term that is beneficial to clarify in a CKP is "**Indigenous knowledge,**" also referred to by related terms such as **traditional knowledge, Indigenous cultural knowledge, traditional ecological knowledge**. Indigenous communities and Indigenous Nations ultimately decide for themselves how best to describe what is their Indigenous knowledge, often using their own Indigenous language. One example is "Inuit Qaujimajatuqangit" an Inuktitut phrase that is often translated as "Inuit traditional knowledge".

In the *Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of yúndíit'õh (traditional knowledge)*[38], *Yúndíit'õh* translates as "the past time of the land" or as "our heritage" and includes all of the stories, legends, experiences, practices, beliefs, etc. of the Sambaa K'e Dene people from time immemorial. *Yúndíit'õh* includes "The collective and evolving stories, experiences, practices, knowledge, and beliefs of our ancestors that developed from a close relationship with the land and are held in trust by our elders for future generations, and knowledge and information gained

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[32] Protocols and Policies**.** University of Manitoba, N.D. Available at: https://umanitoba.ca/student/indigenous/protocols-and-policies.html

[33] *Cultural Protocols & Policies for Working with Elders***.** University of Manitoba, N.D. Available at: https://umanitoba.ca/student/indigenous/cultural-protocols-and-policies-for-working-with-elders.html

[34] *Smudging and Pipe Ceremonies*. University of Manitoba, N.D. Available at: https://umanitoba.ca/student/indigenous/smudging_ceremony.html

[35] *Honorariums and Travel Costs for Elders*. University of Manitoba, N.D. Available at: https://umanitoba.ca/student/indigenous/honourariums-and-travel-costs.html

[36] *Guidelines for Working with First Nations, Inuit and Metis Elders*. Carleton University, N.D. Available at: https://carleton.ca/indigenous/wp-content/uploads/Guidelines-for-Working-with-Indigenous-Elders.pdf

[37] *Tobacco Offering Protocol***,** Carleton University, N.D. Available at: https://carleton.ca/indigenous/resources/tobacco-offering-protocol/

[38] *Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of yúndíit'õh (traditional knowledge),* 2003. Available at: https://nwtresearch.com/sites/default/files/sambaa-k-e-dene-band.pdf

through previous experiences with land and resource development in this area and through contemporary land use activities and practices."

Two general and commonly referenced international definitions of **Traditional knowledge** include:

Convention on Biological Diversity (CBD):[39]

> *Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Sometimes it is referred to as an oral traditional for it is practiced, sung, danced, painted, carved, chanted and performed down through millennia. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, forestry and environmental management in general.*

World Intellectual Property Office (WIPO)'s *Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore:*[40]

> *Traditional knowledge (TK) is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.*
>
> *While there is not yet an accepted definition of TK at the international level, it can be said that:*
>
> - ***TK in a general sense** embraces the content of knowledge itself as well as traditional cultural expressions, including distinctive signs and symbols associated with TK.*
> - ***TK in the narrow sense** refers to knowledge as such, in particular the knowledge resulting from intellectual activity in a traditional context, and includes know-how, practices, skills, and innovations.*
>
> *Traditional knowledge can be found in a wide variety of contexts, including: agricultural, scientific, technical, ecological and medicinal knowledge as well as biodiversity-related knowledge.*

There are many other terms, phrases or concepts that could be considered for definition or explanation in a CKP, as determined by each Indigenous community. For example, clarifying what it means to be an Elder or Indigenous Knowledge Holder (or other preferred term, such as Indigenous Knowledge Keeper or Indigenous Knowledge Provider), specifying what is the Indigenous community's

[39] The CBD definition of traditional knowledge is available at: https://www.cbd.int/traditional/intro.shtml
[40] WIPO's *Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore's* definition of traditional knowledge is available at: https://www.wipo.int/tk/en/tk/

traditional territory, and defining terms of cultural significance and local relevance. An example of a comprehensive glossary of culturally and locally-relevant terms is found in the Mi'gmaq Chiefs in New Brunswick's *Mi'gmaq Sagamaq Mawiomi: New Brunswick Mi'gmaq Indigenous Knowledge Study (NBMIKS) Guide v.4.0*.[41]

3.5 What is the nature of the project, program or activity?

Project activities commonly involve research, mapping, interviews, and fieldwork to identify, observe and assess areas, sites, culture, biodiversity, traditions and other topics that are important to Indigenous communities. Traditional Use Studies (TUS), Traditional Land Use Studies (TLUS) and Traditional Land Use and Occupancy Studies (TLUOS) are common types of projects, as are a variety of environmental, social and cultural research projects with academic, government or non-profit partners. The project goals, the partners involved (if any), the nature of the activities undertaken and the methods chosen all influence the kind of data that will be generated and the kind of Indigenous knowledge and information that will need to be shared to achieve the goals.

When activities involve external partners or third parties, it is important to consider if and how the project conception, design and methods empower the community. An ideal starting point for projects that are not community-led is ensuring knowledgeable community members are part of the inception, including budget allocations for different aspects, such as:

- Recognition and hiring of community members with relevant expertise,
- Training of youth and other community members,
- Ensuring community protocols and values are considered in project design and methods,
- Ensuring time and space for relationship-building,
- Ample time for community review processes, and considering an appropriate process for dispute resolution should disagreements arise.

Several of these aspects (e.g. hiring community members) are discussed in later sections to assist Indigenous communities in considering if they should be included in a CKP.

3.6 Who is involved in the activities and what are their external obligations and constraints?

Considerations may be different depending on who is involved in a project or program, such as government, industry, university, non-profit or other Indigenous community. Understanding the external party's interests, institutional obligations and institutional constraints or limitations is key to creating realistic expectations. For example, government partners or funders may have requirements for public reporting of results, and results held by government partners may be subject to FOIPP

[41] *Mi'gmaq Sagamaq Mawiomi: New Brunswick Mi'gmaq Indigenous Knowledge Study (NBMIKS) Guide v.4.0.* Mi'gmaq Chiefs in New Brunswick, 2019. Available at: https://static1.squarespace.com/static/57d6d16e03596eeae4a951be/t/5cdac034ddc7900001355afc/1557839925744/NBMIKSG+v+4.0+2019+03+04.pdf

requests. Academic partners may have expectations and pressures for peer-reviewed publications to result from the collaboration. Industry partners may have their own stipulations on sharing results or protecting certain results as proprietary.

A key question when partnering with Canadian academic institutions is whether activities are considered "research" and if they involve "human participants." Research that is affiliated with academic institutions in Canada and involves humans as participants must follow a set of national ethical guidelines called the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS2), and must receive advance approval through a formal institutional research ethics review process. There are additional guidelines in the TCPS2 (Chapter 9) for research involving First Nations, Inuit or Métis Peoples.[42] Familiarity with TCPS2, particularly chapter 9, may be helpful for Indigenous communities to understand what ethical obligations their academic partners are required to follow, and the level of ethical accountability that academic researchers are held to by their institutions.

For an academic partner, not all data collection is considered "research," not all research "involves humans," and not all research involving humans requires institutional ethics review. In this context, research is defined as "an undertaking intended to extend knowledge through a disciplined inquiry and/or systematic investigation." Furthermore, "disciplined inquiry" means "an inquiry that is conducted with the expectation that the method, results and conclusions will be able to withstand the scrutiny of the relevant research community." However, it is also noted that "choice of methodology and/or intent or ability to publish findings are not factors that determine whether an activity is research requiring ethics review."[43] Research activities in academic institutions are distinguished from "quality assurance" or "quality assessment" where the purpose may be to improve services or practices within a program, which does not require adherence to TCPS2 or institutional research ethics review.

The research is considered to involve "human participants" when methods involve observing living people or asking people to provide knowledge, information, data, or responses to interventions, stimuli, or questions that are intended to help answer the research question. Research based on published information does not require institutional ethics review. These distinctions are important when working with an academic partner to know if the TCPS2 applies to the project activities or not.

Most academic institutions provide their researchers with clear guidance on navigating TCPS2 and research ethics review requirements, for example, through decision trees or other resources.[44] Even when adherence to the TCPS2 is not required, some elements of the guidance in Chapter 9 may be useful to Indigenous communities to be aware of and consider for their own processes or tools. However, it is important to note that the TCPS2 only applies to human-centered research, not to research involving other living beings or the environment. The Inuit Tapiriit Kanatami's *National Inuit Strategy on Research* (2018) points out this gap in ethical oversight as problematic because the TCPS2

[42] CIHR, NSERC and SHHRC, 2018. Chapter 9, (pp. 107-12).
[43] CIHR, NSERC, and SHHRC, 2018. Article 2.1.
[44] Research or Quality Assurance Decision Tree, University of Waterloo Research Ethics Office. Available at: https://uwaterloo.ca/research/sites/ca.research/files/uploads/files/research_or_quality_assurance_decision_tree.pdf

"does not encompass Inuit-specific ethical concerns related to research conducted on health and wellbeing as well as wildlife and the environment."[45]

3.7 What knowledge, information and/or data need to be shared with whom, and for what purpose?

Sharing Indigenous knowledge, information and/or community data is a choice of Indigenous Knowledge Holders and their Indigenous communities. The specific considerations in sharing will likely differ depending on whether an activity is led by the Indigenous community for its own sake, or if there are partners or external parties involved. For example, a community might proactively seek out a partnership (e.g., with university, non-profit, government) to address a question or support a community initiative. Or a community may be approached by an institution or organization to partner in a project. Some Indigenous communities may feel obligated or pressured into sharing, or be forced to react to industrial activities happening in their territories.

Whatever the circumstances, clarity about what needs to be shared with whom, and for what purpose is important in determining the most appropriate and effective strategies for ensuring a community's data, information and knowledge are respected and protected. Ideally issues can be predicted and proactively addressed before they arise by considering a number of questions such as:

- What kind of knowledge, information and/or data will be shared or generated to achieve the purpose?
- Who will the knowledge, information and/or data be shared with as part of the project?
- Are there any concerns or sensitivities about sharing the specific knowledge, information and/or data outside of the community?
- Is there any intention or requirement to share the learnings or outcomes with wider audiences or the public after the project is completed?

As suggested in Section 2, it may be important for a community to clearly distinguish between what is considered Indigenous knowledge compared with what is understood as information or data, as these terms are not consistently used or uniformly defined. Indigenous knowledge is likely much more comprehensive than data, reflective of a worldview and way of thinking and being, perhaps shared to provide historical and cultural meaning and context for understanding and interpreting data. Some Indigenous knowledge may be important to share to provide context for the people directly involved in the activities but should not be explicitly recorded as data (and in many cases is not even possible to adequately document).

Some Indigenous knowledge should not be shared at all outside the cultural routes of transmission, or should be shared only under strict protocols and protective measures to respect sensitivities and protect individual and collective rights and responsibilities of community members. For example, the

[45] Inuit Tapiriit Kanatami, 2018 (p. 23-24). Available at: https://www.itk.ca/wp-content/uploads/2018/03/National-Inuit-Strategy-on-Research.pdf

Na-Cho Nyak Du First Nation has put in place policies to protect traditional knowledge since "it must be treated with high respect as this wisdom is sacred." An application process is in place through their Heritage department for anyone wishing to access their traditional knowledge.[46]

Clarity about who the knowledge and/or data will be shared with directly or indirectly (e.g., university research project partners, government decision-makers, industrial development proponents, or the wider public through public reporting requirements) can inform the specific methods, processes and tools for collecting, sharing, managing and protecting what is shared. The kinds of concerns that might arise could relate to ensuring what is shared is understood accurately and documented in an appropriate form that limits potential misinterpretation, prevents misuse, and protects rights of the Indigenous community and Indigenous Knowledge Holders.

There may be a need to choose different strategies for protecting Indigenous knowledge in its many tangible and intangible forms and modes of transmission, compared with information or data that is more specific and concrete.[47]

3.8 What are the anticipated benefits of sharing for the community, and what are the anticipated burdens or risks?

There is a long history of inequities in the sharing of Indigenous knowledge with universities, governments and the public and private sectors where the contributions of Indigenous communities and the time and expertise of Elders and Indigenous Knowledge Holders were not adequately acknowledged, respected or remunerated. Today, there is an expectation that Indigenous communities will benefit from research, monitoring and other activities conducted on their territories and/or with their involvement. Benefits may be short term or longer term, and tangible or intangible, ranging from training and capacity-building to employment or financial remuneration, to creation of new understandings for better decision-making.

