INITIATIVE FOR KNOWLEDGE CO-CREATION IN COLLABORATION WITH INDIGENOUS COMMUNITIES

Basic approach: Ethics of research

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1. Introduction

In Canada, scientific research in Indigenous communities began in the late 19th century. This activity intensified in the context of major economic development projects, such as the James Bay hydroelectric project in 1970 (Lévesque, 2009). Since that time, this type of research has undergone many changes in terms of community relations and intercultural methodologies.

This type of research did not always respect local practices, which could lead to an imbalance of power relationships. Community members were rarely consulted or involved in the various stages of the research process (Assembly of First Nations Quebec-Labrador [AFNQL], 2014). This way of proceeding could create a sense of having been excluded, used, exploited and robbed (of knowledge, personal information, etc.) within the communities involved in research (Adams et al., 2014). Such practices led to numerous negative experiences for Indigenous communities, which fostered a climate of distrust towards researchers, their institutions and their projects (Durst, 2004).

The past few years, the Government of Canada has a process of reconciliation with Indigenous peoples (Truth and Reconciliation Commission of Canada, 2015). As part of this process, the Laurentian Forestry Centre (LFC) wishes to strengthen its commitment to Indigenous communities, in order to develop long-term relationships that lead to projects based on knowledge co-creation in forest science. Before embarking on this process, it is important to be aware of the realities of Indigenous communities, particularly regarding how best to carry out research with them.

It is in this context that the Chair of Educational Leadership in Indigenous Forestry at Université Laval was given the mandate to explore collaborative approaches with the communities. As Indigenous research based on knowledge co-creation is a lengthy process, this document will examine the ethical foundations of relationships between researchers[1] and Indigenous communities.

First, an exploration of the scientific literature helps paint a picture of the challenges and good practices associated with research carried out in collaboration with Indigenous communities. More specifically, it is essential to understand the impacts that research can have on communities and the benefits it can bring them. For these purposes, research protocols can be important tools. Two workshops held as part of the project put this approach into practice. The first was held with LFC researchers in order to open a conversation about their interest in developing (or furthering) relationships with Indigenous communities. The second was held with representatives of the Pessamit community, with the aim of exploring better methods of building relationships between community members and LFC researchers. Finally, the table in Appendix I brings together various good practices that may be useful for researchers who wish to develop a collaborative approach with Indigenous communities.

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1. The term "researcher" here refers to a person doing research according to the traditional paradigms of science. Although usually associated with a non-Indigenous institution, it may also refer to either an Indigenous or non-Indigenous researcher.

2. Methodology

This project is part of a qualitative initiative (Olivier de Sardan, 2008) which focused on a collaborative approach (Morrissette, 2013). A literature review was carried out and two *focus group* workshops were held to collect data.

2.1.   Literature Review

The literature review was an iterative process, i.e. involving a back-and-forth between consulting the databases, analyzing selected articles and holding discussions with the LFC team. We first focused on issues concerning Indigenous knowledge as it relates to scientific knowledge in the natural sciences. The objective was to identify connections between ideas and concrete practices, to develop the vocabulary and acquire the concepts related to this subject, and to identify methods used in the past to deal with this subject (Dumez, 2011).
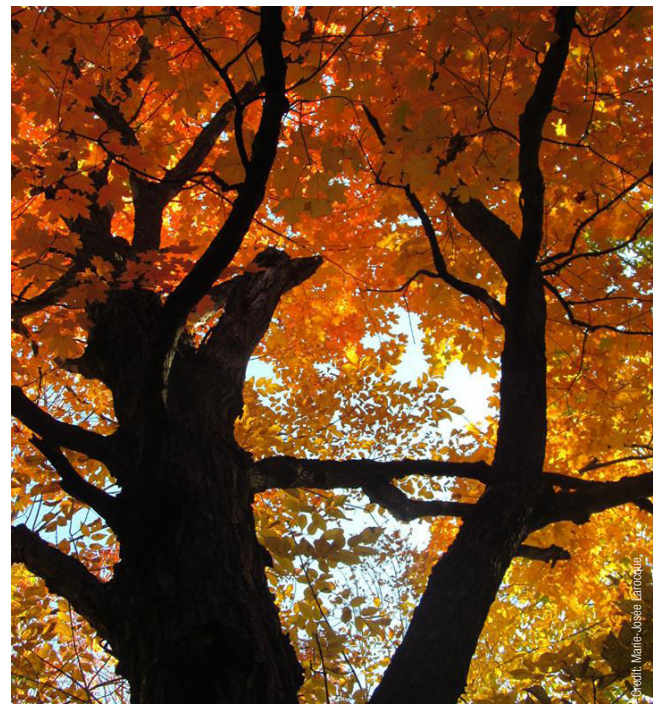
Formulations using the following keywords[2] were looked up in three databases: Érudit, Web of Science and Google Scholar. This exploratory literature review resulted in a great number of relevant references. In order to remain focused on the needs of the LFC, we specified the subject by concentrating on studies undertaken with Indigenous communities employing a co-creation approach. We also looked for articles specifically dealing with the Canadian context.[3] In addition to searching the databases, we used references that the team had on hand. Focusing on titles and abstracts, a total of 145 references were considered relevant to this subject (see List, Appendix 2). In order to meet the established schedule, we narrowed the analysis down to about twenty relevant references. The selected references come from various sources (scientific

articles, theses and dissertations, research reports, research protocols). Several references were from Indigenous authors and/or organizations. NVivo software was used to facilitate the analysis of the content found in these references.

2.2.   Workshops

In addition to a literature review, the project included a practical component. Two workshops were held to stimulate the reflections on relationships between LFC researchers and Indigenous communities. The first workshop was held on January 11, 2019 with LFC researchers in their work environment. The second was held in Pessamit with members of the community and a team of representatives from the LFC and the Chair of Educational Leadership in Indigenous Forestry. Further details on these workshops can be found under 6.

Credit: Marie-Josée Larocque.

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2. Knowledge, Indigenous, ecological, traditional, environment, climate change, traditional, ecological, knowledge, Indigenous, ecology.
3. We did retain some articles with non-Canadian topics when they seemed highly relevant to this project.

3. Good research practices in an Indigenous context

There is a wide range of vocabulary used to designate good research practices with Indigenous communities. We can refer to collaborative or participative research, co-production or co-creation, etc. These research practices have their distinct nuances and references within research vocabulary, but for practical purposes, we will use the term "collaborative research" when referring to research conducted in collaboration with one or more Indigenous communities. The degree of a community's involvement may vary according to the research topics, the methodology used and the extent of the community's interest.

According to Adams et al. (2014), collaborative research is an inclusive and equitable research process that adapts to the distinctive features of each context. It is based on collaborative decision-making, equity, and mutual respect and shared progress at all stages of a research project. Practices, modalities and the degree of commitment may vary from one situation to another. The research process must benefit both Indigenous communities and researchers (Adams et al., 2014). Ideally, the research initiative will from traditional research structures (universities, research centres, etc.) to relevant communities. This process allows communities to be involved at each stage of the project, to express their needs and to set conditions (Lertzman, 2010; Nadasdy 2005).

Without drastically changing the traditional paradigms of science, a number of events led to methodological changes in order to foster a more ethical approach to Indigenous research. For example:

- The United Nations Declaration on the Rights of Indigenous Peoples (begun in 1982).

- Multidisciplinary and global criticism (involving initiatives taken by Indigenous communities worldwide [1990]) denouncing colonial practices in carrying out research (see Gentelet, 2009).

- The Royal Commission on Aboriginal Peoples (1996).

- The Truth and Reconciliation Commission of Canada (2015).

Indigenous organizations are increasingly engaging around issues which concern them and making recommendations regarding methodological principles (Assembly of First Nations Quebec-Labrador, 2014; Basile, 2012; Gros-Louis Mchugh, Gentelet and Basile, 2014). These efforts are being made in conjunction with a multidisciplinary academic debate on the responsibilities of science and on the ethics of research (see Chapter 6 of the *Tri-Council Policy Statement* [SSHRC, NSERC and CIHR, 2014]). There are a great number of examples of Indigenous initiatives[4] regarding research protocols and ethic guidelines.

