



HOUSE OF COMMONS  
CHAMBRE DES COMMUNES  
CANADA

# **INCORPORATING INDIGENOUS KNOWLEDGE AND SCIENCE IN CANADIAN RESEARCH AND POLICY DEVELOPMENT**

**Report of the Standing Committee on Science  
and Research**

**Valerie Bradford, Chair**

**JUNE 2024  
44th PARLIAMENT, 1st SESSION**

---

Published under the authority of the Speaker of the House of Commons

**SPEAKER'S PERMISSION**

The proceedings of the House of Commons and its Committees are hereby made available to provide greater public access. The parliamentary privilege of the House of Commons to control the publication and broadcast of the proceedings of the House of Commons and its Committees is nonetheless reserved. All copyrights therein are also reserved.

Reproduction of the proceedings of the House of Commons and its Committees, in whole or in part and in any medium, is hereby permitted provided that the reproduction is accurate and is not presented as official. This permission does not extend to reproduction, distribution or use for commercial purpose of financial gain. Reproduction or use outside this permission or without authorization may be treated as copyright infringement in accordance with the *Copyright Act*. Authorization may be obtained on written application to the Office of the Speaker of the House of Commons.

Reproduction in accordance with this permission does not constitute publication under the authority of the House of Commons. The absolute privilege that applies to the proceedings of the House of Commons does not extend to these permitted reproductions. Where a reproduction includes briefs to a Standing Committee of the House of Commons, authorization for reproduction may be required from the authors in accordance with the *Copyright Act*.

Nothing in this permission abrogates or derogates from the privileges, powers, immunities and rights of the House of Commons and its Committees. For greater certainty, this permission does not affect the prohibition against impeaching or questioning the proceedings of the House of Commons in courts or otherwise. The House of Commons retains the right and privilege to find users in contempt of Parliament if a reproduction or use is not in accordance with this permission.

Also available on the House of Commons website  
at the following address: [www.ourcommons.ca](http://www.ourcommons.ca)

**INCORPORATING INDIGENOUS KNOWLEDGE  
AND SCIENCE IN CANADIAN RESEARCH AND  
POLICY DEVELOPMENT**

**Report of the Standing Committee on  
Science and Research**

**Valerie Bradford  
Chair**

**JUNE 2024**

**44th PARLIAMENT, 1st SESSION**

## **NOTICE TO READER**

### **Reports from committees presented to the House of Commons**

Presenting a report to the House is the way a committee makes public its findings and recommendations on a particular topic. Substantive reports on a subject-matter study usually contain a synopsis of the testimony heard, the recommendations made by the committee, as well as the reasons for those recommendations.

# **STANDING COMMITTEE ON SCIENCE AND RESEARCH**

## **CHAIR**

Valerie Bradford

## **VICE-CHAIRS**

Corey Tochor

Maxime Blanchette-Joncas

## **MEMBERS**

Richard Cannings

Shaun Chen

Lena Metlege Diab

Hon. Helena Jaczek

Mike Kelloway

Ben Lobb

Lloyd Longfield

Hon. Michelle Rempel Garner

Gerald Soroka

## **OTHER MEMBERS OF PARLIAMENT WHO PARTICIPATED**

Yvan Baker

Élisabeth Brière

George Chahal

Paul Chiang

Chad Collins

Luc Desilets

Sukh Dhaliwal

Ted Falk

Marilyn Gladu

Randall Garrison

Brendan Hanley

Jamil Jivani  
Arielle Kayabaga  
Hon. David Lametti  
Joël Lightbound  
Larry Maguire  
Michael V. McLeod  
Blake Richards  
Darrell Samson  
Charles Sousa  
Ryan Turnbull  
Anita Vandenberg

**CLERKS OF THE COMMITTEE**

Philip den Ouden  
Hilary Smyth

**LIBRARY OF PARLIAMENT**

**Research and Education**

Kelsey Brennan, Analyst  
Grégoire Gayard, Analyst

# **THE STANDING COMMITTEE ON SCIENCE AND RESEARCH**

has the honour to present its

## **ELEVENTH REPORT**

Pursuant to its mandate under Standing Order 108(3)(i), the committee has studied the integration of indigenous traditional knowledge and science in government policy development and has agreed to report the following:





# TABLE OF CONTENTS

---

SUMMARY .....	1
LIST OF RECOMMENDATIONS .....	3
INCORPORATING INDIGENOUS KNOWLEDGE AND SCIENCE IN CANADIAN RESEARCH AND POLICY DEVELOPMENT .....	7
Introduction.....	7
Chapter 1: Indigenous Knowledge and Science.....	7
1.1 Indigenous Knowledge and Science Within Indigenous Communities in Canada .....	8
1.2 Indigenous Knowledge and Science in Relation to Other Knowledge Systems.....	13
1.3 Historic and Ongoing Barriers Faced by Indigenous Communities in Engaging with Knowledge Practices .....	15
Chapter 2: Incorporating Indigenous Knowledge and Science in Canadian Policy Development.....	16
2.1 Terms to Describe Incorporating Indigenous Knowledge and Science ..	16
2.2 How Indigenous Knowledge and Science is Currently Contributing to Canadian Research and Policy Development .....	18
2.2.1 Indigenous Knowledge in the Federal Government .....	19
2.2.2 Indigenous Knowledge and Provincial and Territorial Government Programs .....	23
2.2.3 Indigenous Knowledge in International Policy.....	24
2.2.4 Indigenous Knowledge and Western Science-based Research .....	25
2.3 Resolving Conflicts and Disputes .....	27
2.4 Increasing the Use of Indigenous Knowledge and Science in Canadian Research and Policy Development .....	31
2.4.1 Early Engagement .....	31
2.4.2 Ongoing Engagement.....	32
2.4.3 Alignment with Existing Policies.....	33

2.4.4 Supporting Indigenous Communities and Indigenous Sovereignty .....	35
2.4.5 Education and Training.....	37
APPENDIX A: LIST OF WITNESSES.....	41
APPENDIX B: LIST OF BRIEFS.....	45
REQUEST FOR GOVERNMENT RESPONSE .....	47
SUPPLEMENTARY OPINION OF THE BLOC QUÉBÉCOIS .....	49

## SUMMARY

---

On 18 September 2023, the House of Commons Standing Committee on Science and Research (the Committee) decided to undertake a study on the ways in which Indigenous knowledge and science can inform Canadian research and policy development. During its study, the Committee held seven meetings between 6 November 2023 and 13 February 2024. It heard from 47 witnesses and received five briefs.

Witnesses warned the Committee that simple definitions of Indigenous knowledge and science are impossible to establish, due to the diversity of Indigenous communities across Canada and the localized, place-based nature of specific Indigenous knowledge systems. However, some common elements of Indigenous knowledge systems include the involvement of Indigenous knowledge holders, focusing on relationships, respect for the world and those within it, and the use of Indigenous languages. Other witnesses cautioned against defining a knowledge system based on membership in a specific cultural or ethnic group, emphasizing the universal nature of knowledge.

The Committee heard from some witnesses that rather than integrating Indigenous knowledge and science into Canadian research and policy development, organizations and governments should focus on supporting such concepts as parallel paths, two-eyed seeing, ethical space, braiding and weaving as ways to show how knowledge systems of equal prominence and value can support and strengthen decision-making processes.

The Committee heard about the many ways in which Indigenous knowledge and science is already contributing to Canadian research and policy development at federal, provincial, territorial, international and institutional levels, such as through the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Witnesses also provided suggestions on how to resolve any conflicts that emerge between different knowledge systems, and ways in which the Government of Canada can improve the way Indigenous knowledge and science is considered in research and policy development. Some of these improvements include supporting early and ongoing engagement with Indigenous communities during research projects and policy development, aligning government practices with existing policies such as UNDRIP, supporting Indigenous communities and institutions, and providing increased educational and training opportunities for both Indigenous and non-Indigenous peoples in Canada on this topic.

Based on the testimony it heard, the Committee is making 15 recommendations to the federal government to support the use, development and integration of Indigenous knowledge and science in Canadian research and policy development.