The *First Nations of Quebec and Labrador Research Protocol* (2005) of the Assembly of the First Nations of Quebec and Labrador acknowledges the diversity of potential benefits for a host community, such as results that are useful for community use, training of co-researchers and assistants and supporting community decision-regarding regarding local issues and priorities. It encourages identifying "local, regional, national or international spin-offs" before a project begins so they can be maximized for the communities. It notes that "the importance of possible research spin-offs should sort of take precedence over its potential contribution to science."[48]

In addition to clear benefits, here is also a commitment within human research ethics in Canada to minimizing burdens and risks of harm to participants and their communities. **Burdens** refer to the

[46] *Na-Cho Nyak Dun First Nation Cultural Orientation and Protocols Toolkit*, The Council of Yukon First Nations N.D. (p. 6). Available at: http://lss.yukonschools.ca/uploads/4/5/5/0/45508033/part_4_nndfn.pdf

[47] For further discussion on rationales for managing Indigenous knowledge differently than data, see CIER, 2018.

[48] *First Nations of Quebec and Labrador Research Protocol***.** Assembly of the First Nations of Quebec and Labrador, 2005 (p. 30). Available at: http://fnqlsdi.ca/wp-content/uploads/2013/05/protocole_recherche_en.pdf

imposition of hardships, such as commitments of time or money, inconveniences, or tradeoffs. **Risk of harm** is the probability or likelihood that harm will occur, directly or indirectly, in the short or longer term. **Types of harm** can be categorized broadly as physical, psychological, social, cultural, ecological, economic, or legal. Harm is often invisible, elusive, and dependent on one's perspective. Harm may arise directly from an activity (e.g., material or reputational impacts, harms to the environment), or be caused indirectly (e.g., use of information that has not been mutually-agreed in advance, failure to share data and benefits with community partners, or institutional policies that perpetuate colonization).

Policies of research institutions and funding agencies in Canada have evolved in recent years to more appropriately support remuneration of Indigenous participants for their time, expertise and inconveniences in contributing to research. For example, it is standard practice to have travel costs and reasonable out of pocket expenses covered for research participants. Gifts and appropriate remuneration for participation (such as honoraria, stipends, or employment) are also becoming common practice. To ensure amounts are reasonable and fair, remuneration rates should be mutually-agreed in advance and should align with the Indigenous community or Indigenous Nation's protocols and policies. As noted in an earlier section, it may also be appropriate for a community to provide guidance to partners or external parties on appropriate cultural protocols for offering gifts or remuneration to Elders, Indigenous Knowledge Holders or other community members, in recognition of their contributions.

3.9 Are individual and collective consent processes in place, including respect for privacy and confidentiality?

Consent is defined in a variety of ways in different ethical, legal and political contexts. **Consent** means 'voluntary agreement' and represents the ethical and legal expression of a person's right to have their autonomy and self-determination respected. Generally, consenting is a process of choosing to participate in an activity. To be informed, this choice is based on fully understanding the nature, purpose and consequences of an activity and its impacts on the individuals and communities who are affected. The process of consenting ought to begin prior to initiating the activity and should be ongoing, with continuing affirmation throughout the activity.

The internationally accepted standard of consent for Indigenous rights that is found in the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP, 2007), which is upheld by the *Truth and Reconciliation Commission's* (TRC, 2015) Calls to Action and explicitly committed to in the Government of Canada's *Principles Respecting the Government of Canada's Relationship with Indigenous Peoples*[49] is **Free, Prior, and Informed Consent** (FPIC), where:

- **Free** means the choice must be freely and voluntarily made, without any inducement or manipulation involved in giving consent, and without penalty for not giving consent.

- **Informed** means that to be meaningful and valid, the choice must be based on as complete an understanding as is reasonably possible of the nature, purpose and consequences of the

[49] *Principles Respecting the Government of Canada's Relationship with Indigenous Peoples*. Government of Canada, 2018. Available at https://www.justice.gc.ca/eng/csj-sjc/principles.pdf

activity and its impacts on individuals, communities and the environment. This understanding includes foreseeable risks, harms, costs and potential benefits for all parties involved.

- **Prior** means that the choice to participate is made prior to the activity taking place. Adequate time and opportunity to understand the information provided and decide on participation is required.[50]

FPIC requires processes that fully respect Indigenous institutions of representation and decision-making.

Activities involving sharing and transmitting of Indigenous knowledge commonly have both an individual and a collective dimension to consent, to ensure the collective rights, interests and responsibilities of the affiliated communities are addressed. Individual consent from a member of a community cannot be assumed as conferring consent or endorsement on behalf of a community. Indigenous community protocols need to be followed on who can speak to whom, for whom and about what. To be given access to Indigenous knowledge requires an appropriate process of consenting by the individual Knowledge Holder(s), and may additionally require a collective process of consent by the Indigenous community, as determined by the Knowledge Holder(s), community protocols and community governance structures. Throughout this process, Indigenous communities and participants have the 'right to say no' to any aspect of the activity during a project lifecycle.

Where activities are to be conducted on lands under the jurisdiction of an Indigenous community authority (e.g., Chief and council), engagement of the culturally appropriate recognized leadership in the community through the appropriate process defined by the community is required to determine the appropriate collective consenting or endorsement process and mechanism.

The process and form of requesting consent must be valid and meaningful, such that all information about the activity is conveyed in a way, at a level, and in a language that is clear and understandable to Indigenous community members. This may include translation into other language(s) to ensure all involved people equally comprehend the information.

As mentioned in a previous section, the *First Nations of Quebec and Labrador Research Protocol* developed by the Assembly of the First Nations of Quebec and Labrador (2005)[51] and the *Mi'kmaq Research Principles & Protocols***,** developed by Mi'kmaw Ethics Watch (in association with Unama'ki College of Cape Breton University)[52] both include requirements that consent processes are conducted in the Indigenous language of the participants.

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[50] FPIC is mentioned in UNDRIP Articles 10,11,19,28, 29. For more information on FPIC, see Food and Agricultural Organization of the United Nations, 2016.

[51] *First Nations of Quebec and Labrador Research Protocol,* Assembly of the First Nations of Quebec and Labrador, 2005 (p. 34, Article 2.17). Available in English and French at:
English: http://fnqlsdi.ca/wp-content/uploads/2013/05/protocole_recherche_en.pdf
French: http://iddpnql.ca/wp-content/uploads/2017/03/161006_APNQL_protocole_recherche_PN_2014.pdf

[52] *Mi'kmaq Research Principles & Protocols.* Mi'kmaw Ethics Watch (in association with Unama'ki College of Cape Breton University), N.D. Available at:
http://mikmaki.ca/wp-content/uploads/2016/07/Mikmaw-Research-Principles.pdf

Evidence of consent should be documented in a way agreeable to the parties involved, such as in writing, by audio or video recording, by witness, or through a ceremony. In some activities, such as where the process, final products or purpose of use are evolving, ongoing consent may be best achieved through a multi-phased consent process. Consent is not a fixed moment in time but it is an ongoing process, which means there is an option to withdraw participation at any time and for participants to retract any Indigenous knowledge that they have shared. It may be prudent to discuss and put in place (or commit in principle to) a mutually-agreeable and culturally-appropriate grievance mechanism that respects Indigenous dispute resolution and decision-making systems when there is a disagreement or when the withdrawal of consent creates a problem that needs to be resolved.

Consent also relates to privacy and confidentiality. The **right to privacy**, is the right to exercise control over personal information by consenting to, or withholding consent for, the collection, use and/or disclosure of information. Consenting processes must comply with applicable legal and regulatory requirements and obligations with respect to protection of privacy under Canadian privacy law and provincial *Freedom of Information and Protection of Privacy* (FOIP) *Acts*, which include the Office of the Privacy Commissioner of Canada's *Guidelines For Obtaining Meaningful Consent* (2019).

It is important than there is some kind of evidence of individual and collective consent, meaning consent processes should be documented. This may be through a written and signed letter of agreement, an audio or video recording of participants giving oral consent, or in some other mutually-agreed way. The documentation should be retained by all parties involved as part of the project records. As an example, the *Gwich'in Tribal Council Traditional Knowledge Policy* requires an "Informed Consent Statement" that "outlines the nature of the research, and the manner in which the information the participant is providing can be used and accessed." The policy includes a detailed list of essential elements to be included in the Informed Consent Statement.[53]

The specific processes for ensuring and documenting individual and collective consent should be agreed in advance by all those involved to ensure that collective rights, interests and responsibilities are known and upheld. In this regard, the following questions may be helpful for Indigenous communities to consider when developing a CKP:

- Who are the knowledge holders and appropriate Indigenous community authorities who should be approached for consent?
- What are the knowledge holders' and community's processes and protocols for requesting consent of individuals and consent or endorsement by the community?
- Are measures in place to protect individual's rights to privacy and confidentiality?
- Has full information about the activity or project been made available (*e.g.,* nature, purpose and all reasonably foreseeable impacts) in appropriate ways, forms and languages before consent is given?

[53] *Gwich'in Tribal Council Traditional Knowledge Policy.* Gwich'in Tribal Council, 2004. See Schedule B for list of essential elements of an Informed Consent Statement. Available at: https://gwichin.ca/sites/default/files/gtc_final_tk_policy_2004.pdf

- In what form will the evidence of community and individual consent be documented so that all involved have the same understanding about what been consented to?
- Is there a process in place throughout the activity or project to enable participants and the community to continue to consent or re-consent?
- Is there a process in place to enable participants and the community to withdraw consent to the activities and outcomes, for example, if circumstances change during the course of the activity?
- What is the process if there is a desire to use the knowledge, information or data for another purpose?
- Is there a commitment and process in place to ensure consent can be withdrawn if circumstances arise that require this measure, for example to protect sacred knowledge?

An example of a template form that addresses many of the elements raised in this Guidance Document is the *Template Traditional Knowledge Confidentiality and Consent Form* offered by Indigenous Corporate Training Inc.[54]

3.10 What are the requirements and processes for community review and validation of community knowledge, information and data?

A key assurance needed when Indigenous knowledge is shared outside of traditional forms of transmission is that the knowledge has been documented accurately and is not taken out of context or misinterpreted. An appropriate process is needed for Indigenous Knowledge Holders to review and verify the accuracy of what has been documented in its various forms, such as interview transcripts, sound recordings, video footage or notes. Projects and programs for developing curriculum involving Indigenous knowledge, language or culture may require particular scrutiny, to ensure the curricular content is validated and approved by members of the Indigenous community who hold the appropriate language expertise and other cultural expertise.

There may also be requirements and processes for review of information and data by the appropriate community leaders or authorities, to ensure the collective interests, responsibilities and rights of the community are upheld. Until these review and validation steps have occurred, the Indigenous knowledge, information and data that are shared could be treated as confidential between the parties.

The *Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of yúndíit'õh (traditional knowledge)*[55] requires summary documents of research activities and copies of all research data be submitted to the Sambaa K'e Dene Band for review "to determine the reliability and

[54] *Template Traditional Knowledge Confidentiality and Consent Form*. Indigenous Corporate Training Inc. Available at: https://cdn2.hubspot.net/hubfs/374848/docs/TKConsent_Form_.pdf?t=1521485539033

[55] *Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of yúndíit'õh (traditional knowledge).* Sambaa K'e Dene Band, 2003. Available at: https://nwtresearch.com/sites/default/files/sambaa-k-e-dene-band.pdf

validity of the information submitted and its consistency with the Yúndíit'õh Research Agreement." Authorization by the Sambaa K'e Dene Band is required before any materials can be used. Further more, "Disagreement over the use of certain information or materials will first be negotiated and subsequently arbitrated according to a process agreed upon by the SKDB and the Proponent."

Review and validation by Indigenous Knowledge Holders and community representatives requires sufficient time for review and approval or correction. It would be prudent to have a confirmation process in place to ensure that any corrections and retractions required are made. Such requirements and processes for community review and validation of community knowledge, information and data are important considerations for including in a CKP.