Collaborative research requires going beyond simple methodological adjustments and completely revising the way things are done. There must be collaborative efforts before (research project design and ethics), during (data collection, interpretation and dissemination of results) and after (research follow-up) the project (AFNQL, 2014). In short, collaborative research consists of a major revision of the operationalization and validation of research. This openness is not always straightforward, especially when researchers are not familiar with local cultures and realities.

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4. Committees, guides, protocols and regulations surrounding research with Indigenous people; such as the First Nations principles of OCAP® [https://fnigc.ca/en/news/pcapmd-become-need-to-define-the-new-status-of-the-commerce-market. html] and the AFNQL research protocols [https://cerpe.uqam.ca/wp-content/uploads/sites/29/2016/08/Protocole-de-recherche-des-Premieres-Nations-au-Quebec-Labrador-2014.pdf]

In this section, different boxes will present good practices developed during cultural mediation by La Boîte Rouge VIF.

La Boîte Rouge VIF is a non-profit Indigenous organization whose mandate is to promote the preservation, communication and appreciation of the cultural heritage of these communities, using an approach focusing on consultations and co-creation. Its team has extensive experience working in communities and produced the *Petit guide de la grande concertation: Création et transmission culturelle par et avec les communautés* (Little guide to the big dialogue: Creation and cultural transmission by and with communities) in 2016. This guide explains the methods practised by the organization at each stage of the projects that they support in Indigenous communities. Through their work in cultural mediation, they have developed principles of behavioural competency that are useful in creating positive connections with communities.

3.1. Engaging with the community and identifying local needs

Before contacting the community, it may be useful to gather some relevant information. From the outset, research projects must be part of a relationship development approach. It is a good idea to verify whether the research project can meet the social, political or economic needs of the Indigenous community. Even if the project does not directly reflect a local concern, the benefits of the project may still satisfy other needs. Benefits to the community can be enhanced at various levels: when organizing data collection, analyses or other stages of the project.

The principles of Free, Prior and Informed Consent (FPIC) are important when conducting research in Indigenous territories. The concept of FPIC is part of the *Tri-Council Policy Statement* (SSHRC et al., 2014) and the principles of the *First Nations in Quebec and Labrador's Research Protocol* (2014). Communities

need to understand what they are becoming involved with when they collaborate with researchers. Thus, the initial consultation "determines whether or not the research project answers the First Nations' needs, if it meets the local protocols as well as the level of implication of the First Nations people at every step" (AFNQL, 2014: 10). It also serves to determine the conditions for consent (collective and individual). It is important to keep this principle in mind when first contacting a community and to be well prepared for the first meetings. Still, time must be provided for the community to organize itself internally and to understand the implications of the project (AFNQL, 2014). Provided with clear explanations and an appropriate period for consideration, community representatives will be more likely to come back with proposals that truly reconcile local needs with those of the researchers (Asselin and Basile, 2012).

Needless to say, a good introduction goes hand in hand with great respect. However, it is not always easy to exercise intercultural skills. Adams et al. (2014: 6,7) identified a series of guidelines in that regard:

- Respect the community's authority and be informed about its concerns.

- Show respect for the places you visit.

- Be mindful of the language you use.
  - Avoid technical terms such as "study site" or "field work," as such designations do not show respect for the various attitudes towards the territory.
  - Avoid personal pronouns in certain situations, such as "my" study site.

- Ensure the project is presented clearly in terms of the vocabulary and expressions used.

- Inquire about the way the study or institution is represented within the community. Be informed about the community's experiences and impressions with respect to research or research organizations.

Naturally, the relationship is strengthened over time. Long-term researchers, who spend time with the community outside their work (meals, pow wows, etc.), demonstrate a commitment to the people and territory where research is being conducted (Adams et al., 2014). For those who cannot commit their personal time and engage with the community outside their working hours, there are a few other ways to strengthen relationships:

- Lighten the schedule on days when work is being done in the community to make room for parallel activities (Adams et al., 2014).

- Maintain essentially the same research team throughout the process to ensure long-term follow-up (Tanguay, 2010a).

Moreover, communities do not all have the same participation processes, so it may be difficult to identify members' concerns. Consulting local institutions is a good place to start. Each community has its own organization, but some are more responsive to researchers than others. Some communities will be capable of building a project, developing it and taking charge of the details locally. Other communities, less knowledgeable about following research procedures or less inclined to do so, will have different means of communicating local concerns (Adams et al., 2014).

3.2.   Clarifying each party's interests, needs and expectations

It is important to specify the interests, needs and expectations of all parties as early in the process as possible. For example, a project may represent an opportunity for political or legal advocacy for a community (Adams et al., 2014), which may detract from the quality, accuracy and objectivity of the project. On the other hand, communities may be reluctant about following or participating in an outside research process, preferring to mobilize skills and resources within their community. Another challenge is that each community

has its own unique context, interests and needs, making it difficult to standardize relationships between researchers and Indigenous communities. Thus, time and resources must be set aside for each research project in order to ensure that the interests, needs and expectations of all parties are specified and realistic (Adams et al., 2014). Important benefits can be derived from this mutual clarification of interests, needs and expectations. This type of effort makes it possible for the project to incorporate an exercise of intercultural reflection that gathers together contextual elements and, in a more nuanced fashion and with greater depth and complexity, to express various ways of thinking about nature (Adams et al., 2014; Riedlinger and Berkes, 2001). In addition, this clarification process helps minimize misunderstandings, incompatibility and inconsistencies arising from differences between cultures and knowledge systems, thereby avoiding disappointments.

3.3.   Principles of Ownership, Control, Access and Possession (OCAP)

The principles of OCAP (ownership, control, access, possession) are a declaration of values associated with information and knowledge management. They protect the information heritage and the knowledge held by Indigenous communities (AFNQL, 2014). The principles of OCAP are incorporated into the *Tri-Council Policy Statement* (SSHRC et al., 2014). These principles should be discussed early in the development of the research design. Generally speaking, it is a matter of establishing what type of data will be collected, to whom the data belongs, who will have control over and access to it, and how it will be stored. More specifically, **ownership** refers to the relationship between communities and the knowledge, data and information concerning their culture. Ownership may be collective (e.g., traditional songs and legends) or individual (e.g., personal information). The principle of **control** refers to the right of Indigenous communities to claim control over all

stages of the research and information management process that affect them. In addition, the principle of **access** holds that Indigenous communities have the right to physical access to the information and data that concern them. The **possession** of the data applies essentially to the way the data will be stored (AFNQL, 2014).[5]

These principles were put forward as a strategic response to colonial approaches to research and information management (Schnarch, 2004). Research conducted in this context supposes a close connection between the community and the researcher, and one in which the community becomes the researcher's "client" in a sense. In this context, the question arises as to what room is left to the researcher's intellectual freedom, creativity and imagination (Jérôme, 2009). Obviously, the desire to control the production of knowledge runs up against a fundamental principle of our work environment: that of academic freedom (Charest, 2005: 119). Research conducted applying strict OCAP principles certainly has its relevance, but should not be the only guiding principle for collaborative research (Charest, 2005; Jerome, 2009). The discussion must continue as to how researchers in Indigenous communities can express their academic freedom while working towards the decolonization of research.

3.4. Formulating questions and research design

At this stage, it is helpful to collaboratively evaluate the level of participation desired from each party (Asselin and Basile, 2012). The community may wish to be involved in various ways from simple consultation to local control (of certain aspects), through cooperative efforts or a partnership (Paquette-Dioury, 2009). This step makes everyone's expectations clear and

situates those expectations in the project in question. Here are some elements that can be found in the research design (AFNQL, 2014: 33 and 61-80):

- Project presentation and description, questions and research objectives, proposed methodology, anticipated outcomes and how they will be used (by whom and for what purpose).

- Presentation and description of the respective roles and responsibilities of the researchers and the community, as well as the conditions for participating in the study.

- Presentation and description of sources of funding and, if applicable, the terms of financial participation by the community.

- Presentation of the technical terms of the research (committee/institutions involved, meetings schedule, data collection method, confidentiality elements, etc.).

- Presentation and description of methods of analysis, interpretation and validation applied to data and results.

- Presentation of the terms of engagement and training of co-researchers, the aim being to promote acquiring skills regarding research within communities, while ensuring the transfer of knowledge.