# LIST OF RECOMMENDATIONS

---

*As a result of their deliberations committees may make recommendations which they include in their reports for the consideration of the House of Commons or the Government. Recommendations related to this study are listed below.*

## **Recommendation 1**

**That the Government of Canada encourage researchers to build relationships with Indigenous communities prior to identifying specific research projects. .... 31**

## **Recommendation 2**

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research—review funding criteria to ensure that all research projects affecting Indigenous populations in Canada have established relationships with the relevant communities and received their consent and support for the project prior to approving funding..... 31**

## **Recommendation 3**

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research—examine the representation of Indigenous knowledge holders on their review panels and work with Indigenous communities to support the appropriate evaluation of applications for funding that affect Indigenous communities. .... 32**

## **Recommendation 4**

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research— review funding criteria to ensure that all projects affecting Indigenous communities in Canada have sufficient timelines to ensure the ongoing participation of the affected communities and encourage participation across all stages of the project..... 33**

**Recommendation 5**

That the Government of Canada accelerate implementation of the *United Nations Declaration on the Rights of Indigenous Peoples Act* Action Plan, and the recommendations of the Truth and Reconciliation Commission and the National Inquiry Into Missing and Murdered Indigenous Women and Girls, and report regularly to ensure that progress is being made without delay. .... 34

**Recommendation 6**

That the Government of Canada replicate the National Advisory Committee established in the *Canadian Environmental Protection Act* in other ministries to ensure Indigenous communities’ input into Canadian federal policy development..... 34

**Recommendation 7**

That the Government of Canada explore additional opportunities to support self-determination in Indigenous communities across Canada, such as the development of co-management agreements pertaining to land and resources with Indigenous communities..... 37

**Recommendation 8**

That the Government of Canada explore methods to incorporate Indigenous-led research priorities, such as the First Nations Principles of Ownership, Control, Access and Protection (OCAP®) and the National Inuit Strategy on Research, into federal policies and practices..... 37

**Recommendation 9**

That the Government of Canada, in collaboration with Indigenous governments, organizations and communities, explore the ways in which Indigenous data sovereignty and collective rights can be better supported in Canadian policy and law. .... 37

**Recommendation 10**

That the Government of Canada increase Indigenous participation in policy development, such as through increased Indigenous hiring or the development of a comprehensive list of local Indigenous advisors. .... 37

**Recommendation 11**

**That the Government of Canada review and bolster training requirements for public servants to ensure that all employees receive sufficient training in Indigenous history and practices, and to provide specialized training for those working directly with Indigenous communities. .... 39**

**Recommendation 12**

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research—enhance supports for Indigenous students and researchers. .... 40**

**Recommendation 13**

**That the Government of Canada review experience criteria for positions within the public service and for external funding opportunities to ensure that different forms of cultural experience, such as on-the-land experience, are considered in hiring, promotion, and funding decisions when appropriate. .... 40**

**Recommendation 14**

**That the Government of Canada, through the Canada Foundation for Innovation, increase investment in Indigenous research and post-secondary educational institutions. .... 40**

**Recommendation 15**

**That the Government of Canada continue to support Indigenous language revitalization, such as federal funding for Indigenous language initiatives and the use of Indigenous place names in federal documents. .... 40**







# INCORPORATING INDIGENOUS KNOWLEDGE AND SCIENCE IN CANADIAN RESEARCH AND POLICY DEVELOPMENT

---

## INTRODUCTION

On 18 September 2023, the House of Commons Standing Committee on Science and Research (the Committee) adopted the following motion to study ways in which Indigenous knowledge and science can inform Canadian research and policy development:

That, pursuant to Standing Order 103(3)(i), the Committee undertake a study of how best to integrate Indigenous Traditional Knowledge and science into government policy development; how to resolve conflicts between the two knowledge systems; that a minimum of 12 hours of witness testimony be heard prior to the drafting of the report to the House of Commons and that, pursuant to Standing Order 109, the committee request that the government table a comprehensive response to the report.<sup>1</sup>

During its study, the Committee held seven meetings between 6 November 2023 and 13 February 2024. It heard from over 40 witnesses and received five briefs. The Committee would like to thank all the individuals and organizations that took the time to participate in this study by appearing or submitting a brief.

The evidence compiled by the Committee led to 15 recommendations for the Government of Canada to support the use of Indigenous knowledge and science in Canadian research and policy development.