3.11 What are the expectations regarding recognition, attribution and due credit?

A CKP could ensure that the contributions and expertise of Indigenous community members are duly recognized and appropriately documented as part of any project or activity, for reasons of credit, credibility, accountability, responsibility and rights. Appropriate recognition, attribution and due credit should also extend to any outcomes such as reports, publications, curricula, presentations, maps, films or videos that are produced from sharing Indigenous knowledge, information or community data. Depending on the specific contribution and who is involved, this might be accomplished through a formal acknowledgement, a citation that identifies Indigenous Knowledge Holder(s) as the source of knowledge (with their permission and in the way that those people wish to be identified), through co-authorship or in other ways.

In partnerships or activities involving external parties, it may be appropriate for the Indigenous community, individual Knowledge Holders or an appointed representative (individual or organization) to hold or share **copyright**[56] in what is produced. Even if circumstances require that copyright in a product be transferred, it is important to the integrity of the knowledge that Indigenous Knowledge Holders and communities consider retaining their **moral rights**[57] in what has been shared. In Canada,

[56] **Copyright** is a form of intellectual property rights and means the sole right to produce or reproduce a work or a substantial part of it in any form.

[57] **Moral rights** are legal rights that exist within Canadian copyright law and continue after expiration of the copyright. Moral rights safeguard the integrity of a creative work as integral to the reputation of the creator; they relate to guarantees that the originator is always credited for the work (credit), the work shall remain in basically the same state unless the originator changes it (integrity), and others may not change the work without permission (context). Moral rights merit specific consideration in publications, recordings, video productions and other products arising from knowledge sharing where intangible aspects of Indigenous knowledge are "fixed" in tangible forms to which copyright can then be assigned. If copyright related to Indigenous knowledge is to be held by a party other than the Indigenous knowledge holders, it is important to ensure that the moral rights of Indigenous knowledge holders to their Indigenous knowledge remain intact. In Canadian copyright law, moral rights remain with the originator unless they are explicitly waived, such as through a written agreement. Moral rights should not be waived by Indigenous knowledge holders when their knowledge, stories or performances are documented. For more information, see the Government of Canada's Archived webpage on Moral Rights, available at: https://www.canada.ca/en/heritage-information-network/services/intellectual-property-copyright/nailing-down-bits/moral-rights.html and the Canadian Intellectual Property Right Office's "A Guide to Copyright" available at: https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/h_wr02281.html

moral rights are not automatically transferred with copyright, they must be explicitly waived, for example through a written contract.

In certain cases, it may be desirable to pursue other forms of western intellectual property rights (IPR) such as trademark or patents. In other cases, alternatives to western IP protection may be more desirable and appropriate (discussed in a subsequent section).

Ensuring that the Indigenous community and contributing community members are clearly recognized as the source of the Indigenous knowledge and community information is important to retaining ongoing rights, especially if information is made public and/or becomes available for use or application by others.

3.12 Are the plans for publication and dissemination of outcomes understood and agreed?

The publication and dissemination of outcomes in forms such as articles, reports, curricula, videos, films, maps, or websites often involve authorization by the Indigenous community through a formal review process that is specified by the community. Specifying such a process in a CKP can ensure that any outcome authorized by the community that includes or makes reference to their Indigenous knowledge would explicitly acknowledge the ownership (including copyright if applicable and appropriate). A CKP could also include a statement of inalienable Indigenous rights and responsibilities to that knowledge by the Indigenous Knowledge Holder(s) who shared it, and their Indigenous community or Nation, in the way specified by those who hold the knowledge, and according to cultural protocols and community policies.

There could be limits imposed on distribution of outcomes if there is no requirement that they be made public. Educative statements about ownership, rights and responsibilities could be included with outcomes if they are to be made public. The Indigenous community should determine what is permissible to post online for public access, with the understanding that there is effectively little control over information that is shared publicly online or distributed electronically, even when one holds copyright in the material.

It is important to be clear that when authorization has been given by an Indigenous community for outcomes to include Indigenous knowledge, information or data, that authorization is specific to the particular outcomes and does not extend to other projects or initiatives.

An Indigenous community could require that all outcomes that are authorized for dissemination by the community could first be shared with the community before being shared with the target audience or the public. Where the capacity exists, the community could require they be given the first opportunity to communicate the findings directly to the public.

If there is unresolvable disagreement between the Indigenous community and the partners or external parties involved in the project or activity about the contents of a publication, an agreement could be made to include a dissenting perspective, whereby each party

could include their own interpretation within the publication.

3.13 How can Indigenous intellectual property rights be addressed?

Intellectual property (IP) is an emerging topic of concern for many Indigenous communities, but it is not a concept that is uniformly understood outside of the western legal system where it emerged. IP has come to mean different things to different people in different contexts and within different cultural regimes. IP is the result of intellectual or creative activity. In a western legal sense, IP is not the intellectual or artistic idea itself, but the concrete *expression* of that idea. Rights to IP can be attached to certain forms of expression based on strict eligibility criteria. In a western legal system, the notion of intellectual property rights (IPR) often emphasizes concepts of ownership and benefit. IPR are generally exclusive rights, granted for a limited time to give the creator a competitive edge in commercializing a creation. Western IP is concerned with patents, copyrights, trademarks, and other forms of legal protection for something that has real or potential commercial value. In general, common law and certain statutes and acts (e.g., Canadian Patent and Copyright Acts) are the legal means by which IP is defined and through which legal rights to IP can be protected.

Intellectual property associated with Indigenous knowledge, sometimes called **Indigenous intellectual property** usually refers to the tangible and intangible expressions of Indigenous knowledge, embodied in stories, songs, prayers, languages, teachings, practices, laws, protocols, ceremonies, dances, art, designs, recipes, as well as formulas, processes, innovations and scientific discoveries that are informed by Indigenous knowledge. These may or may not be fixed in writing, photographs, sound recordings, video recordings, performances, literary works or other forms. Western IP law does not protect most of these elements. Common processes of scientific or academic documentation for research, monitoring, language studies, curriculum development and other activities can transform and "fix" intangible expressions into tangible forms to which western legal rights can be attached. This act of "fixing" enables ownership to be claimed, which has often been used by the western scientific or academic proponent or a third party.

Under many Indigenous laws and customary practices, IPR involving Indigenous knowledge are seen as communally "owned," although the notion underlying Indigenous ownership may differ from a western understanding (discussed later in this section). In contrast, under western laws, IPR are owned by individual creators or assigned to their institutions. Under many Indigenous laws and customary practices, IPR involving Indigenous knowledge would generally not be transferable. If any such transfer were permitted, the transmission process would be based on the cultural qualifications of both the source and the recipient, as well as on the purpose and intended use of the Indigenous knowledge. Under western laws, IP can be freely transmitted and assigned by the rights holder, usually for economic returns over a set time. Many Indigenous laws and customary practices emphasize integrity of, and responsibility to, culture and environment, whereas western IP laws emphasize economic rights.

At this time, Canadian IP laws are seen as inadequate to protect the communal rights and diverse forms of expression of Indigenous knowledge and associated IP that are transmitted through cultural systems of sharing.[58, 59] Research, monitoring and other activities have the potential (often

[58] A recent statutory review of the Canadian Copyright Act has led to formal recommendations for recognition

unintended) to facilitate the appropriation of Indigenous knowledge and associated IP, which may cause a range of harms and offenses to Indigenous communities. A common approach in addressing IP issues related to sharing Indigenous knowledge is through upfront IPR statements of claim, contracts or other written agreements that clearly state ownership rights between those involved. It is also important in any discussion of Indigenous IPR to acknowledge the challenges and tensions in applying the concept of "ownership" to Indigenous knowledge. Greg Younging (2018:25) offers a helpful perspective:

> *"Cultural rights are part of contemporary Indigenous cultural realities. Understanding these rights, including how they evolved, is key to working in a culturally appropriate and respectful way. Indigenous Peoples think of Creation as something that includes and sustains all living things. People are part of it and responsible for caring for it. The question of "who owns it" has no context.*
>
> *By contrast, "who owns it" preoccupies European notions of the world. … If something isn't "owned"–air, for example–European notions consider it either free for the taking (mostly without value) or not yet owned. Indigenous Peoples have formulated a new idea of ownership–Indigenous cultural property–to assert their place in a post-contact world of owned things."*

Within the understanding of ownership as a contemporary "post-contact world of owned things," the Indigenous community or Nation is the guardian and owner of the their collective Indigenous knowledge, and holds the rights to all tangible and intangible cultural heritage and IP associated with their Indigenous knowledge. To ensure rights are asserted, it is important that the Indigenous community or Nation is explicitly acknowledged as guardian, owner and rights holder in all documentation, uses and applications of the Indigenous knowledge that is shared.

It is also understood that certain specialized (*e.g.,* secret or sacred) Indigenous knowledge is entrusted to, and held by, specific individuals, families, and structural systems recognized by the Indigenous community or Indigenous Nation for their role in holding, practicing, transmitting and safeguarding this cultural expertise and the associated sociocultural, ecological, and spiritual responsibilities and accountabilities. Matters related to permission, transmission, use and dissemination of this specialized Indigenous knowledge is typically in accordance with the cultural protocols and policies of the community or Nation.

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and effective protection of traditional arts and cultural expressions in Canadian law, within and beyond copyright legislation, as well as the participation of Indigenous groups in the development of national and international intellectual property law (House of Commons Canada, 2019).

[59] In spring 2018, the Minister of Innovation, Science and Economic Development announced *the Intellectual Property Strategy* (http://www.ic.gc.ca/eic/site/108.nsf/eng/h_00000.html) as part of Canada's Innovation and Skills Plan. Building on the Government of Canada's commitments to implement the UNDRIP and to recognize Indigenous rights, the IP Strategy includes initiatives aimed at making Canada's IP system more inclusive and reflective of the needs and interests of Indigenous Peoples. See https://www.canada.ca/en/innovation-science-economic-development/news/2019/04/government-of-canada-ip-strategy-supports-the-preservation-and-protection-of-indigenous-knowledge-and-cultural-expressions.html

Being informed about Canadian IP laws including copyright law, and understanding the opportunities, limitations and potential harms in using western IP laws to protect Indigenous knowledge are important considerations. Given there is often an implied or explicit imperative to share knowledge for the public good, given that the imperative of the IPR system is to stimulate creations of public benefit, and given a general absence of sufficient legal tools to protect Indigenous knowledge and associated Indigenous intellectual property, it is important for Indigenous communities to be aware of and consider the risks as well as the benefits in sharing their Indigenous knowledge, and not rely very heavily on the western legal system for protection of their associated IPR.

It may be important for Indigenous communities to proactively address Indigenous IPR issues in developing a CKP, but this is ideally done with a deeper understanding of the range of issues and opportunities raised by the western IPR system (*i.e.,* what it does and does not protect) as well as solutions offered by alternative and complementary strategies to protect Indigenous IPR. Legal or other specialized professional advice may be needed to effectively include these understandings and measures for implementing them within a CKP.

Including a general statement on Indigenous IPR is one way to highlight the importance of the topic in a CKP without going into details that may depend on specific circumstances or require professional advice. An example of this approach is found in the Mi'gmaq Chiefs in New Brunswick's *Mi'gmaq Sagamaq Mawiomi: New Brunswick Mi'gmaq Indigenous Knowledge Study (NBMIKS) Guide v.4.0*[60], which refers to Article 31 in UNDRIP and states:

> *Indigenous people maintain both individual expressions of IIPRs through their life experiences and creations as well as communal IIPRs through enveloping and ongoing cultural knowledge and practices. MSM and Mi'gmawe'l Tplu'taqnn support the UNDRIP's principle of individual and communal IIPRs. Mi'gmaq IIPRs in their many manifestations must be recognized and respected by all persons and organizations wishing to operate in the territory of the Mi'gmaq in New Brunswick*

Another example of a general reference to IPR is found in the *First Nations of Quebec and Labrador Research Protocol* of the Assembly of the First Nations of Quebec and Labrador (2005), which links IPR to the **OCAP™ principles** as an "expression of self-determination and self-governance in the areas of research and information."[61]

The *Mi'kmaq Ecological Knowledge Study Protocol*[62] includes the requirement that:

> *An explicit statement must be included in the MEKS that states that the Study is not intended to be interpreted as 'Consultation' for the purpose of justifying an infringement on the existing*

[60] *Mi'gmaq Sagamaq Mawiomi: New Brunswick Mi'gmaq Indigenous Knowledge Study (NBMIKS) Guide v.4.0.* Mi'gmaq Chiefs in New Brunswick, 2019. Available at: https://static1.squarespace.com/static/57d6d16e03596eeae4a951be/t/5cdac034ddc7900001355afc/1557839925744/NBMIKSG+v+4.0+2019+03+04.pdf

[61] *First Nations of Quebec and Labrador Research Protocol***.** Assembly of the First Nations of Quebec and Labrador, 2005. Available at https://fnqlsdi.ca/wp-content/uploads/2013/05/protocole_recherche_en.pdf

[62] *Mi'kmaq Ecological Knowledge Study Protocol* (2nd Edition)**.** Prepared by Kwilmu'kw Maw-klusuaqn Negotiation Office on behalf of Assembly of Nova Scotia Mi'kmaq Chiefs. Available at: https://novascotia.ca/abor/aborlearn/docs/MEK Protocol Second Edition.pdf

Aboriginal and Treaty Rights of the Mi'kmaq of Nova Scotia. The MEKS must include a provision acknowledging that the MEK contained within the Study is subject to the intellectual property rights of the Mi'kmaq of Nova Scotia, which they individually and collectively hold.