- Presentation and description of research monitoring and information mechanisms.

- Presentation and description of the terms regarding intellectual property, control, access, possession, storage and/or repatriation of data and results, confidentiality and access to research products (presentation of conclusions, dissemination of results, if any, revision of results/publications).

Research questions should meet the needs of both the community and the researcher. The formulation of the research questions can harmonize the technical perspectives of research with those

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5. The First Nations Information Governance Centre (FNIGC) provides a detailed definition of these principles: https://fnigc.ca/en/pcapr.html

of the communities. For example, in a project assessing the contamination of traditional food in collaboration with Atikamekw communities, researchers took the time to develop a common vision of the problem (Tanguay, Grosbois and Saint-Charles, 2013: 4). To do so, it was necessary to understand the local definition of health and to become familiar with local knowledge concerning the benefits and risks of traditional food (Arquette et al., 2002). Among Atikamekw, the concept of health encompasses the quality of the land and the health of the animals (Tanguay et al., 2013: 15). This example illustrates how researchers who have taken the time to learn about local perspectives on the concepts used in their research can avoid conceptual bias from the outset of the process.

It is also important to take into account any research that has already been done in the community, in order to avoid duplication. With respect to methodology, researchers must remain open to the possibility of communities proposing new methodological and conceptual approaches (AFNQL, 2014: 16). Communities should be able to take up the project themselves if they are interested in doing so. Researchers can also examine the methodology in order to ensure that the following guidelines are respected:

- Inclusion of First Nations co-researchers and creation of a local committee (or calling on an existing local committee) to discuss and validate certain aspects of the research;

- Recognition of these bodies, their authority, their knowledge and their skills (AFNQL, 2014).

These measures require that research time be managed differently. The researcher must adapt his or her approach to harmonize with the community's important events, its individual rhythm and its priorities. The research agenda should therefore be developed jointly, so as to consider:

- Community events;

- Cultural activities (initiations, national holidays, hunting seasons, etc.);

- Social activities (gatherings, sporting events, etc.);

- Other events…

Finally, one of the major points at this stage is to address the principles of FPIC and OCAP and consider how they may apply to the project.

> **Practical tips:**
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> According to La Boîte Rouge VIF's experience, it may be relevant to:
>
> - Create and present an organizational chart showing all the stakeholders;
>
> - Define desired degrees of collaboration at each stage and present them in a graph;
>
> - Ensure that the community has clearly given its support;
>
> - Work with a community delegate, such as a local authority;
>
> - Assess the interests of each party with respect to the project;
>
> - Plan for ad hoc exchange sessions;
>
> - Become familiar with the AFNQL protocol;
>
> - Identify a common vision;
>
> - Define the vision, mission, values, objectives, strategies, actions;
>
> - Co-create a flexible agenda.

3.5.   Data collection

In an ethical approach to research, researchers must obtain free, prior and informed consent. Some projects may have profound implications for a community, especially if they involve personal or socio-political data. It is important for Indigenous participants to be able to appreciate the scope of the research, including the distribution, destination and interpretation of the data. Participants from whom data is collected (for example through semi-structured interviews) must be aware of the relationship between the researchers and the community authorities. In practical terms, it is a matter of:

- Being attentive to the accessibility and openness of the exchanges;

- Clearly and precisely describing, both verbally and using relevant documentation, the goals of the research, the methodology selected, the advantages and disadvantages associated with participating, and the benefits and uses of the research (AFNQL, 2014).

In the spirit of free, prior and informed consent, Indigenous participants have the right to authorize or refuse the gathering or dissemination of data which concerns them (audio or video recordings, photographs, samples of blood, hair, skin, stool, etc.). Similarly, they are entitled to authorize or decline at any time the entire research project, should it not correspond with or respect their needs, expectations, local protocols, etc. The following are further details in this regard:

- Invitations to meetings should be extended respectfully and in accordance with local protocols.

- Those participating in the research may decline to continue at any time, whether formally (in writing) or verbally, and to have their anonymity restored and/or respected (AFNQL, 2014); no community member shall be required to participate in the research project, despite the Band Council's endorsement (Asselin and Basile, 2012; AFNQL, 2014).

- Any consent form (which must also be written in clear, direct language—if necessary, in the respondent's language, etc.) should also be accompanied with a clear and detailed letter or include a description of the research project.

It is recommended that local skills be enlisted for all data collection efforts. In addition to enhancing security and facilitating logistics (Adams et al., 2014) (especially in forested areas), the incorporation of local talent, for example, by hiring a research assistant from the community, helps foster skills and meet economic needs. This relationship can contribute to understanding local issues and facilitating communication with potential participants, conducting interviews effectively or carrying out information retrieval (see the following research: Jacqmain, 2008; Tanguay, 2010b; Tanguay et al., 2013). Furthermore, these individuals can assist in translating interviews, as well as help eliminate translation bias through their familiarity with the terminology and local viewpoint (Ruest Bélanger, 2018; Tanguay, 2010a). By joining a network of contacts, researchers remain connected to the community, which enables them to better evaluate research methodologies. This network of individuals can also be a local advisory committee, as in the Jacqmain project (2008). This way of proceeding can help align the realities of research with those of the community (Adams et al., 2014; Jacqmain, 2008; Tanguay, 2010b).

Practical tips:

According to La Boîte Rouge VIF, to get the project underway, it may be appropriate to:

- Identify the necessary resources and call on the services of the community (community dinner, accommodation);

- Detail, upstream from the planning phase, the contributions that will be needed as well as each of the partners to be involved;

- Engage the community (making the research personnel visible, visiting prominent local persons, using local communication networks, living the community experience from within);

- Be open and accept impromptu invitations;

- Work from a perspective of training and developing skills;

- Maintain a visible presence and make activities transparent;

- Meet our commitments;

- Create a directory of resources (expertise and skills);

- Document definitions of terms;

- Avoid creating conflicting groups for work or interview purposes;

- Be attentive to silences and nonverbal communication during interviews;

- Adapt the methods used (for instance, with respect to age groups) in order to mitigate relationships of power.

3.6. Analysis and validation

In the context of collaborative research in Indigenous environments, special attention must also be given to the methods used for data processing, analysis and validation. The AFNQL protocol is clear regarding this issue: "First Nations have a right of examination and decision on all the steps of the proposed research" (AFNQL, 2014:18). It is appropriate (especially when data is derived from interviews) that participating Indigenous respondents and representatives be of foremost consideration in the analysis and validation of the data. That is, they are shown the results first so that they can share their observations and reactions, propose corrections and suggest new or complementary interpretations. In particular, out of concern for:

- Intercultural aptitude. From the perspective of collaborative research, the joint evaluation of data demonstrates respect and equity among the research partners (both researchers and Indigenous people) (AFNQL, 2014).

- The accuracy of data processing, analysis and validation. The joint performance of data analysis and validation helps correct and/or minimize errors of interpretation which may result from researchers' cultural biases (see Jacqmain, 2008).

- The acceptability and understanding of the data and of the analysis results. This is a matter of ensuring that the results are worded in a manner that is appropriate (described in clear and accessible language, avoiding inconsistencies and partial truths) and culturally acceptable (without any discriminatory terms or expressions and eschewing any moral judgment or criticism, etc.).

In practice, the collaborative processing, analysis and validation of data involve overlapping various methods and iterative processes with the aim of building knowledge together. For this purpose, researchers are strongly encouraged to:

- Consult with members of the Indigenous community on how best to evaluate research practices and protocols. More specifically, researchers are encouraged to consult them with respect to their opinions of the validity and accuracy of the research (which may differ from researchers' opinions), as well as on the evaluation methods (validity, accuracy, impact) applied in the community (Desbiens, 2013; Vachon, Pinard, Blais, Andre-Lescop and Rock, 2017).

- Work towards a consensus among the participants with respect to the data and data processing. A broad consensus among community members can mean that the data processing meets the community's expectations. This is a first step in the validation of the data (Denzin, 1989; Jacqmain, 2008; Miles and Huberman, 2003).

- Dialogue with community members is an iterative process, meaning that it will be reopened numerous times. In addition to minimizing misinterpretations, the iterative process helps highlight convergences or inconsistencies over the long term, among respondents (or among statements taken from the same respondent), which constitutes a further form of validation. This way of proceeding, namely through working sessions, also facilitates the re-evaluation of the relevance of tools and methodologies (Vachon et al., 2017).