## CHAPTER 1: INDIGENOUS KNOWLEDGE AND SCIENCE

The following sections explore what Indigenous knowledge and science looks like among the many Indigenous communities in Canada and in relation to other knowledge

---

1 House of Commons, Standing Committee on Science and Research (SRSR), *Minutes of Proceedings*, 18 September 2023.



systems, as well as historic and ongoing barriers Indigenous communities have faced in engaging with these practices.

## 1.1 Indigenous Knowledge and Science Within Indigenous Communities in Canada

Many witnesses and those who provided written submissions warned the Committee that a single definition of Indigenous knowledge and science was impossible to establish, due to the diversity of Indigenous communities across Canada, and the localized, place-based nature of specific Indigenous knowledge systems.<sup>2</sup> As Marjolaine Tshernish, Executive Director of Institut Tshakapesh explained, “Canada is home to some 80 Indigenous nations. Each of these nations has its own history, language, beliefs, and traditional knowledge.”<sup>3</sup> However, some common elements of Indigenous knowledge systems emerged throughout the study.

Broadly, the Tri-Agency Reference Group for the Appropriate Review of Indigenous Research, which includes representatives from the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Canadian Institutes of Health Research (CIHR), recognize

---

2 SRSR, [Evidence](#), 29 November 2023, 1650 (K\_ii'lijuus Barbara Wilson, Haida Scholar and Matriarch of the St'awaas X\_aaydaG\_a, Ruling Eagle Clan, Cumshewa, As an individual); SRSR, [Evidence](#), 27 November 2023, 1720 (Jeannette Armstrong, Associate Professor, As an individual); SRSR, [Evidence](#), 29 November 2023, 1830 (Joe Dragon, Chairman, Board of Directors, Canadian Mountain Network/Braiding Knowledges Canada); SRSR, [Evidence](#), 27 November 2023, 1540 (Alexandra Cropp, Senior Manager of Operations, Mokwateh); SRSR, [Evidence](#), 27 November 2023, 1655 (Kelsey Wrightson, Executive Director, Dechinta Centre for Research and Learning); SRSR, [Evidence](#), 27 November 2023, 1710 (Kevin Lewis, Assistant Professor, University of Saskatchewan); SRSR, [Evidence](#), 8 February 2024, 1210 (Marjolaine Tshernish, Executive Director, Institut Tshakapesh); SRSR, [Evidence](#), 29 November 2023, 1840 (Hugo Asselin, Full professor, As an individual); SRSR, [Evidence](#), 13 February 2024, 1150 (Dominique Henri, Research Scientist, Department of the Environment); SRSR, [Evidence](#), 29 November 2023, 1650 (Anne Salomon, Professor of Applied Marine Ecology and Social-Ecological System Science, As an individual); SRSR, [Evidence](#), 4 December 2023, 1615 (Kyle Bobiwash, Assistant Professor, As an individual); SRSR, [Evidence](#), 4 December 2023, 1620 (Jared Gonet, PhD Candidate, Conservation Biology, As an individual); SRSR, [Evidence](#), 6 February 2024, 1250 (Kori Czuy, Indigenous Science Consultant, As an individual); SRSR, [Evidence](#), 8 February 2024, 1220 (Nancy Turner, Distinguished Professor Emerita, As an individual); SRSR, [Evidence](#), 13 February 2024, 1210 (Danika Littlechild, Assistant Professor, Carleton University, As an individual); Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024; Danika Billie Littlechild, [Brief](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 9 February 2024; and SRSR, [Evidence](#), 13 February 2024, 1255 (Heather Sayine-Crawford, Director, Wildlife Management, Government of the Northwest Territories).

3 SRSR, [Evidence](#), 6 November 2023, 1600 (Marjolaine Tshernish).

Indigenous research as “research conducted by, grounded in, or engaged with, First Nations, Inuit or Métis communities, societies or individuals and their wisdom, cultures, experiences or knowledge systems, as expressed in their dynamic forms, past and present.”<sup>4</sup>

Witnesses and supplemental material provided to the Committee spoke to the fact that Indigenous methods emphasize relationships, such as those between different generations of humans, those between different disciplines of study, and those between humans, animals and nature.<sup>5</sup> Kevin Lewis, an Assistant Professor at the University of Saskatchewan, explained the relationality of Indigenous knowledge using the birch tree: “This tree can feed us. We can drink from this tree, and we can travel with canoes, and we can create baskets to gather and harvest plants and medicines.”<sup>6</sup>