The *Guidelines for Ethical Research in Manitoba First Nations: Principles, Practices and Templates* developed by the Manitoba First Nations Education Resource Centre (2014) includes a section on "Data Ownership and Intellectual Property Rights" that states that the First Nation **"**retains all intellectual property rights (including copyright), as applicable, to the data offered under [the] agreement. Access and stewardship of the collective data are negotiated and determined by the First Nation."[63]

3.14 How can a community's Indigenous knowledge, information and data be protected?

A key question of interest and concern in sharing Indigenous knowledge, information and/or community data is how these will be respected and protected. This question is not new and addressing it is not simple. The issue of cultural appropriation is longstanding and of international scope, acknowledged in UNDRIP (2007)[64], in the work of the World Intellectual Property Organization (WIPO)'s Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore,[65] in many formalized statements and declarations made by Indigenous Peoples,[66] in the Codes of Ethics of some professional and academic societies,[67] and in the *Policy on Scientific and Indigenous Knowledge Integrity* of Crown-Indigenous Relations and Northern Affairs Canada (2019).[68]

As indicated, there are insufficient legal mechanisms or governmental/institutional policies in place to offer the type of protections needed to ensure the respectful and appropriate use of Indigenous knowledge. Indigenous knowledge is relational in nature, and linked with specific lands, waters, and life forms in specific places. Concerns for protecting Indigenous knowledge and associated community

[63] *Guidelines for Ethical Research in Manitoba First Nations: Principles, Practices and Templates*, Manitoba First Nations Education Resource Centre, 2014. Available at: http://www.mfnerc.org/wp-content/uploads/2014/03/Ethical-Research-in-Manitoba-First-Nations.pdf

[64] UNDRIP, 2007 Article 11(2) acknowledges that cultural, intellectual, religious and spiritual properties have been taken without the free, prior and informed consent of Indigenous Peoples and/or in violation of Indigenous laws, traditions and customs.

[65] WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore is developing an international legal instrument to support the effective protection of traditional knowledge (TK), traditional cultural expressions (TCEs) and genetic resources (GRs). See https://www.wipo.int/tk/en/igc/

[66] For example, the *Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples*. Available at https://www.wipo.int/export/sites/www/tk/en/databases/creative_heritage/docs/mataatua.pdf

[67] For example, the *International Society of Ethnobiology Code of Ethics*, 2006/2008. Available at: http://www.ethnobiology.net/what-we-do/core-programs/ise-ethics-program/code-of-ethics/code-in-english/

[68] *Policy on Scientific and Indigenous Knowledge Integrity*. Crown-Indigenous Relations and Northern Affairs Canada, 2019. Available at: https://www.rcaanc-cirnac.gc.ca/eng/1575567784632/1575567805298

data relate to self-determination and multigenerational kinship rights and responsibilities, which rely on Indigenous protocols, ceremony, customs and laws to be practiced and respected.

By comparison, the creative and ownership rights and responsibilities that are important within western science are largely protectable by Canadian laws and institutional policies through mechanisms for recognition and credit, authorship, individual or corporate ownership and proprietary rights and intellectual property rights for those who have contributed to discoveries, innovations or creations. Protective mechanisms commonly include written agreements or contracts, copyright and tools within western IPR laws in Canada.

This inequity in protection of knowledges that come from different knowledge systems requires priority attention when Indigenous knowledge and community information and data are shared. Protecting Indigenous knowledge that is shared outside the cultural protections of Indigenous protocols, ceremony, customs and laws is a joint responsibility of those who hold the knowledge and of those with whom knowledge or data is shared. To uphold this responsibility requires understanding that Indigenous knowledge arises from a worldview that includes values, rights, and responsibilities, all of which will determine what kind of protection is needed, and will inform the appropriate processes and specific tools for protection, *i.e.,* there is no one-size-fits-all solution.

Encapsulating the importance and complexity of protecting Indigenous knowledge while creating concrete guidance are important to consider in a CKP. A range of suggestions is offered below. Some have already been described in previous sections since there is a degree of interrelatedness among elements of a CKP and many different ways to organize them:

- Considering the protection of Indigenous knowledge explicitly and as an upfront priority (rather than an after-thought) in all aspects of the conception, design and implementation of a project, program or activity.

- Using Indigenous community-led and community-based participatory methodologies that are designed by or in collaboration with the community.[69]

- Considering if there is a role for technology in documenting and sharing Indigenous knowledge and what are the specific issues and opportunities involved.

- Understanding from Indigenous Knowledge Holders specifically what needs to be protected – what is the nature (*e.g.,* stories, cultural teachings) and form (*e.g.,* oral, written) of the information or knowledge shared? And what are the concerns, risks or perceived threats in sharing these, for example marginalization, devaluation, misinterpretation, misuse or misappropriation of the knowledge and/or data?

- Developing a strategy and proactively putting in place best available tools and practices, to address the concerns, risks and perceived threats, such as:

    - Ensuring that originals (when feasible) or copies of all recordings, notes, transcripts,

[69] For examples of Indigenous research methodologies, see Wilson, 2015 and Smith, 2012.

photos, maps and other records are held by the community or Nation.

- Making clear that the possession of original or duplicate records by partners or external parties does not constitute ownership.

- Making clear that what is shared should only be used by with the explicit agreement of the community or Nation, and only for purposes that have been agreed.

- Ensuring individuals who share their Indigenous knowledge are given a copy of the final, vetted versions of their contributions (after review and validation) for their own personal use and records. For example, these might include interview transcripts or photographs.

- Asserting the right of the community or Nation to access any data, information, records, outcomes related to their Indigenous knowledge are indefinitely and free of charge.

- Considering the idea of designating a trusted person to authorize use of certain types of Indigenous knowledge on behalf of a Knowledge Holder. This may help to address scenarios where a Knowledge Holder may be asked to share the same knowledge for multiple uses and to ensure the knowledge can continue to be used once the Knowledge Holder has passed way.

- Using well-informed and clearly written agreements to ensure clarity on rights and responsibilities related to who holds, maintains, uses, controls, owns and/or stewards the data, information, knowledge and outcomes of a project.

- Addressing copyright to any tangible expressions of Indigenous knowledge and to any coproduced works with a full understanding of the scope and limits of protection offered by Canadian copyright law, including moral rights.

- Ensuring that no claim of copyright, patent, trademark or other form of western legal property or intellectual property rights is made on the community or Nation's Indigenous knowledge (or any derivative) by anyone other than the community or Nation if they so choose, or authorized members on their behalf.

- Being aware if information that is shared with public bodies (provincial government, municipalities, universities, school boards) is subject to *Freedom of Information and Protection of Privacy Acts* (FOIPP).

- Committing to participating in a mutually-agreeable and culturally-appropriate dispute resolution process in the event of an irreconcilable disagreement or dispute about the protection, interpretations or respectful use of Indigenous knowledge.

A diverse array of comprehensive policies, guidelines and protocols that include similar elements as listed above have been developed by Indigenous communities in Canada. Some contain checklists, templates or fillable forms. Many are publicly available and may serve as illustrative examples for

Indigenous communities seeking to develop their own CKP. A few examples that have not already been mentioned include:

- Tl'azt'en Nation's *Tl'azt'en Nation Guidelines for Research in Tl'azt'en Territory*[70] succinctly outlines community expectations, including the need for a detailed research contract to be developed between parties.

- *Gwich'in Tribal Council Traditional Knowledge Policy*[71] prepared by Gwich'in Social & Cultural Institute is a comprehensive policy that outlines community roles/responsibilities, principles, and definitions. It includes a detailed research agreement framework (form), consent form checklist, and specific Indigenous knowledge research guidelines that cover many of the elements found in this Guidance Document.

- *Six Nations Council Research Ethics Committee Protocol*[72] of the Six Nations Council Research Ethics Committee is a comprehensive application for ethics approval that is comprised of detailed forms with checklist, questions requiring short responses, and a requirement to submit additional project information. Implementation would require an experienced and high capacity community ethics review board and staff but the checklist approach offers a succinct format to cover the essential considerations and concerns.

- *NWT Métis Nation Traditional Knowledge Policy*[73] of the North West Territory Métis Nation provides internal guidance for the NWT Métis Nation as the primary entity undertaking projects involving their Indigenous knowledge. Contains definitions, guiding principles, responsibilities within the Nation, and guidance related to data management, access, and sharing, informed consent, confidentiality, research review, reporting back to the community, and potential access to Indigenous knowledge by third parties, which is governed by a research agreement and requires government authorization.

- Inuvialuit Regional Corporation's *Inuvialuit Regional Corporation Guidelines for Research in the Inuvialuit Settlement Region*[74] provides a brief introduction to the Inuvialuit Research Policy, meant as an overall guide for how researchers should approach Inuvialuit communities about research projects, and how Inuvialuit Institutions and communities can coordinate and facilitate research projects. It outlines considerations and ethical principles in working with Indigenous knowledge, with a brief reference to TCPS2 and Inuvialuit cultural and local

[70] *Tl'azt'en Nation Guidelines for Research in Tl'azt'en Territory*. Tl'azt'en Nation, 1998. Available at: http://nafaforestry.org/forest_home/documents/CEM-TlaztenGuidelines.pdf
[71] *Gwich'in Tribal Council Traditional Knowledge Policy*. Gwich'in Tribal Council, 2004. Available at: https://gwichin.ca/sites/default/files/gtc_final_tk_policy_2004.pdf
[72] *Six Nations Council Research Ethics Committee Protocol*. Six Nations Council Research Ethics Committee, 2014. Available at: http://www.sixnations.ca/admResearchEthicsProtocol.pdf
[73] *NWT Métis Nation Traditional Knowledge Policy*, 2012. Available at: http://nwtmetisnation.ca/wp-content/uploads/2016/02/TKpolicy.pdf
[74] *Inuvialuit Regional Corporation Guidelines for Research in the Inuvialuit Settlement Region*. Inuvialuit Regional Corporation, N.D. Available at: https://nwtresearch.com/sites/default/files/inuvialuit-regional-corporation.pdf

protocols. It gives concrete guidance for how to initiate a project and includes a sample research agreement template.

The shared responsibility of protecting knowledge ideally involves a commitment to ongoing stewardship as part of trusted and respectful relationships where reciprocal accountability exists. Note that sharing specific information and/or community information and data outside of such relationships or partnerships may be best served by development of a data sharing agreement (DSA) or another fitting tool to explicitly outline the specific terms and conditions under which sharing between parties takes place (see Section 4 for guidance on developing a DSA).

Developing a CKP offers an opportunity to create or support *internal* clarity within the community, which can inform the *external clarity* that is needed in establishing agreements about sharing Indigenous knowledge, information and/or data, or in developing partnerships (*e.g.,* with university, government, the non-profit sector or industry) based on mutually respectful relationships and processes that lead to mutually beneficial outcomes for all involved.

After developing internal clarity, an Indigenous community puts itself in a better position to then communicate that clarity to others and use it as the basis for developing more specific agreements with partners and external parties, such as a DSA, if appropriate. As the CIER (2018) report points out, developing and implementing clear protocols, permission processes, and data-sharing agreements are seen by many Indigenous communities as critical tools for ensuring appropriate accessing to their Indigenous knowledge. The following section describes key elements of a DSA and offers guidance and further resources for Indigenous communities seeking to develop their own DSA.