- Apply the method of triangulation in validating the results. This entails simultaneously using several methods to collect and validate the data. The correlation of the results constitutes another form of validation (see the method used in Jacqmain, 2008).

Overall, it is recommended that research protocols coincide with the concept of "two-eyed seeing" (AFNQL, 2014; Bartlet, Marshall and Marshall, 2007). This entails research designs gathering several points of view into a perspective of collaboration and complementarity.

Practical tips:

According to La Boîte Rouge VIF, when validating content, the right of examination shared by all members of the community must be considered:

- Possibly organize a public gathering;

- Hold a meeting that is fun and relaxed;

- Announce the event in any way possible;

- Ensure the consultation goes smoothly (the materials communicated have been well prepared);

- Lead the meeting in a way that elicits questions;

- Ensure the participants' contributions and the role they played are properly recognized;

- Keep track of all correspondence (diplomatic relations).

3.7.   Publication and dissemination

Intellectual property concepts may apply differently in Indigenous communities, particularly because of the collective ownership of knowledge (AFNQL, 2014). Researchers must be sensitive to these distinctive aspects and their implications for their projects. Ideally, issues related to individual ownership should be addressed in anticipation of the project. For instance, special attention should be given to the status of author and co-author (Adams et al., 2014; Schnarch, 2004; Tobias, Richmond and Luginaah, 2013). As an example, the members of a community can contribute to the writing of documents.

Collaborative research as a general rule involves the principle of mutual recognition and equitable relations among collaborators. Thus, researchers should give credit to the holders of traditional knowledge and skills and, more generally, recognize and acknowledge the contribution made by

Indigenous communities, representatives and participants to the research (Adams et al., 2014; Canadian Institutes of Health Research, 2007). Future plans for disseminating research results should also be discussed. The following in particular should be clarified:

- Permissions to be requested to present the results at conferences.

- Validation of all the communication materials (PowerPoint, etc.).

- Acknowledgments to be expressed verbally.

- Any other arrangements to be made to present the results in public.

- Requirement of a dissemination plan detailing the target audience, the products to be transmitted, the methods, dates, format and language used, as well as the budget applied.

- Requirement of a spokesperson to relay information to the media.

3.8.   Evaluation of the research process

The evaluation of the research process is an important step in collaborative research undertaken in partnership with Indigenous communities. It facilitates the following:

- More specific and efficient planning and management for future research.

- Adjustment or replacement of deficient or irrelevant research policies.

- Assessment of the relevance and/or improvement of collaborative structures (such as advisory and working committees).

- Follow-up, as well as corresponding adjustment, for increased engagement and participation on the part of research participants.

It is important to remember that there is more than one way to carry out collaborative research in partnership with an Indigenous community. It is best to develop a methodology and start a research process that is tailored to the specific needs and interests of each community. The evaluation of the research process must reflect this intention.

Credit: FOREST PRODUCTS ASSOCIATION OF CANADA

3.9. Communication

Motivated by a spirit of mutual respect and fairness, dialogue and consideration for the other party are important at every phase of the research process (Lertzman, 2010). It is best to encourage a natural dialogue, setting aside any potential relationships of authority. The communication deed must be approached as an informal dynamic exchange and encouraging the expression and mutual recognition of all parties' experiences and knowledge. It is in researchers' interests to promote a natural and organic style of meeting, in which people skills take precedence over technical skills. There is obviously no magic recipe that guarantees quality of dialogue between researchers and Indigenous people. Considering the complexity of Indigenous relationships with nature and the concepts that express them, the researcher must be very careful when interpreting or translating these concepts. Some will have no equivalent in English or French: we must be aware of the bias introduced by translation and, if necessary, decide to leave the concepts in their original language. It is recommended that you seek the assistance of a community member to interpret the data, as well as to validate the accuracy of interpretations and translations with the community. In addition, the researcher must take care to be clear in writing both administrative documents and research products. Concern for the reader must be a priority.

6. http://www.laboiterougevif.com/wp-content/uploads/2017/08/Extrait_guide.pdf

3.10. Importance of benefits for the community

A basic principle in knowledge co-creation and collaborative research is that all parties have to share the benefits equally, i.e. both Indigenous communities and research communities (AFNQL, 2014). Indigenous knowledge can be of great value to traditional scientific paradigms (Guay 2007; Lertzman 2010; Polfus et al., 2016; Riedlinger and Berkes 2001; Tanguay 2010a). For Indigenous communities, the benefits of a research project can mean significant gains, both tangible and intangible (development of structures, capabilities, knowledge) (see the example in the box). Moving away from the idea of the scientific validation of Indigenous knowledge, collaboration can result in a mutually beneficial relationship. Beyond acquiring knowledge and skills, collaborative research can provide Indigenous communities with a greater capacity for dialogue at various levels (Lertzman, 2010).

EXAMPLE:

The studies conducted in an Atikamekw community (Tanguay et al., 2013) are a good example of how research can become a tool and enhance local capabilities. In this case, the research project was created in response to a local concern about the risk of contamination of the flesh of animals which were being hunted or fished. Community members said that they could identify the healthiest catches and were able, in the context of the project, to correlate this knowledge with measurements of contaminants. A locally designed project such as this provides a practical illustration of one type of benefit that communities may reap. Far from being shelved (a problematic identified by Asselin and Basile, 2012), the project has encouraged better food choices.

Credit: Marie-Josée Larocque

4. Challenges of collaborative research

Several challenges arise in relation to research undertaken in collaboration with Indigenous communities. The point about clarifying each party's interests, needs and expectations has been addressed, as well as the issue of academic freedom in the context of decolonization. Challenges are numerous and arise at every stage of the research process, particularly with respect to funding, scheduling, administrative procedures and dialogue between the different kinds of knowledge.

4.1. Funding, research agenda and administrative procedures

Research undertaken in collaboration with Indigenous communities never follows a standard process. Each community has specific needs and a unique background. Researchers are therefore continuously required to adapt. A number of obstacles maintain research methods that do not fit with collaborative efforts. One important obstacle is associated with research funding. In fact, the execution of a research project generally depends on granting institutions. These institutions impose conditions on grant competitions, thereby greatly influencing research design. The resulting designs may involve strict timelines whereby researchers must optimize spending and demonstrate the achievement of specific objectives at specific dates (Adams et al., 2014).

Considering the strict rules imposed by the granting agencies researchers must work with, it can be difficult to make the time to establish a long-term relationship with community representatives, including understanding their needs and establishing trust. Preoccupied with the careful and efficient use of resources (including both public and private funds) associated with research, researchers may be tempted to limit their interactions with the communities. This approach leaves little room for the iterative process required in collaborative research (Adams et al., 2014). Indeed, tensions may arise on account of a research agenda that does not take into consideration the community's calendar. If the research design involves meeting a strict timeline, communities will not necessarily be inclined to comply, especially if they have not been consulted. Note that issues concerning funding and the research agenda may be more complex, depending on how remote and/or isolated the community may be.

Even in the context of collaborative research, many research design specifications developed for Indigenous people are created by administrative bodies outside the communities. These bodies meet operational expectations (project filing date, specification of a problem, budget limitations, etc.) which are sometimes unknown to or misunderstood by community members. These ways of proceeding generally maintain a "colonial" style of intercultural relations (Nadasdy, 2005). It is not necessarily a question of ill-will, but rather a research culture whose normal activities encourage the compartmentalization of an issue in accordance with an objective approach. Collaborative research is therefore often reduced to technical considerations, which mainly focus on the selection of participants, the collection of data and the incorporation of Indigenous knowledge deemed relevant (Nadasdy, 2005). In this regard, many researchers are questioning how to build relationships and create truly collaborative research projects in conjunction with Indigenous people. For example, research protocols and individual consent forms contribute to greater transparency in research. However, many elements of the project must be included in order to adequately inform the participants. During the course of the research, it becomes difficult to deviate from the initial objectives as officialized in these documents and to adopt instead an iterative process as is often advocated in qualitative research (Jérôme, 2009).