4 QUESTIONS AND ELEMENTS TO CONSIDER IN A DATA SHARING AGREEMENT

This section offers background information to support Indigenous communities and Indigenous Nations who wish to navigate and negotiate the complex topic of developing a DSA. This background information is not comprehensive but offers many basic considerations and questions. The information provided does not substitute for professional and legal advice, which will likely be needed to develop a DSA.

Data sharing and data use can have important implications for Indigenous Peoples in exercising their individual and collective rights. Data collected with or about Indigenous communities, and data on or about Indigenous territories, can enable Indigenous Peoples to engage in decision-making in accordance with their Indigenous values, and collective interests[75].

When Indigenous communities partner with external parties in environmental research or monitoring, there are a range of issues that need to be considered and agreed upon, related to the collection, transmission, storage, security, analysis, re-use, archiving, and destruction of data. Often, a formal signed legal agreement is the tool of choice, such as a data sharing agreement, data use agreement, data licensing agreement, or data transfer agreement. This section focuses on a DSA as a common tool used in environmental and climate monitoring.

A DSA is a legally binding agreement that is created to share specific data between specific parties according to specific requirements and conditions. A DSA clearly lays out what data will be collected through a project or initiative, how that data can and cannot be used and shared, with whom and for what purposes. The special considerations and restrictions for data derived from a community's Indigenous knowledge are likely to be an important part of a DSA.

Ideally, the use and sharing of data and information are explicitly discussed at the beginning of any new project so it can be determined if a DSA is needed. A DSA can also be created for the sharing of historic or existing data sets, for example, when a community is seeking access to data held by government or research partners, or when external partners are seeking access to community datasets or archives.

The questions below provide an overview of the general elements of a DSA, and some considerations that may be helpful before entering into a DSA. Examples of DSAs are often not made public but template frameworks for developing a DSA and other online resources are available to assist Indigenous communities in preparing their own DSA.[76]

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[75] Research Data Alliance International Indigenous Data Sovereignty Interest Group, 2019.

[76] For examples, see the Framework for a Data Sharing Agreement available from the Alberta First Nations Information Governance Centre at: http://www.afnigc.ca/main/includes/media/pdf/community%20resources/Data_Sharing_Agreement.pdf and the data sharing template in the First Nations in Quebec and Labrador's Research Protocol at: https://arcticnet.ulaval.ca/docs/First_Nations_in_Quebec_and_Labrador_Research_Protocol_EN.pdf. Other general guidance documents are available from the website of the Data Governance and Management Toolkit for Self-Governing Indigenous Governments: https://indigenousdatatoolkit.ca/

4.1 Who is involved in the agreement?

A DSA needs to specify the individuals or entities (often called "parties") who are making the agreement. All parties to a DSA must meet the legal requirement to be able to enter into a legal agreement (*i.e.,* qualify as a legal person), and one party must hold the rights to the data that are to be shared through the agreement. Any Indigenous community representatives who are named as parties to a DSA should be duly authorized by their community or Nation to enter into the agreement.

The question of who is involved in a DSA is broader than just the legal parties to the agreement - any third party who will have access to the data should also be known and agreed upfront. There may be specific requirements for data access, depending on who are the parties to the agreement. For example, government partners (federal, provincial, or municipal) may have open data policies that apply to a DSA, or legislative requirements that create the potential for public access to information shared with them. Academic institutions may have similar policies or requirements under provincial legislation or funder obligations. The DSA should contain clear statements about who will have access to the data, and who is responsible for custody and control of the data.

4.2 What will be achieved by sharing the data?

The DSA should clearly establish the reason why data is being shared and the objectives for sharing. DSAs may have a wide variety of objectives and all parties signing a DSA should fully understand these objectives. For example, a research team might be interested in placing weather monitoring equipment within an Indigenous community, and a DSA would provide the community with shared access to the data generated to support the community's climate change planning.

The DSA should name any principles that will help to guide the objectives, including frameworks and protocols that the DSA supports or is linked to. These might include Indigenous community protocols, a code of ethics, information protection frameworks, or broader principles such as:

- **OCAP™ principles**[77] (Ownership, Control, Access and Possession), which are the *de facto* standard for conducting research with First Nations in Canada, and the related First Nations Data Governance Strategy[78]
- **Inuit Qaujimajatuqangit (IQ) principles** (the IQ principles are outlined in Section 3.1 of this Guidance Document) [79]
- **CARE principles** for Indigenous Data Governance (**C**ollective benefit, **A**uthority to control, **R**esponsibility, and **E**thics), which are described as "people and purpose-oriented, reflecting the crucial role of data in advancing Indigenous innovation and self-determination." [80]

[77] See https://fnigc.ca/index.php for more information about the OCAP™ principles.
[78] The First Nations Data Governance Strategy is available for download at: https://fnigc.ca/news/introducing-first-nations-data-governance-strategy.html
[79] See https://www.gov.nu.ca/culture-and-heritage/information/inuit-qaujimajatuqangit for more information on Inuit Qaujimajatuqangit (IQ) principles.

4.3 What data and/or information will be shared?

Detailed information should be included in a DSA describing specifically what data is being shared, by whom, and in what formats it is being transferred between parties. Parties to a DSA should consider whether the data sharing is a one-way transfer, or if data from Indigenous and external partners will be linked together to create a pooled or shared dataset. These distinctions may have implications as questions around data use, ownership, and dissemination are explored.
Careful consideration is needed in defining types, forms and mechanisms of data sharing within a DSA, to ensure common understanding between the parties. For example:

- **Type(s) of data being shared or transferred**: General types of data may include quantitative data, qualitative data, personal data or information[81], aggregated data, administrative data, and confidential data. There are additional considerations with certain types of data, such as qualitative data, particularly when derived from Indigenous knowledge (see Section 4.10 for more information about considerations for qualitative data).
- **Form(s) of data being shared or transferred:** Data can take many different forms, both physical and electronic. The physical manifestations of data (*i.e.,* the things that get shared) are referred to as data assets. These may include digital files, paper data sheets, field notes, maps, photos, audio or video recordings, etc.
- **Mechanism(s) for sharing or transferring data**: The DSA needs to specify how the data assets will be shared. For example, sharing might involve: direct access to a database, data flow for upload, email submission by the sharing partner, or transfer of data on a physical device. Logistical questions that may need to be considered when establishing a data sharing mechanism include:
    - What format will data be shared in (so that the data is accessible and **interoperable**[82] by all parties)?
    - What **metadata**[83] may need to be created (and whether this will require additional time, funding or other support)?
    - How will the transfer mechanism maintain **data security**[84]?
- **Timing of data sharing or transfer**: The DSA should establish when data will be shared, for example, in response to a request, at regular intervals, or at completion of a particular phase of a project.

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[80] The CARE principles complement the FAIR principles (**F**indable, **A**ccessible, **I**nteroperable, and **R**eusable**)** for scientific data management and stewardship**.** (Research Data Alliance International Indigenous Data Sovereignty Interest Group, 2019). See https://www.gida-global.org/care
[81] For example, see https://www.oipc.bc.ca/guidance-documents/2066 as an example of provincial guidance for public bodies interested in sharing personal information.
[82] **Interoperable** means capable of being used or operated by all the systems involved.
[83] **Metadata** refers to additional descriptive, structural, or administrative data attached to the original research or monitoring data. Metadata often helps improve interoperability and machine readability, and can contribute to data protection, accessibility, and archiving.
[84] **Data security** refers to protecting data from loss, corruption or unapproved access.

4.4 What is the category of data access?

Data access is often categorized as **open, restricted or closed**. The following definitions[85] may be helpful to support Indigenous communities in understanding and/or selecting appropriate data access categories:

- **Open data** are "those that because of their origin or level of processing do not require any access restriction beyond general commitment to use and cite them in accordance with standard practices." Open data are structured and machine-readable, must be available at no more than a reasonable reproduction cost, must be provided under terms that permit their re-use and redistribution (including intermixing with other datasets), and must be provided irrespective of use (for example, commercial use).[86]

- **Restricted data** are "those deemed sensitive from a research ethics point of view, and so must be accessed after meeting certain criteria that ensure that the original research subjects' rights are respected. Access to controlled data may be restricted not only because of ethical concerns but also because of epistemological or interpretive concerns."

- **Closed data** are "those deposits that are made for archival purposes but are entirely non-accessible to any other user. These data might be embargoed until research results are published, or they might remain closed until a certain amount of time or a sensitive issues has passed."

4.5 How will the data be used?

A DSA needs to specify the authorized uses of the data, so that it is clear what uses are being consented to. These uses should align with the objective(s) of the DSA, and any principles that have been identified and agreed by parties. The following questions are offered to support deeper consideration of data uses. Note that some DSAs specifically state that only these uses are authorized, unless a named process is followed for seeking agreement on other uses (for example, a process for seeking prior written consent for secondary use).

Will the data be interpreted or remain as primary or source data? Data that will be used for research, or other purposes where interpretation of the data is implied, may lead to additional considerations compared with data that is collected for surveillance or aggregation purposes (for example, instrumented data). This should not be assumed, though, as some groups consider all data collected on Indigenous lands and territories to be Indigenous data, and assert a continued interest in the use and dissemination of that data. For example, the Indigenous Data Sovereignty (IDS) approach

[85] Definitions and information provided in this section are from Jones and Alexander (2018:21).
[86] The Government of Canada has begun to provide some consideration of the implications of including Indigenous data into Open Data policies and open government initiatives; for example, see http://publications.gc.ca/collections/collection_2020/rncan-nrcan/M113-2-57-2019-eng.pdf

(described in Section 4.11) asserts that IDS applies to all data collected by, on, with, or about Indigenous peoples and Indigenous lands.

Does the DSA apply to a one-time sharing of data for a particular purpose, or an ongoing project where new data will continue to be produced? It may be easier to specify the agreed uses of the data when an existing dataset is being shared, since a project creating new data may have some degree of uncertainty. Unless the sharing is one-time for limited purposes, the parties entering into a DSA may need to proactively develop procedures for future data access/use requests and approvals.

What expectations or possibilities are there for community involvement in data analysis? For example, community verification of data interpretation can be a useful data quality process for certain kinds of data.

4.6 Who will own the data and who holds the associated IPR?

There needs to be explicit consideration of the ownership of the shared data and derivative information and products in creating a DSA. This will likely differ depending on the type of data shared, whether new data is being created for sharing under the agreement, and whether the shared data is being combined together with other data.

Are there any intellectual property (IP) assertions that the Indigenous Nation or community might want to make over the shared data, or products derived from the shared data? If data are being transferred by an Indigenous community, the community can seek to include a statement asserting intellectual property rights to the transmitted data, and granting a license only for accessing information generated by their use. If the agreement applies to a collaborative project where new data is being created, then a statement specifying shared ownership and IPR may be more appropriate.

If nothing is specified in the agreement, depending on the specific intellectual property in question, rights could be automatically awarded to the organization leading a research project. If the community does not intend to transfer IP rights to a partnering organization, it is vital to reach an agreement stating what intellectual property rights belong to the community before transmitting data to a partnering organization. Professional legal advice is recommended in defining data ownership and associated IPR. Particular consideration is needed when the data is derived from Indigenous knowledge.[87]

[87] Codified representations of Indigenous Knowledge may be protected under the *Copyright Act* or other forms of IP protections. Further information, available from the Government of Canada on "Introduction to Intellectual Property Rights and the Protection of Indigenous Knowledge and Cultural Expressions in Canada," may be useful: https://www.ic.gc.ca/eic/site/108.nsf/eng/00007.html

4.7 What considerations are needed for publication or other forms of dissemination based on the data?

The DSA should specify any requirements related to the publication and dissemination of the shared data. These might include:

- Participation options for community partners in manuscript drafting,
- Advance notice of any planned publication, and an advance copy of the draft manuscript,
- Pre-publication review by the community, and/or development of communication tools such as plain language summaries to support community dissemination of publications.

Parties to the DSA may decide that it is appropriate for individual community members or communities as a whole to be included as co-authors, included within acknowledgments, or otherwise recognized within publications. There may also be mechanisms related to publication that are required by Indigenous community protocols. These should all be described within the DSA.