4.2. Dialogue among different types of knowledge

According to common practice, the wording of the questions defines the beginning and the scope of a research project. However, classic paradigms of science often imply that a project's questions and priorities will be defined by researchers rather than by communities (Stevenson, 2005 \[in Asselin and Basile, 2012]). Scientific research may claim to *validate* Indigenous knowledge, which implicitly places scientific knowledge above Indigenous knowledge (Fletcher, 2003 \[in Asselin and Basile, 2012]). In the same vein, the *integrative* approach involves gathering relevant Indigenous knowledge and subsequently integrating it with scientific knowledge. This approach poses significant problems, since Indigenous knowledge is produced in a cultural context that generally involves a broad vision of nature. To take this knowledge out of its context is to deprive it of meaning (Davidson-Hunt and O'Flaherty, 2007). As a result, integrating (i.e. compartmentalizing and selecting) Indigenous knowledge with Western knowledge may better serve the interests of researchers rather than the interests of the communities. In addition, Indigenous knowledge taken out of context may be unusable.

Knowledge integration can be seen as an attempt to instrumentalize, appropriate or assimilate (Adams et al., 2014). We must also be cautious about the use of Indigenous knowledge. Some Indigenous knowledge is passed down from generation to generation and may collectively belong to the community. In Canada, this knowledge is difficult to protect by means of intellectual property law. It is therefore particularly important that researchers take firm measures to protect Indigenous knowledge, so that it is not used or disclosed without the consent of the holders of that knowledge (AFNQL, 2014).

Traditional scientific paradigms tend to compartmentalize and specify research problems and objectives in a single-case and short-term context. This provision may be opposed to a holistic Indigenous perspective, which involves the continuous synthesis of a large number of experiences transmitted through a multi-generational oral tradition (Beauclair, 2015; Bodle, Brimble, Weaven, Frazer and Blue, 2018; Capel, 2014). Traditionally, for many Indigenous communities, humans are part of nature, not a separate element. Efforts must be made to better situate the role and relevance of scientific knowledge within the holistic Indigenous vision (Adams et al., 2014; Tobias, 2000). Researchers and Indigenous communities can both acknowledge their cultural distinctions and work together towards common research goals.

5. A look at relevant tools: research protocols, guides and agreements

From a research ethics perspective, various authorities have established protocols for conducting research with Indigenous people. There are different types of protocols, guides and agreements, the following being some examples:

Created by an organization

- The *First Nations of Quebec and Labrador Research Protocol* was produced by the AFNQL. A first version was created in 2005 and a new one in 2014 (AFNQL, 2005, 2014). The purpose of this protocol is to respond to the concerns of First Nations receiving research proposals and to provide tools to guide the research.

- The *Lignes directrices en matière de recherche avec les femmes autochtones* (Guidelines for research involving Indigenous women) (2012), proposed by the Association Femmes autochtones du Québec (Basile, 2012).

- In a joint effort, the Social Sciences and Humanities Research Council of Canada (SSHRC), the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Canadian Institutes of Health Research (CIHR) have produced a brief called the *Tri-Council Policy Statement* (SSHRC et al., 2014), concerning all facets of the ethics of collaborative research. One section is dedicated to research with Indigenous peoples.

- The *Boîte à outils des principes de la recherche en contexte autochtone* (Toolbox of research principles in an Indigenous context) was produced by Réseau DIALOG, the Université du Québec en Outaouais, the Université du Québec en Abitibi-Témiscamingue and the First Nations of Quebec and Labrador Health and Social Services Commission (Gros-Louis Mchugh et al., 2014). This is not a protocol per se, but a document offering various tools for research.

Created by a Nation

- *Negotiating Research Relationships with Inuit Communities: A Guide for Researchers* (2007) and *Negotiating Research Relationships: A Guide for Communities* (2003) are the fruit of the work of the Nunavut Research Institute and Inuit Tapiriit Kanatami (Inuit Tapiriit Kanatami, 2003, 2007).

- The *Mi'kmaq Ecological Knowledge Study Protocol* was written by the Assembly of Nova Scotia Mi'kmaq Chiefs (Assembly of Nova Scotia Mi'kmaq Chiefs, 2007).

Created by a community

- The *Regulations for Research in Kahnawake (2006)* are a collaboration between the Kahnawake Onkwata'karitahtshera Research Sub-Committee and the Onkwata'karitahtshera Health and Social Services Research Council (AFNQL, 2014).

Note that a protocol or agreement can also be signed between two or more organizations regarding a general relationship or for each specific project.

5.1. The purpose

For the AFNQL (2014), a research protocol is a "collective tool" created for researchers, communities, representatives and managers to be used as a guide "in order to establish rules for research activities performed with First Nations or on their territory." Like their Western counterparts, research protocols established by First Nations constitute synthetic, condensed official benchmarks of community standards for performing research. Therefore, before submitting a research request to a community, it is important for researchers to know about any

existing protocols, taking them into account and implementing them as guidelines to their research (AFNQL, 2014: III). The goal of a research protocol should be to propose an ethical framework supporting the fundamental values that will guide the research.

The development of a collaborative research protocol requires the consideration of a number of crucial prerequisites, notably dealing with the introduction phase (initial contact and subsequent contact with the target community), as well as terms of inclusivity and co-creation of research. As mentioned previously, it is important for the researcher to be interested in and understand the community context (cultural, political and social). Likewise, the researcher must learn about the community's attitudes towards outside research (openness, perception, prejudice, etc.).

5.2.   The content

In general, a research protocol contains procedures and principles related to research in an Indigenous environment. The statement of these principles helps put in place certain methodological and ethical elements. A protocol can help correct the asymmetry of relationships of power and colonialism. The content of a protocol may vary depending on subjects, needs and expectations. For example, a community may have a general protocol for research. All researchers wishing to work with the community will have to base themselves on this protocol. Then a research design for a particular project may be put together. Many research protocols emphasize the notions of respect (attentive listening, understanding contexts and perspectives), equity (sharing tasks, contributions and responsibilities) and reciprocity (mutual and beneficial relationships between parties) (AFNQL, 2014: III). In addition to these main principles, research protocols may also emphasize other notions:

- Self-determination;

- Recognition of the worldview and value systems;

- Customary law;

- FPIC (free, prior and informed consent);

- Steward and interpreter of one's culture;

- Protection of heritage and knowledge;

- Decolonization of research;

- Right of withdrawal by Indigenous people;

- Quality and integrity of data (OCAP);

- Validation by Indigenous people (See AFNQL, 2014: IV-V).

Although research protocols may be useful in providing the broad direction of a project, not all communities necessarily wish to apply them in a strict manner; hence the importance of listening to understand where community members stand in relation to research protocols.

Credit: FOREST PRODUCTS ASSOCIATION OF CANADA

6. Discussion of potential meetings between Natural Resources Canada researchers and Indigenous communities

For several years, the Government of Canada has been undertaking a process of reconciliation with Indigenous peoples (see, for example, TRCC, 2015). As part of this process, the Laurentian Forestry Centre (LFC) aims to increase its commitment to Indigenous communities, in order to develop sustainable relationships that can lead to knowledge co-creation in forest science.

6.1. Workshop with researchers in the city of Québec

On January 11, 2019, a meeting was held with LFC researchers to discuss their relationships, or lack thereof, with Indigenous communities in the context of their research. As soon as they entered the room, they were asked to point out on a map of Quebec the places where they have research activities and/or facilities.

More specifically, the objectives of this workshop were:

1. To open the conversation about researchers' interests in developing relationships with Indigenous communities;

2. To enable researchers to identify the communities that use the territories where they are doing research;

3. To share their interests and experiences.

A map of traditional Indigenous lands (https://native-land.ca/) was presented and then compared with the map of Quebec on which research activities had been identified.