There may be processes needed to ensure accuracy of the data beyond standard quality assurance or quality control measures, such as processes to validate findings with Indigenous Knowledge Holders or other community members, or to update and correct personal information associated with the data being shared. These should be described within the DSA, in language clearly specifying who is responsible for carrying out these processes.

Publication in peer-reviewed journals is sometimes accompanied by a request or requirement that data connected to the publication is made openly available to readers. Such conditions would need to be evaluated with a thorough understanding of what uses and dissemination of the shared data is authorized under the DSA, and who holds the ownership over the data needed to authorize public sharing. If publication or dissemination of the data itself is not authorized under the agreement, this should be specified within the DSA to help ensure that research results can be shared while community rights and information are protected.

4.8 What considerations are needed for the storage, protection and security of the data?

Parties to DSA need to be clear on the requirements and capacities needed to fully protect the data. This includes any particular administrative, technical, and physical safeguards required to prevent such things as loss, corruption, and unauthorized access.

Data protection could include processes such as maintaining a log of data access, requiring signed confidentiality agreements prior to data access, requiring physical data to be stored in a locked filing cabinet, requiring password protection on all electronic files, and/or requiring data to be stored on a computer without internet connection.

The need for confidentiality can arise from different contexts. Expectations of what data or information is being provided in confidence need to be made explicit in a DSA. In general, personally identifiable and other confidential data should be protected from loss, destruction or unauthorized access by specific mechanisms. These measures to protect the confidentiality and security of the data

should be listed within the DSA, and any individuals responsible for overseeing the measures should be specified.

The DSA should specify any restrictions on the storage and access of data and information arising from legislation, policy or protocol (e.g., some freedom of information legislation includes a requirement to keep personal data within Canada).

The agreement should specify how long the shared data will be saved and stored. It should also contain details on any requirements for the secure destruction of data when the retention period expires, or if the agreement is cancelled. These can include returning data to the source, or destroying the data (physically and/or electronically) at a designated site where it is held.

A DSA could make reference to professional archiving norms, so that information is not destroyed or lost but will remain in secure storage indefinitely or until otherwise agreed by the parties. This may involve communities or partner organizations holding copies in trust, independent of any ability for the partner organization to use that data and information (i.e., authorized use can be separated from authorized secure storage).

4.9 How long will the data sharing agreement last?

The DSA should indicate the date when the agreement starts (typically, the date of signature of all parties), the agreement duration, and any provisions for renewal or extension.

A DSA should specify if the agreement is open to amendment. Considering that even when agreements are created from the onset of projects, it may be difficult to anticipate the diverse uses and requests for access to data that could arise in the future. There may be a need to revisit the DSA when new requests arise that were not discussed thoroughly in the project design phase.

Most legal agreements have provisions to end or revoke the agreement. For example, in a DSA, this could be for breach of conditions (with a prescribed process for notifying other parties to the agreement if this has occurred). Or it could be at any agreed time by the parties, with a prescribed notice period and process. Due consideration is needed of the implications and potential negative consequences of ending or revoking a DSA. Professional legal advice may be advisable.

4.10 Special considerations for qualitative data

There are a number of unique issues related to the sharing and reuse of qualitative data that require particular consideration, so this topic is briefly summarized as a separate subsection.

Qualitative data refers to any information or data that is unstructured, and includes a broad range of types and forms of data and information, for example: text-based data such as written responses from open-ended interview questions, transcripts of recorded interviews or focus group sessions, written observations and notes, as well as audio recordings like oral history interviews, video recordings, photographs, and maps.

A major challenge for the sharing and reuse of qualitative data is the decontextualization that takes place when data is removed from its original context. There can be significant logistical challenges to anonymizing qualitative data or stripping it of sensitive information, and once processed in these ways, such data may lose much of its usefulness for analysis/reanalysis or synthesis (Marley 2018).

In addition, certain kinds of qualitative data are at higher risk of exploitation, appropriation, and misrepresentation than quantitative data. These include Indigenous knowledge, interviews, cultural expressions including songs, oral histories/stories, ceremonies, dances, and other texts, images, and recordings (Marley 2018). Research involving these aspects can threaten not only individual privacy and well-being but also collective rights and cultural sovereignty. Further, use of these data and information may be acceptable for one purpose but damaging when used differently.

Some of the specific considerations that are worth considering and likely need to be addressed when developing data sharing approaches include:

- Addressing questions about how any repository or other transfer of data/data ownership approaches safeguarding sensitive data.
- Developing adequate and appropriate metadata standards and expectations for data sharing that are transparent and well-articulated.
- Providing consideration for the amount of time it can take to generate ethically and materially adequate metadata.
- Recognizing the likelihood that some qualitative researchers will continue to reject any form of data sharing, while others will need to provide more metadata than they might otherwise be inclined or equipped to do.
- Developing transparent approaches to secondary analysis and synthesis that include information about:
    - Methods that will be used to gather, analyze and interpret qualitative data,
    - How research processes relate to findings,
    - What forms of review and consent of draft and final outputs will be made available to participants.

Two references that offer greater detail on the spectrum of challenges that are faced in qualitative data sharing, use and reuse are Jones and Alexander (2018) and Alexander et al. (2019).

4.11 Considerations related to data sovereignty and Indigenous data sovereignty

This Guidance document would be remiss to not mention the emerging area of data sovereignty, particularly the Indigenous data sovereignty approach. This section provides a brief introduction and references for further learning if desired by Indigenous communities and Indigenous Nations.

The 21st century has brought incredible growth in information and information access, giving rise to the concept of **data sovereignty**: “managing information in a way that is consistent with the laws,

practices and customs of the nation-state in which it is located."[88] The related and emerging concept of **Indigenous data sovereignty** (IDS) draws attention to the sovereign rights of Indigenous peoples within a data sovereignty space, asserting the importance of Indigenous rights, practices and customs as they relate to the collection, control and use of data and information.[89]

IDS refers to the right of Indigenous peoples to govern the collection, ownership, and application of data about their own communities, peoples, lands, and resources. These data governance rights apply regardless of where data is held, by whom, or in what formats (digital or otherwise). Indigenous data sovereignty also asserts the right to protect individual and collective rights to data access and privacy. This often differs from the focus that data protection laws, policies and practices of nation-states place on the individual alone.

IDS stems from "inherent and inalienable rights and interests…relating to the collection, ownership and application of data about their people, lifeways and territories."[90] This inherent right is also upheld in Article 31 UNDRIP:

> *Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.*

Work to define an intentional approach to IDS emerged from the consideration of shared questions, concerns and interests by Indigenous peoples across Canada, Australia, New Zealand and the United States. These include questions such as how to understand the collective and intergenerational 'self' in self-determination, and what kind of collective identity Indigenous peoples want to shape for themselves.[91] Importantly, these also include implications for specific questions about data: who should have the authority to collect, validate, interpret, own and use data related to Indigenous peoples?

IDS can be seen as a key approach in translating Indigenous rights from future goals into everyday practice. Effective self-governance requires access to trusted, relevant and accurate information, so that Indigenous Nations and Indigenous communities can make informed decisions about current priorities and future directions. IDS also explicitly recognizes and helps to challenge post-colonial power dynamics within long-standing data access and use practices, such as the sharing of data without the consent or knowledge of communities, or statistical practices that focus on the deficits of Indigenous populations. Instead, IDS asserts Indigenous governance of data, to decolonise governance arrangements and enable stewardship for present and future generations.

[88] Snipp, 2016:39.
[89] For further reading on IDS, see Oguamanan, 2019 and Rainie et al., 2019.
[90] Kukutai and Taylor, 2016:2.
[91] Smith, 2016:118.

IDS seeks not only control, ownership, and governance of research and data, but also protection of sovereignty and culture.[92] Cultural sovereignty and political sovereignty are intertwined, and violations of cultural sovereignty such as exploitation, appropriation, theft, and misrepresentation threaten the political sovereignty of Indigenous peoples. Proponents of IDS argue that it is imperative that data and information are subject to the laws, policies, and/or governance of the Nation or community in which they are collected, in line with their unique political status as sovereigns, and to protect and respect both cultural and political sovereignty.

There remain many challenges to fully implementing IDS in the many contexts that communities seek to achieve full governance of data and information on and about themselves and their lands. However, there are many promising paths forward to assure the protection of Indigenous rights and data. IDS has helped to raise fundamental questions about assumptions of ownership, representation, and control in open data communities. IDS highlights and challenges some core assumptions of open data communities: that there is only one government actor, that data is either open or not, and that open data is always useful, and that data is uncomplicated by any bias or relevance issues. IDS networks are working to shape open data principles to better respect the rights of Indigenous peoples, and maximize benefits of open data for Indigenous peoples and other users of Indigenous data.

Within Canada, the Government of Canada's approach to open data is under development. The Government of Canada has recently acknowledged the harm of some its policies and laws, and has committed to engaging directly with Indigenous peoples on open government in the context of nation-to-nation relationships.[93] This renewed recognition of Indigenous rights and interests, and commitment to direct collaboration, includes supporting **OCAP™** training for government staff, building capacity for Indigenous communities and organizations to use data for their own requirements, and working with Indigenous peoples to identify ways to enhance transparency.

[92] Marley, 2018.
[93] See Canada's 2018-2020 National Action Plan on Open Government, Article 9: https://open.canada.ca/en/content/comments-9-reconciliation-and-open-government

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ANNEX A:
Summary of the Data-Information-Knowledge-Wisdom (DIKW) Pyramid

Terms such as data, information and knowledge do not have universally agreed definitions so it is important to consider how these terms are understood and used by all the parties involved in a project. A common understanding is especially important when developing a formal agreement, such as a DSA. Broad understandings of these terms may be useful to consider, but specific understandings will depend on the particular context and parties involved.

The most widespread definitions of data, information and knowledge within western knowledge systems are linked to a hierarchical framework used within information and knowledge management contexts, known as the **Data-Information-Knowledge-Wisdom (DIKW) pyramid**. Within this framing, the distinction between data and information is relatively straightforward:

Data are signals or symbols. Data are unorganized and unprocessed, and are effectively useless because they lack meaning. Without further processing, data do not enable knowing, and are sometimes referred to as 'know-nothing'. For example, the numbers 23, 25, 20, 21, 20, 21 are data; without any further context, we have no way of knowing what these numbers might mean. Similarly, a marked up map or field notebook from someone else's work are also data, but without the context to interpret them, they remain difficult to understand the meaning held within them.

Information is data made useful by the application of context, structure, and/or function. Information acquires meaning and purpose through interpretation and analysis. The process of answering questions about data, such as who, what, where, when, and/or how many adds meaning, and is sometimes referred to as 'know-what'. For example, the numbers listed above with the added context of 'average daily high temperature from June 1-6 in Calgary' is information.
In our daily use of these terms, we do not generally distinguish between data and information with this level of precision. The terms data and information are often used interchangeably and imprecisely, and some of what is termed 'data' in one context (e.g., environmental monitoring) would likely be labelled 'information' in an information management context.

When considering data sharing and data sharing agreements, it may be the case that the word 'data' is being used to apply to both data and information; this is common, and can be explicitly identified and acknowledged within the agreement. Being precise about what is being shared, and who is involved in interpretation and analysis, will also help to avoid confusion caused by assumed understandings of what is meant by 'data' and 'information'.

The **knowledge** piece of the DIKW pyramid is harder to define than data or information. It is often understood as information that has been processed, organized, structured, synthesized, and applied in a useful way, leading it to sometimes be referred to as 'know-how'. Knowledge implicitly requires learning and implies a knower. It is often described in western terms as a mental structure that comes

from accumulated learning and systematic analysis of information. In this understanding, unless it has been codified and stored within a transferable medium, knowledge is relatively difficult to transfer to others and to disseminate widely. Knowledge is also usually understood to be produced, for example, we intuit patterns, build predictive models, generate insights and develop understanding through accumulated learning and systematic analysis of information. While information can help us to understand relationships, knowledge enables us to see patterns.

The **Wisdom** part of the DIKW pyramid is described as going beyond detecting patterns to being able to understand them deeply and predict them correctly into the future.

As noted, these definitions come from information technology and organizational knowledge management and offer one example of a commonly used framework. They have been critiqued from an Indigenous lens[94] and other perspectives.[95] These critiques dispute the one-way understanding of the flow from data to information to knowledge (and even propose a flow in the opposite direction for Maori knowledge and science), and question the applicability of hierarchical (pyramid) models themselves.

There is a continuing need to develop context-specific definitions of data, information and knowledge that work for different groups, taking into account the expectations, understandings and specific applications of those groups. Ultimately, it is up to Indigenous communities and Indigenous Nations to define and describe what is their Indigenous knowledge (and wisdom) in accordance with their own worldviews, as well as what the relationship is between their Indigenous knowledge and the information and data derived from it.

[94] Mercier *et al.* 2011
[95] Frické, 2009.

ANNEX B:
Question Set for Developing a Community Knowledge Protocol

The following sets of questions are offered as a tool to support discussion related developing a CKP.

Guiding Principles and Community Protocols

- Does your community have guiding principles for working with external partners? (*i.e.*, as a basis to create common understandings of respectful working relationships).
- What are your community or Nation's protocols for sharing individual and collective knowledge within research or monitoring collaborations?

Language Requirements and Considerations

- In what ways should and could your Indigenous language be included as part of project activities and outcomes?
- Are there bilingual or multilingual speakers in your community who can support language awareness among the project team, for example, by sharing place names or validating accuracy of information that is documented in English or French?
- Is it important or desirable for your community to receive information or results from an external partner in your Indigenous language?

Special Guidance for Engaging Community Members

- Does your community have protocols for requesting participation of Elders, Knowledge Holders? Are there specific cultural protocols for interviewing Elders and Knowledge Holders?
- Does your community have pre-determined honoraria, remuneration or compensation rates for Elders and Knowledge Holders?
- Does your community have special precautions for engaging with youth (under-age participants)?

Defining Key Terms, Phrases or Concepts

- Who is considered an Elder or Knowledge Holder in your community?
- How does your community define its own Indigenous knowledge or system of Indigenous knowledge and wisdom?
- Are there culturally significant terms or concepts that should be defined to ensure common understanding among project partners?

Project Design and Implementation

- Are there research ethics considerations or requirements that need to be included in project design and implementation?
- Who will provide individual and collective consent for community members to participate in a project? What is the process for providing consent?
- Does your community want knowledgeable community members to be involved in or have a lead role in project design and implementation?
- Do you want external partners to hire and train local community members for technical jobs or activities using western scientific methods?
- Should external partners be taught by knowledgeable community members about local indicators, culturally-relevant criteria and culturally-respectful methods?
- How should youth be involved in projects with external partners?
- How will dispute resolution be handled between the community and external partner?

Sharing Indigenous Knowledge and Community Information and Data

- What kind of knowledge, information or data should be shared and for what purposes?
- How will Indigenous knowledge or community information and data be shared with external partners?
- Who should be recognized as the source or authority of the knowledge or information shared? How should these people or entities be acknowledged or given credit as the sources or authorities?
- Does your community have practical measures and tools (e.g., agreements or contracts) in place to ensure any knowledge, information and data that are shared are respected and protected?
- Is there clarity in your community about what Indigenous knowledge, community information or data is confidential, secret or sacred and not for sharing outside of tradition cultural transmission?
- What are the risks, opportunities and benefits of sharing certain Indigenous Knowledge or community information and data?
- What are your community requirements and processes for community review and validation of community knowledge, information and data?
- What are the plans for publication or wider dissemination of the project results?
- How will your community's Indigenous rights be protected? What legal or other professional advice or support is needed to ensure community rights are upheld?

ANNEX C:
Suggested Resources Related to CKPs and DSAs

The following resources are based on a literature search of publicly-available resources related to CKPs and DSAs that focus on the Canadian context, including: Indigenous community policies, protocols, codes, and guidelines within Canada; guidance for working with Indigenous communities developed by non-profit and academic institutions in Canada; guides and toolkits created by Indigenous organizations in Canada, and selective reports and academic publications that offer key background and are written in accessible language.

This compilation of suggested resources is not comprehensive, rather it offers a sampling of documents intended to provide a range of practical examples related to community knowledge protocols and/or data sharing agreements. To the degree possible, the selection represents:

- diversity in Indigenous communities (First Nation, Inuit, Métis)
- diversity in geography (different provinces and territories), and
- diversity in type of document (e.g., from simple/short to comprehensive/detailed).

Many of these documents are referred to within Sections 3 and 4 of the Guidance Document as illustrative examples to highlight some of the key elements described for CKPs and DSAs.

Please note that all documents listed below were publicly-available at the urls indicated at the time of writing but their availability cannot be guaranteed into the future.

Indigenous Community Policies, Protocols, Codes and Guidelines

(developed by or on behalf of First Nation, Inuit or Métis communities; listed by province or region)

BC (First Nations):

Tl'azt'en Nation Guidelines for Research in Tl'azt'en Territory
(Tl'azt'en Nation, 1998)
http://nafaforestry.org/forest_home/documents/CEM-TlaztenGuidelines.pdf

Northern BC/Northern Alberta (First Nations):

Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of yúndíit'õh (traditional knowledge)
(Sambaa K'e Dene Band, 2003)
https://nwtresearch.com/sites/default/files/sambaa-k-e-dene-band.pdf

NWT, Yukon and Nunavut (First Nations, Inuit and Métis):

Conducting Traditional Knowledge Research in the Gwich'in Settlement Area A: A Guide for Researchers
(Prepared by Gwich'in Social & Cultural Institute for adoption by Gwich'in Tribal Council, 2011)
https://nwtresearch.com/sites/default/files/gwich-in-social-and-cultural-institute_0.pdf

Gwich'in Tribal Council Traditional Knowledge Policy
(Prepared by Gwich'in Social & Cultural Institute for adoption by Gwich'in Tribal Council, 2004)
https://gwichin.ca/sites/default/files/gtc_final_tk_policy_2004.pdf

Dehcho First Nations Traditional Knowledge Policy
(Deh Cho Land Use Planning Committee, 2003)
http://reviewboard.ca/reference_material/traditional_knowledge

Dehcho First Nations Traditional Knowledge Research Protocol
(Dehcho First Nations, 2004)
http://reviewboard.ca/file/591/download?token=fD8TG1hm

Na-Cho Nyak Dun First Nation Cultural Orientation and Protocols Toolkit
(Na-Cho Nyak Dun First Nation and Council of Yukon First Nations, N.D.)
http://lss.yukonschools.ca/uploads/4/5/5/0/45508033/part_4_nndfn.pdf

NWT Métis Nation Traditional Knowledge Policy
(North West Territory Métis Nation, 2012)
http://nwtmetisnation.ca/wp-content/uploads/2016/02/TKpolicy.pdf

Inuvialuit Regional Corporation Guidelines for Research in the Inuvialuit Settlement Region
(Inuvialuit Regional Corporation, N.D.)
https://nwtresearch.com/sites/default/files/inuvialuit-regional-corporation.pdf

Negotiating Research relationships with Inuit communities: A Guide for Researchers
(Inuit Tapiriit Knatami and Nunavut Research Institute, 2007)
https://www.itk.ca/wp-content/uploads/2016/07/Negotitiating-Research-Relationships-Researchers-Guide_0.pdf

National Inuit Strategy on Research
(Inuit Tapiriit Kanatami, 2018)
https://www.itk.ca/wp-content/uploads/2018/03/National-Inuit-Strategy-on-Research.pdf

Guiding Inuit Qaujimajatuqangit Principles
(Government of Nunavut, N.D.)
https://www.gov.nu.ca/sites/default/files/iq_brochure_draft_1.pdf

Ontario (First Nations):

Six Nations Council Research Ethics Committee Protocol
(Six Nations Council Research Ethics Committee, 2014)
http://www.sixnations.ca/admResearchEthicsProtocol.pdf

Quebec and Labrador (First Nations):

First Nations of Quebec and Labrador Research Protocol
(Assembly of the First Nations of Quebec and Labrador, 2005)
English: http://fnqlsdi.ca/wp-content/uploads/2013/05/protocole_recherche_en.pdf
French: http://iddpnql.ca/wp-content/uploads/2017/03/161006_APNQL_protocole_recherche_PN_2014.pdf

Nova Scotia (First Nations):

Mi'kmaq Ecological Knowledge Study Protocol (2nd Edition)
(Prepared by Kwilmu'kw Maw-klusuaqn Negotiation Office on behalf of Assembly of Nova Scotia Mi'kmaq Chiefs, N.D.)
https://novascotia.ca/abor/aborlearn/docs/MEK Protocol Second Edition.pdf

New Brunswick (First Nations):

Mi'gmaq Sagamaq Mawiomi: New Brunswick Mi'gmaq Indigenous Knowledge Study Guide v.4.0
(Mi'gmaq Chiefs in New Brunswick, 2019)
https://static1.squarespace.com/static/57d6d16e03596eeae4a951be/t/5cdac034ddc7900001355afc/1557839925744/NBMIKSG+v+4.0+2019+03+04.pdf

Guidance for working with Indigenous communities developed by government, corporate, non-profit or other organisations (excluding academic institutions)

Guidelines for Ethical Research in Manitoba First Nations: Principles, Practices and Templates
(Manitoba First Nations Education Resource Centre, 2014)
http://www.mfnerc.org/wp-content/uploads/2014/03/Ethical-Research-in-Manitoba-First-Nations.pdf (includes data sharing protocol and template)

Indigenous Guardians toolkit Chapter 11 – Conduct Research
(Nature United, 2021)
https://www.indigenousguardianstoolkit.ca/chapter/conduct-research

Six Guidelines for Projects involving Traditional Indigenous Knowledge
(Indigenous Corporate Training Inc, 2018)
https://www.ictinc.ca/blog/6-guidelines-for-projects-involving-traditional-indigenous-knowledge

Template Traditional Knowledge Confidentiality and Consent Form
(Indigenous Corporate Training Inc., N/D.)
https://cdn2.hubspot.net/hubfs/374848/docs/TKConsent_Form_.pdf?t=1521485539033

Summary of Best Practices for Applying Traditional Knowledge in Government of the Northwest Territories Programming and Services
(Government of the Northwest Territories, 2005)
https://www.enr.gov.nt.ca/sites/enr/files/reports/tk_best_practices_summary.pdf

North West Territories Traditional Knowledge Policy
(Government of the North West Territories, 2005)
https://www.enr.gov.nt.ca/sites/enr/files/documents/53_03_traditional_knowledge_policy.pdf

North West Territories Traditional Knowledge Policy Implementation Framework
Government of the North West Territories (2009)
https://www.enr.gov.nt.ca/sites/enr/files/gnwt_traditional_knowledge_implementation_framework_-_2009.pdf

Ottawa Indigenous Knowledge Principles
(Arctic Council, 2018)
http://www.saamicouncil.net/fileadmin/user_upload/Documents/Eara_dokumeanttat/Ottawa_IK_Principles.pdf

Canadian Academic Institutional Policies

(overarching national research ethics policy (TCPS2) and examples from Canadian universities)

National Ethics Policy:

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2)
(Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada, 2018)
http://www.pre.ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf

See: **TCPS2 Chapter 9 "Research Involving the First Nations, Inuit and Métis Peoples of Canada"** designed to serve as a framework for the ethical conduct of research involving Indigenous peoples of Canada.
http://www.pre.ethics.gc.ca/eng/tcps2-eptc2_2018_chapter9-chapitre9.html

Carlton University:

Guidelines for Working with First Nations, Inuit and Metis Elders
(Carlton University, N.D.)
https://carleton.ca/indigenous/wp-content/uploads/Guidelines-for-Working-with-Indigenous-Elders.pdf

Tobacco Offering Protocol
https://carleton.ca/indigenous/resources/tobacco-offering-protocol/

Memorial University:

Memorial University's Proposed Policy on Research Impacting Indigenous Groups: Principles for Engagement
(Office of the Vice President Research, 2020)
https://www.mun.ca/research/Indigenous/Principles_of_Engagement_.pdf

Indigenous Research Agreement Template
https://www.mun.ca/research/Indigenous/agreement.php

Policy on Research Impacting Indigenous Groups
https://www.mun.ca/research/Indigenous/consent.php

Primer on Indigenous Peoples and protocols in Newfoundland and Labrador
https://www.mun.ca/research/Indigenous/primer.php

For researchers: Doing Indigenous research in a good way
https://www.mun.ca/research/Indigenous/faq.php