Source: https://native-land.ca/
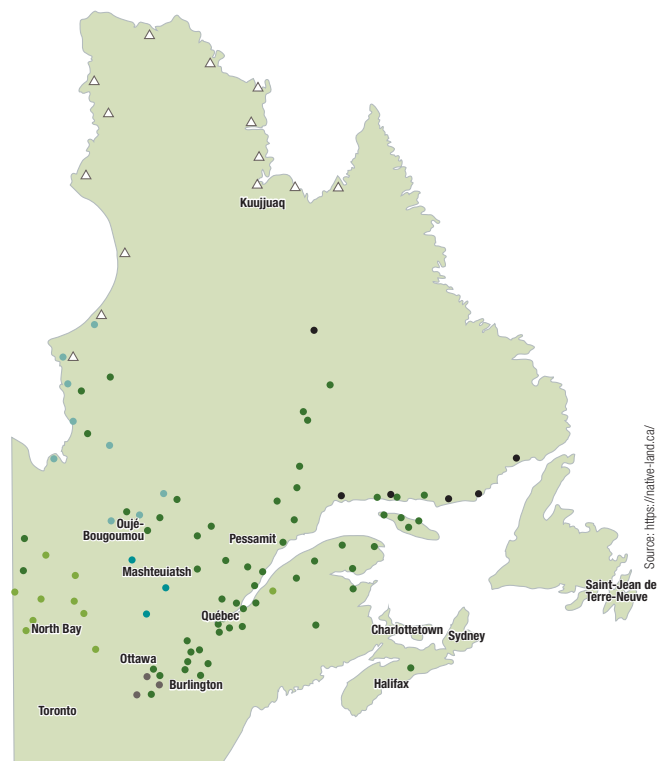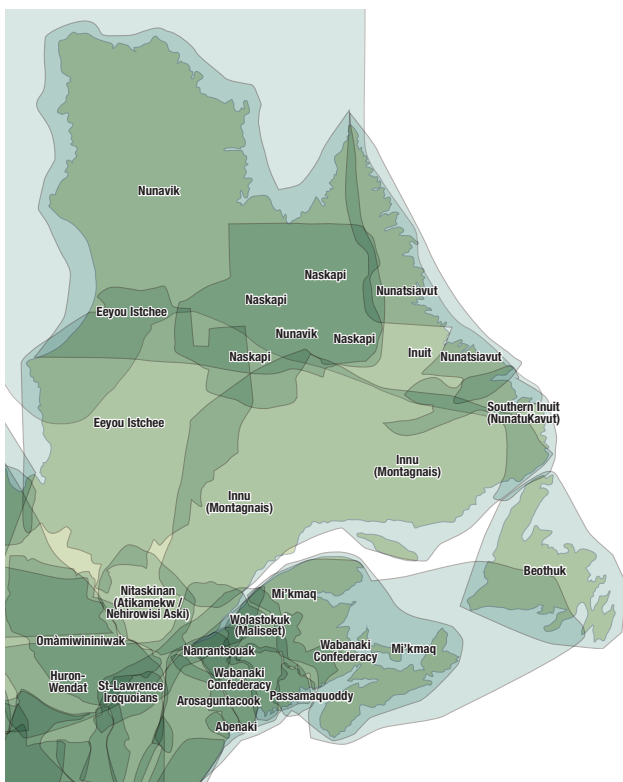
Before beginning the discussion, various questions were asked:

- Do you know the communities that are present in the locations where your studies are being carried out?

- Have you had any experience with members of Indigenous communities in the context of past or current research?

- Would you be interested in working with Indigenous communities on your research projects?

The discussion revealed that some researchers have a great deal of experience with Indigenous communities, others have some experience, and some have none at all. The main question that emerges from these exchanges is: what can researchers do when they want to contact an Indigenous community with respect to a project? Several issues arise around this question. Some communities are extremely sought after for consultations of all kinds, while others are not equipped to respond adequately and in an informed fashion to the requests addressed to them. In addition, Government of Canada employees must be aware of the image they project.

Several secondary questions were addressed. Who should be contacted first? Should we start with community members? Who is the best person to contact in the community? What should be done in the case of communities that are already in high demand? Is it a good idea to contact colleagues who are already working with them? Would it be possible to have a *communications map*, in order to know with whom to communicate in each region or community?

Another issue raised relates to the availability of researchers. Indeed, many of them do not have time to develop relationships with the communities. Moreover, some subjects require rapid intervention such as, for example, following a forest fire. Several workshop participants expressed the need for a structure, a hub, to manage relationships and exchanges with Indigenous communities. It was suggested to have a place of consultation/coordination, in order to know who is going where as well as who is doing what, and with which community.

A literature review shows that it is better to include Indigenous communities from the outset of a project. But what should be done if a researcher has maintained facilities on a territory for 15 years and has never thought to contact the communities that are active in the area? What should be done if a researcher is denied access to a territory?

Various ideas are identified to improve relationships between researchers and Indigenous communities, such as the inclusion of Indigenous people in projects (hiring a student or community employee), inviting them to LFC conferences and asking them to attend the Chair of Educational Leadership in Indigenous Forestry conference on Indigenous forestry. In conclusion, being a good listener was mentioned as a good attitude to have on a continual basis.

6.2. Workshop in Pessamit with researchers and members of the Pessamit community

In order to continue the debate begun with the LFC team and to solidify it with a concrete approach, a meeting with the Pessamit community was held on March 21, 2019, bringing together representatives of the LFC and the community. To be precise, three LFC workers attended, two from the Chair of Educational Leadership in Indigenous Forestry, and five members of the community.

The coordinating team had prepared a number of tools for the meeting:

- A meeting plan (see Appendix 3);

- A PowerPoint presentation;

- *Post-it* sticky notes to classify what comes out of the discussions;

- An example of a collaborative research protocol;

- The map of Quebec created at the workshop held on January 11, 2019, showing the locations of the sectors in which LFC research projects are being carried out.

Upon their arrival, the LFC team and one of the Indigenous representatives (the main contact and assistant in organizing the meeting) were highly interested in a museum exhibit on display in the hall of the cultural centre where the meeting was being held. This exhibit provided the context for a dialogue about the community's history. The Indigenous representative took the opportunity to talk about his community's attachment to the caribou: "The caribou has saved our lives many times. Now the caribou is asking us to help save it."

Before starting the meeting, a facilitator asked if there was a protocol to follow for the opening. The Indigenous representative then began by going around the table. Afterwards, the LFC team explained the purpose of the meeting, which was essentially to initiate relationships between LFC researchers and members of the Pessamit community.

Community members expressed their opinion about research in general. The following issues were addressed:

- The socio-economic benefits of research, mainly through employment opportunities;

- The educational and scholastic benefits of research, through capacity development, building awareness among youth with respect to the sciences and research, and internship opportunities for youth;

- Collaborative methodologies to develop;

- Current or potential projects on the community's territory;

- Problematic aspects of research, especially researchers' tendency to collect information (such as a lexicon of the Innu language), without providing any benefit to the community;

- Aspects of research participation that they wish to avoid (such as increased administrative tasks, doing a great deal of volunteer work to help researchers, being excluded from the research process, not having the project properly explained to community members, etc.).

Throughout the meeting, exchanges proceeded informally: in accessible language, without technical jargon or interruptions. The map of Quebec and the wall charts were helpful in structuring what came out of the discussions. Everyone had a block of *Post-it* sticky notes and pens, and participants were asked to write down their ideas and then place them in what they felt was the corresponding section. However, this opportunity was not used much (probably on account of a certain shyness). In that vein, one of the facilitators assumed, on behalf of the group, the function of summarizing the exchanges and classifying the ideas. This approach led to a visual representation of the main ideas exchanged, helped make the transition from one subject to another and to summarize the discussions.

After the community members had expressed their opinions on research being conducted on their territory, the meeting focused on the following proposal:

NRCan and Pessamit should build relationships based on their common interests in the territory.

The main ideas were categorized as follows: "Go; No-Go; Reluctance." Here are the results of the exercise:

GO
- Develop capabilities
- DARE to do things differently
- Recognize community members' expertise
- Users appreciate being involved and being paid
- Investigate youth employment opportunities in the community

NO-GO
- Volunteer work
- Being left out Being included at the end of projects

Reluctance
- Not more administrative reports to fill out
- Related issues Data sharing

Go:

- **Involvement of the territory's users in research and remuneration of services.** Indigenous representatives emphasized the necessity of compensating support (knowledge, skills, services) provided to researchers by members of the community, namely in order to acknowledge local skills and knowledge.

- **Look into youth employment opportunities in the community.** Researchers should explore opportunities to hire youth from the community. In this sense, research can involve a degree of social engagement with young people (building awareness of the sciences, assistance roles, internships, etc.).

- **Development of knowledge/skills/abilities.** It is important that research on their territory is aimed at developing local knowledge, skills and abilities.

- **Recognition of community members' expertise.** For Indigenous representatives, collaborative research should promote and encourage the recognition of local expertise. Such recognition could involve employment opportunities (for consultation, for services, etc.). "One must live the forest to truly know it; we know it because we live it."

- **Dare to do something else (innovation/renovation of the research process)**. Indigenous representatives expressed their satisfaction with the meeting, namely that they were treated as equals. According to them, innovation in the intercultural dialogue must be encouraged and developed. Furthermore, speaking on behalf of the community, the representatives insisted that Pessamit wishes to be involved in research for the common benefit. "We want to be proud to speak about Pessamit. We want to be role models in the field of research."

GO

- Users appreciate being involved and being paid
- Investigate youth employment opportunities in the community
- Develop capabilities
- Recognize community members' expertise
- DARE to do things differently

No-Go:

- **No volunteering**. In order for the knowledge and skills of the Pessamiulnut (Innus of Pessamit) to be truly recognized, they must be compensated. Volunteering must therefore be avoided.

- **Being overlooked and/or coming in at the end of the project.** It is important to contact community representatives at the beginning of a project in order to really work together. The Innu word for together is *mamu*.

Reluctance:

In addition to Go and No-Go, representatives mentioned reluctance with regard to certain areas.

- **Issues related to administrative overload.** Community representatives are interested in being involved in research projects, but do not want to have excessive documents or forms to fill out.

- **Issues related to data sharing.** Representatives also discussed their concerns about the sharing and use of sensitive data, especially fearing that their data might be misused.

When the team felt that there was some consensus regarding the proposal, three new sections were added to the table:

- First steps in implementing the proposal.

- Means required in carrying it out.

- Contributions that each party can make.

While the first table identified the main research principles, this more concrete table contained practical options.

NO-GO

Volunteer work

Being left out
Being included
at the end of
projects

Reluctance

Not more
administrative
reports to fill out

Related issues
Data sharing
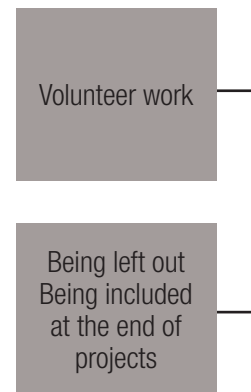
First stages

- **Contact people from the territory and resources sector** in order to introduce the research projects to them using accessible language, along with the LFC and its researchers who are active in the territory in question. Ideally, the community should be notified in advance.

- **Form to be discussed on a case-by-case basis**. Subsequently, each project can be discussed on a case-by-case basis.

Means

- **Hiring people from the community.** It would be appropriate for researchers to develop, along with the community, hiring and work agreements for their needs.

- **Looking into employment opportunities for the community's youth (secondary school).** It would be interesting to think of ways to involve high school students in research.

- **Posting information about the research project on the community's Facebook page.** Considering the practical interest of the platform, Indigenous representatives recommended that information on research projects (proposed and current) be published on the community's Facebook page.

- **Publishing information about the research project in the community's newspapers.** It was proposed that, in conjunction, information about the research project be published in the newspapers Innuvelle, Le Manic and Journal Haute-Côte-Nord, which are read on a daily basis by the community.

- **Subscribe the LFC to community newspapers.** So that LFC researchers can learn more about the realities of Innu life.

Contributions

- **Selection of study sites.** One of the LFC researchers will communicate the location of the research sites to community representatives.

- **Direct contact for future projects.** The community representatives will try to connect those who use the territory with the LFC researchers.

A PowerPoint presentation had been planned to present examples of research protocols and tools for collaborative research. However, this option was put aside during the meeting to avoid interrupting the discussion. The protocols and tools were presented briefly. Community representatives emphasized how important it is to have a framework to guide research, and that the framework in question must be as simple as possible. A new section was created in the table: "Main principles of research with Pessamit."

Main principles of research with Pessamit:

- **Being involved from the outset of the research project.** This issue was addressed at the beginning of the meeting with the aim that research projects be undertaken as truly collaborative efforts.

- **Framing the project as simply as possible.** Community representatives also emphasized the importance of framing research as simply as possible and based on existing protocols.

- **Access to and sharing of data (to be addressed from the outset)**. At the beginning of the research, it is important to discuss who will have access to the data and how it will be shared.

- **Validating data with the Pessamit community.** In order for everyone to agree on the interpretation of the data, it is important to have it validated by members of the community.

- **Sharing results with the community.** It is important that research results be shared with the community. In particular, the notion of open data was mentioned as a topic of discussion, since the Government of Canada is moving in that direction.

- **Discussing the project (to be addressed at the outset)**. It is important, from the beginning of a project, to establish the conditions under which it will be discussed (e.g., when a journalist contacts the researchers).

Although ideas were exchanged about possible future collaborations, at no point in the meeting was there any question of undertaking a research project. In accordance with the wishes of the participants, the meeting was held as an informal person-to-person discussion meant to be light and open.

Before they returned to Quebec City, the researchers visited the new premises of the territory and resources sector of Pessamit. After the visit, they dined with two members of the community. One of them was a gifted orator who spoke passionately of his community, sharing his wealth of traditional knowledge through anecdotes, first- and second-hand stories, as well as historical facts from the archives. On the way back to Québec, the researchers all expressed that their experience had been inspiring. They were all grateful, not only for how they had been welcomed and how the meeting had proceeded, but also for the way each of them had benefitted from learning about the Indigenous perspective and members of the community.

7. Conclusion

Co-creation of knowledge is a complex process. Among other things, we need to think about issues related to the ethics of research in general and the principles of collaborative research. This approach is fraught with challenges, but there are a number of good practices that can inspire researchers who want to move in this direction. Listening respectfully and having the desire to develop intercultural skills are attitudes that encourage dialogue. This establishes good relations, but also contributes to understanding the needs of the community, in order to carry out research that will be useful to its members. A review of the literature enhances understanding of past research projects and helps guide future research practices. In the current project, the review highlighted appropriate ways of proceeding to connect with members of Indigenous communities, in addition to offering some ideas for future LFC projects. Besides this literature review, two workshops were conducted. One workshop involved LFC researchers and the other was conducted with representatives of the Pessamit community. The main question that informed the entire project was: how can connections be formed between LFC researchers and members of Indigenous communities?

During the LFC workshop, several researchers mentioned that they do not know where to turn when they want to communicate with an Indigenous community. The idea of designing a platform or other structure was therefore proposed. With this goal in mind, several studies from the Chair of Educational Leadership in Indigenous Forestry indicate that hiring a liaison officer is an effective measure for fostering relationships between an Indigenous community and an organization (see, for example: Caron, Asselin and Beaudoin, 2018). This practice has mainly been explored from the perspective of Indigenous employability.[7]

It would be interesting to put it to the test in the context of an organization comprising several researchers. As for the workshop in Pessamit, community members were very welcoming and the relationship looks to be off to a good start. During the meeting, it was interesting to note that community representatives were calling for a framework to structure the project without being too rigid. We therefore note the importance of listening, without necessarily following a formal protocol. Based on this perspective, connections can be made with certain elements drawn from the literature review, albeit with some adaptations. The protocol and tools presented at this meeting were not analyzed in depth, but several concerns were raised nonetheless. These also appear in a considerable number of references, particularly in relation to data access, sharing and validation.

From a short- and long-term perspective, it would be interesting to further study relationships between researchers and members of Indigenous communities. How is the relationship structured over the long term? What are the challenges? What are the achievements? How are the community's needs met? What are the implications of Indigenous knowledge with respect to the research? Do these "new" relationships influence researchers (including their visions of the forest or their views of Indigenous peoples)? This project originated as a follow-up to the Truth and Reconciliation Commission's report (TRC, 2015). It would therefore be appropriate to understand how these new relationships are moving away from a colonial approach.