Research FAQs for Indigenous groups, governments, and Nations
https://www.mun.ca/research/Indigenous/faqs2.php

Ryerson University:

Guidelines for Research Involving Indigenous Peoples in Canada
(Ryerson University Research Ethics Board, 2017)
https://www.ryerson.ca/content/dam/research/documents/ethics/guidelines-for-research-involving-indigenous-peoples-in-canada.pdf

Unama'ki College of Cape Breton University:

Mi'kmaq Research Principles & Protocols
(Mi'kmaw Ethics Watch (in association with Unama'ki College of Cape Breton University, N.D.)
http://mikmaki.ca/wp-content/uploads/2016/07/Mikmaw-Research-Principles.pdf

Mi'kmaw Research Principles and Protocols Conducting Research With and/or Among Mi'kmaw People
(Mi'kmaw Ethics Watch, N.D.)
https://achh.ca/wp-content/uploads/2018/07/Form_Ethics_Mi%E2%80%99kmaw-Ethics-Watch.pdf

University of Regina:

Respectful Engagement with Elders, Traditional Knowledge Keepers, and/or Old Ones Policy: GOV-040-025
(University of Regina, 2018)
https://www.uregina.ca/policy/browse-policy/policy-GOV-040-025.html

Appendix A: Standardized Table of Honorarium Fees for Respectful Engagement with Elders, Traditional Knowledge Keepers and/or Old Ones
https://www.uregina.ca/policy/assets/docs/doc/GOV-040-025-AppendixA-Honorarium.docx

Appendix B: Guidelines for Practicing Indigenous Traditional Protocols at the University of Regina
https://www.uregina.ca/policy/assets/docs/doc/GOV-040-025-AppendixB-Protocol.docx

University of Manitoba:

Protocols and Policies (to help determine steps to take when working with Elders and when planning ceremonies)
(University of Manitoba, N.D.)
https://umanitoba.ca/student/indigenous/protocols-and-policies.html

Cultural Protocols & Policies for Working with Elders
https://umanitoba.ca/student/indigenous/cultural-protocols-and-policies-for-working-with-elders.html

Smudging and Pipe Ceremonies
https://umanitoba.ca/student/indigenous/smudging_ceremony.html

Honorariums and Travel Costs for Elders
https://umanitoba.ca/student/indigenous/honourariums-and-travel-costs.html

York University:

Guidelines for Research Involving Aboriginal/Indigenous Peoples
http://research.info.yorku.ca/guidelines-for-research-involving-aboriginalindigenous-peoples/
(York University Office of Research Ethics, N.D.)

Government of Canada Laws, Policies and Commitments

Aboriginal Consultation and Accommodation: Updated Guidelines for Federal Officials to Fulfill the Duty to Consult
(Minister of the Department of Aboriginal Affairs and Northern Development Canada, 2011)
https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/intgui_1100100014665_eng.pdf

Bill C-91 An Act Respecting Indigenous Languages
(House of Commons of Canada, 2019)
https://www.parl.ca/DocumentViewer/en/42-1/bill/C-91/third-reading

Indigenous Knowledge Policy Framework for Proposed Project Reviews and Regulatory Decisions
(Re: New rules for proposed project reviews and regulatory decisions under Bills C-68 and C-69)
(Environment Canada, 2019)
https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/environmental-assessment-processes/discussion-paper-development-indigenous-knowledge-policy-framework.html

Model Policy on Scientific Integrity
(Government of Canada Office of Chief Science Advisor, 2018)
https://www.ic.gc.ca/eic/site/052.nsf/eng/00010.html

Policy on Scientific and Indigenous Knowledge Integrity
(Crown-Indigenous Relations and Northern Affairs Canada, 2019)
https://www.rcaanc-cirnac.gc.ca/eng/1575567784632/1575567805298

Principles Respecting the Government of Canada's Relationship with Indigenous Peoples
(Department of Justice Canada, 2018).
https://www.justice.gc.ca/eng/csj-sjc/principles.pdf

Report of the Royal Commission on Aboriginal Peoples (RCAP)
(Government of Canada, 1996).
https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/royal-commission-aboriginal-peoples/Pages/final-report.aspx

Truth and Reconciliation Commission of Canada (TRC) Calls to Action
(Government of Canada, 2015)
http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf

Guides, Toolkits, Papers by National Indigenous Organizations in Canada

Assembly of First Nations:

Aboriginal Traditional Knowledge and Intellectual Property Rights (discussion paper)
(Assembly of First Nations, N.D.)
https://www.afn.ca/uploads/files/rp-research_ethics_final.pdf

Ethics Guide on Research and Aboriginal Traditional Knowledge (resource booklet)
(Assembly of First Nations, N.D.)
https://www.afn.ca/uploads/files/fn_ethics_guide_on_research_and_atk.pdf

Ethics in First Nations Research
(Assembly of First Nations, 2009)
https://www.afn.ca/uploads/files/rp-research_ethics_final.pdf

First Nations Information Governance Centre:

Ownership, Control, Access and Possession (OCAP™): The Path to First Nations Information Governance
(First Nations Information Governance Centre, 2014)
https://fnigc.ca/wp-content/uploads/2020/09/5776c4ee9387f966e6771aa93a04f389_ocap_path_to_fn_information_governance_en_final.pdf

Native Women's Association of Canada:

Aboriginal Women and Aboriginal Traditional Knowledge (ATK):Input and Insight on Aboriginal Traditional Knowledge (discussion paper)
(Native Women's Association of Canada, N.D.)
https://www.nwac.ca/wp-content/uploads/2015/05/2014-NWAC-Aborignal-Women-and-Aborignal-Traditional-Knowledge-Report1.pdf

National Aboriginal Health Organization:

First Nations Conceptual Frameworks and Applied Models on Ethics, Privacy, and Consent in Health Research and Information. Summary Report
(National Aboriginal Health Organization, 2006)
http://icwrn.uvic.ca/wp-content/uploads/2013/10/FNC_ConceptualFrameworksinHealthResearch.pdf

Considerations and Templates for Ethical Research Practices
(National Aboriginal Health Organization, 2006)
https://achh.ca/wp-content/uploads/2018/07/Guide_Community_FNC_ConsiderationsandTemplates.pdf
(includes a data sharing template, p. 30-37)

Ownership, Control, Access, and Possession (OCAP) or Self-Determination Applied to Research: A Critical Analysis of Contemporary First Nations Research and Some Options for First Nations Communities
(National Aboriginal Health Organization, First Nations Centre, 2007)
https://www.afn.ca/uploads/files/education/18._2007_april_fnigc_ocap_information_resource.pdf

United Nations Declarations, Conventions and Resources

Prior and Informed Consent: An Indigenous Peoples' Right and a Good Practice for Local Communities. Manual for Project Practitioners
(Food and Agriculture Organization of the United Nations, N.D.)
http://www.fao.org/3/a-i6190e.pdf

United Nations Declaration on the Rights of Indigenous Peoples
(United Nations, 2007)
http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage
(UNESCO, 2003)
https://ich.unesco.org/en/convention

Indigenous Data Sovereignty, Data Governance and Data Sharing Agreements
(listed alphabetically by title)

CARE Principles for Indigenous Data Governance
(Data Sovereignty Interest Group, 2019)
https://www.gida-global.org/care

Considerations and Templates for Ethical Research Practices
(National Aboriginal Health Organization, 2006)
https://achh.ca/wp-content/uploads/2018/07/Guide_Community_FNC_ConsiderationsandTemplates.pdf
(data sharing template provided on p. 30-37)

Dissemination of Open Geospatial Data under the Open Government Licence-Canada through OCAP® Principles
(Hackett, Jeff, and Rachel Olson, 2019)
https://ftp.maps.canada.ca/pub/nrcan_rncan/publications/STPublications_PublicationsST/314/314977/cgdi_ip_0057_en.pdf

Elements of a data sharing agreement
(University of Waterloo, N.D.)
https://uwaterloo.ca/research/office-research-ethics/research-human-participants/pre-submission-and-training/human-research-guidelines-and-policies-alphabetical-list/data-sharing-or-transfer-agreements-what-are-they-and-when/elements-data-sharing-agreement-example

Framework for a Data Sharing Agreement
(Prepared for The Alberta First Nations Information Governance Centre by Krista Yao, N.D.)
http://www.afnigc.ca/main/includes/media/pdf/community%20resources/Data_Sharing_Agreement.pdf

Guidelines for Ethical Research in Manitoba First Nations: Principles, Practices and Templates
Manitoba First Nations Education Resource Centre, 2014)
http://www.mfnerc.org/wp-content/uploads/2014/03/Ethical-Research-in-Manitoba-First-Nations.pdf
(includes data sharing protocol information and template)

Indigenous Data Sovereignty: Towards An Agenda
(Kukutai, Tahu and John Taylor, 2016)
Centre for Aboriginal Economic Policy Research College of Arts and Social Sciences. The Australian National University, Canberra. Research Monograph No 38.
https://fnigc.ca/sites/default/files/docs/indigenous_data_sovereignty_toward_an_agenda_11_2016.pdf
(Canada-specific chapter on "Pathways to First Nations' data and information sovereignty" by the First Nations Information Governance Centre p. 139).

Information Sharing Agreement Template
(Central Coast Indigenous Resource Alliance, N.D.)
https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Central%20Coast%20Indigenous%20Resource%20Alliance_Draft%20Information%20Sharing%20Agreement%20Template_0.pdf

National Indigenous Community-Based Climate Monitoring Symposium
Final Report submitted to Indigenous Services Canada.
(Centre for Environmental Resources, 2018)
http://www.yourcier.org/uploads/2/5/6/1/25611440/national_indigenous_community-based_climate_monitoring_symposium_final_report.pdf

General Suggested Resources (articles, books, reports)
(listed alphabetically by title)

Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities
Posey, Darrell A. and Graham Dutfield (1996)
https://www.idrc.ca/en/book/beyond-intellectual-property-toward-traditional-resource-rights-indigenous-peoples-and-local

Ethics of Aboriginal Research
(Brant Castellano, Marlene, 2004). Journal of Aboriginal Health Volume 1, Number 1: 98-114.
https://journals.uvic.ca/index.php/ijih/issue/view/686

Good Practices Guide: Success at Building and Keeping an Aboriginal Mapping Program
Prepared by Centre for Indigenous Environmental Resources on behalf of GeoConnections (Natural Resources Canada, 2010)
http://www.yourcier.org/uploads/2/5/6/1/25611440/good_practices_guide.pdf
(see p. 22 on data confidentiality: "A good rule of thumb is that raw cultural data will never leave the community without a signed confidentiality and data sharing agreement in place.")

Growing together: A principle-based approach to building collaborative Indigenous partnerships in Canada's forest sector
(Paul Robitaille, Chander Shahi, M.A. Smith and Nancy Luckai, 2017)
The Forestry Chronicle 3(1): 44-57.
https://pubs.cif-ifc.org/doi/pdf/10.5558/tfc2017-010

Guidelines for Considering Traditional Knowledges in Climate Change Initiatives
Version 1.0
(Climate and Traditional Knowledges Workgroup, 2014)
https://climatetkw.wordpress.com/guidelines/

Ownership, Control, Access, and Possession (OCAP) or Self-Determination Applied to Research: A Critical Analysis of Contemporary First Nations Research and Some Options for First Nations Communities
(Schnarch, Brian, 2004)
Journal of Aboriginal Health, Vol. 1(1): 80-95
https://ruor.uottawa.ca/bitstream/10393/30539/1/OCAP_Critical_Analysis_2005.pdf

Roundtable on Indigenous Knowledge and Western Science: Summary of Literature
(Institute on Governance, 2019)
https://iog.ca/docs/TIKWS_summary_of_literature_EN.pdf

The Land is Our Teacher: Reflections and Stories on Working with Aboriginal Knowledge Holders to Manage Parks Canada's Heritage Places
(Parks Canada, 2015)
http://www.georgewright.org/The%20Land%20is%20Our%20Teacher_ATK_email%20version_EN.pdf

Turtle Lodge Treaty "Our Way of Life"
(Turtle Lodge, 2013)
http://www.turtlelodge.org/wp-content/uploads/2013/11/Indigenous-Education-Turtle-Lodge-Treaty-Our-Way-of-Life.pdf