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7. See also: https://www.foresterieautochtone.ulaval.ca/attitudes-et-comportements

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Appendix 1: Table of good practices

	GOOD PRACTICES FOR RESEARCH WITH INDIGENOUS COMMUNITIES
Intercultural relations	Adopt an approach based on listening, sharing, openness and respect, as well as a sense of humility.
	Consider interpersonal ethics as a basis for relationships.
	Bear in mind the attitude of reciprocity as conceived in local spirituality.
	Validate translations and try to minimize associated biases. Keep terms in their original language whenever possible.
	Foster mutual understanding of social and political structures, as well as cultural and local customs.
	Lighten the hours of field work in favour of promoting extra-research activities.
	Encourage researchers' moral commitment.
	Have a stable team that is invested in the communities.
	Adjust to the community's notion of time and timing.
	Inquire about local impressions of research and of the institution for which one works.
	Show respect for local authorities and sites.
	Be careful with the language you use.
	Be well prepared, ensuring that the project is presented clearly.
	Schedule a meeting in person.
	Learn about local knowledge needs; try to find out about local research projects that have been completed or are in development.
	Contact local authorities to inquire about their concerns with respect to the researcher's areas of study.
	Whenever possible, use Indigenous geographical names when referring to places where research is to be carried out.
	Create a provisional round table of stakeholders (territory and resources sector, researchers, the community, etc.) for the duration of the research.
	Consider, if required and to the extent possible, other actors that could be involved in the research (committee of elders, fire and police services, health services sector, education sector, culture and heritage sector, etc.).
	Invite heads of households whose territory is affected by the research and take stock of the areas.
Leading meetings	Engage the services of a local co-facilitator.
	Adopt a decision-making process that promotes consensus.
	Have a ratio of researchers to community members that promotes dialogue and avoids relationships of power.
	Adapt to the group on an ongoing basis, taking interest in the exchange of information.

First steps of a research project	Define the degree of involvement of each participant and the terms of their participation. Discuss the expectations of both parties.
	Ensure that the community being approached has all the information necessary to make a free and informed decision regarding the execution of the research project (details with respect to objectives, methodology, funding and potential impacts) and that they are given adequate time to reach these decisions.
	Agree with the community on whether a research protocol or contract needs to be signed.
	Joint creation of a research agenda.
	Discuss and adapt research objectives and expected results.
	Discuss and adapt the different methodological approaches.
	Discuss and adapt the conditions for data collection.
	Along with the community, provide communication and information-sharing mechanisms during the course of the research project.
	Outline, according to local features, the principles of intellectual property, confidentiality and access to collected data and deliverables.
	Open the conversation about the terms of the publication of results (reports, conferences, media interviews, etc.).
	Along with the community, provide follow-up mechanisms regarding the research.
	Anticipate and explain the potential risks for the community (territory, conflict of use, financial risks).
Formulating research questions	Clarify theoretical concepts. Make sure everyone has the same understanding of the definitions.
	Invite the community to propose new conceptual approaches.
	Avoid redundant research (learn about projects currently underway or having been completed in the community).
FPIC and data collection	Be well prepared and able to explain the project clearly.
	Know as much as possible about the Indigenous community.
	Inform participants about their right to a FPIC, independently of band council decisions.
	Inform participants of the connection between the research and community authorities.
	Obtain the authorization and the consent of use for gathering data (recording, sampling, photographing, etc.).
	Ensure that consent forms are clear and understandable, ideally written in the participants' language.
	Be attentive to silences and nonverbal communication during interviews and group discussions.
Benefits for the community	Engage local skills for fieldwork.
	Create an internal advisory committee with key members of the community.
	Ask for the collaboration of a community member as an assistant or co-researcher, especially for the collection and interpretation of data.
	Establish processes for training, capacity building or knowledge transfer with respect to the research project.

Ownership, control, access and possession of data	Be aware of the concepts of collective intellectual property in Indigenous communities and the implications of confidentiality and data sharing.
	Recognize the right to self-government of Indigenous people in the management of their businesses, territories and cultural resources.
	Clearly identify who will own the results and under what terms (individual, community, shared ownership with the research organization, etc.).
	Discuss data storage with the community (where? how?).
	Report to the community if other organizations or researchers outside the team will have access to the data and specify the conditions, nature and scope of this access.
	Ensure that the community and/or participants can access the data relevant to them.
	Discuss the aspect of responsibility for the data and the possibility of data transfers to the community.
	Discuss the conditions of repatriation and reuse of data by the community (anonymization, pseudoanonymization of verbatim reports, etc.). Discuss the identification of participants and partners within project deliverables.
Analysis, validation and dissemination of data and results	Organize working sessions with participants and partners to validate the interpretations of data and results.
	Have a community representative check the content and vocabulary used in reports and summaries.
	Submit data, reports and research results to the community prior to publication or distribution.
	Ensure results have been understood by participants and local partners.
	Use triangulation (or any other relevant process) in validating data.
	Discuss the forms of acknowledgment of the participants and partners within project deliverables.
	Discuss with the community how the researcher will communicate the results (e.g., in conferences, while validating the materials that will be communicated) and/or develop a plan for their dissemination.
Evaluation of the research process	Assess the partners' appreciation of the products of the research project, the method of communication employed and the wording used.
	Evaluate whether the results collected reflect the community's expectations, particularly in light of the conceptualization and interpretation provided by the researcher.
	Look back on the collaborative research process, examining each step of the project. Identify the successes and the difficulties encountered.
	Collect participants' impressions of the way the data was collected.

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Appendix 3: Pessamit meeting plan

Workshop: From co-existence to (co)-creation (of relationships, practices in the territory, knowlege, sharing, developing capabilities…) through building affinities.

March 21, 2019

1. Brief explanation of the outline of the workshop given by Delphine (5 minutes).
   The main points are:
   a. Introduction of the participants and the reasons behind the project.
   b. How to approach coexistence.
   c. Principles of collaborative research.

2. Round table (30 minutes).
   Each participant responds to the following points:
   a. Name.
   b. Place of origin.
   c. Employment; why I am in this profession (what I like about it).
   d. Connection (relationship) with the territory (the forest).

3. Presentation of the NRCan approach by Frank (15 minutes).
   a. Current reconciliation approach focused on organizations, associations, national or provincial collectives.
   b. Mandate for recommending good practices.
   c. Summary of the workshop held on January 11.
   d. Talk about the Shaputuan project.
   e. Clarification of NRCan "culture" and how the proposed approach is voluntary.

4. Explanation of the process by Delphine and Frank (30 minutes).
   a. Clarification on what we are seeking and brief question period. "Quickly" move on to the workshop.
   b. Go-No go Workshop. Proposal: NRCan and Pessamit should build relationships based on their common interests in the territory.
      Each participant receives Post-it sticky notes.
      Everyone takes a few minutes of individual reflection to write their ideas on the sticky notes, which will then be placed in the appropriate area on the wall.
      Take a moment as a group to discuss the ideas that were shared.

Source: https://native-land.ca/
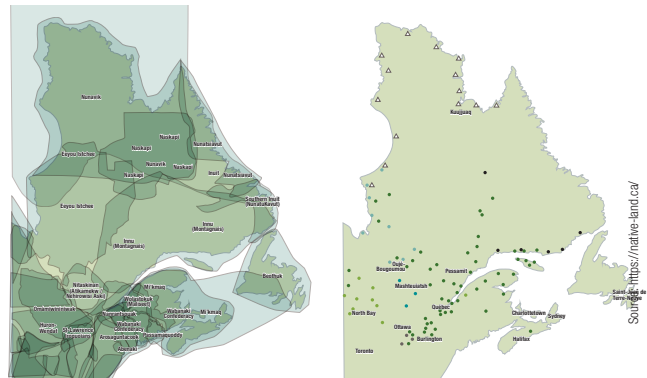
c. **Game Plan Workshop** (if we "pass" Go, otherwise
   we continue to point 5 of the meeting)
   (10 minutes).
   Signs are posted on the wall identifying three
   sections:
   First steps;
   Means to achieve the first steps;
   Each participant's contribution.
   Following the same plan as the previous workshop.
   Participants take a moment to individually write their
   response on a sticky note and place it on the wall.

BREAK   (15 minutes)

Discussion. The sticky notes can be rearranged according to the
discussions as we clarify where we are heading (20 minutes).

5. Principle of collaborative research (45 minutes)
    (using PowerPoint).
    a. Definition of collaborative research.
    b. Presentation of the main principles which currently
       define collaborative research.
    c. Presentation of existing tools.
    d. Discussion/reflection/more…