Connected to this emphasis on relationships is the idea that other living beings, such as plants and animals, have rights, and that human activities should respect all living beings and strive for individual and community improvement.<sup>7</sup> Tammy Steinwand-Deschambeault,

- 
- 4 Government of Canada, *Tri-agency written brief for the House of Commons Standing Committee on Science and Research: Integration of Indigenous Traditional Knowledge and Science in Government Policy Development*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.
- 5 SRSR, *Evidence*, 27 November 2023, 1555 (Joseph Mays, Program Director, Indigenous Reciprocity Initiative of the Americas, The Chacruna Institute for Psychedelic Plant Medicines); SRSR, *Evidence*, 29 November 2023, 1825 (Joe Dragon); SRSR, *Evidence*, 6 November 2023, 1715 (Marc D’lorio, Assistant Deputy Minister, Science and Technology Branch, Department of the Environment); SRSR, *Evidence*, 27 November 2023, 1715 (Michael DeGagné, President and Chief Executive Officer, Indspire); SRSR, *Evidence*, 27 November 2023, 1635 (Kevin Lewis); SRSR, *Evidence*, 29 November 2023, 1735 (Anne Salomon); SRSR, *Evidence*, 29 November 2023, 1735 (K\_ii’iljuus Barbara Wilson); SRSR, *Evidence*, 4 December 2023, 1620 (Jared Gonet); SRSR, *Evidence*, 6 February 2024, 1130 (Lindsay Heller, Indigenous Fellow, Simon Fraser University, Morris J. Wosk Centre for Dialogue, As an individual); SRSR, *Evidence*, 6 February 2024, 1250 (Kori Czuy); SRSR, *Evidence*, 8 February 2024, 1220 (Nancy Turner); SRSR, *Evidence*, 8 February 2024, 1140 (Chief Jessica Lazare, Mohawk Council of Kahnawake); Joe Copper Jack, *Land and Peoples Relationship Model*, 25 May 2020; and Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024.
- 6 SRSR, *Evidence*, 27 November 2023, 1635 (Kevin Lewis).
- 7 SRSR, *Evidence*, 6 November 2023, 1600 (Marjolaine Tshernish); SRSR, *Evidence*, 4 December 2023, 1615 (Kyle Bobiwash); SRSR, *Evidence*, 4 December 2023, 1620 (Jared Gonet); SRSR, *Evidence*, 6 February 2024, 1130 (Lindsay Heller); SRSR, *Evidence*, 8 February 2024, 1140 (Chief Jessica Lazare); SRSR, *Evidence*, 8 February 2024, 1220 (Nancy Turner); SRSR, *Evidence*, 13 February 2024, 1235 (Tammy Steinwand-Deschambeault, Director, Department of Culture and Lands Protection, Tlicho Government); SRSR, *Evidence*, 8 February 2024, 1205 (Vicki Kelly, Associate Professor, Simon Fraser University); Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024; and Andrew Manitowabi, *Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.



the Director of the Department of Culture and Lands Protection with the Tlicho Government, speaking in reference to the Tlicho Nation specifically, encouraged developing knowledge that “helps us to live in harmony with all other forms of life.”<sup>8</sup> Vicki Kelly, an Associate Professor at Simon Fraser University, defined this concept as practicing reverence, respect, responsibility, reciprocity and relationality:

[R]everance, to walk with humility and reverence for life; respect, to respect all ways of being and the right to be and become; responsibility, to walk in a good way, honouring our responsibility as a member within the family of Creation; reciprocity, to take good care of and offer back in gratitude for what we have been given; relationality, to live relationally and ethically in relation to all our relations.<sup>9</sup>

Other witnesses spoke to the fact that Indigenous knowledge is often embedded within Indigenous languages.<sup>10</sup> Myrle Ballard, the Chief Indigenous Science Advisor with the Department of the Environment, described how the word Saskatchewan, in the Anishinaabemowin language, means “where the water runs dry” or “where the water evaporates.”<sup>11</sup> She explained that “[w]hen you start to develop the indicators from why the province was named as such before there were borders, you will start to understand the indicators over time and from then to the present what happened, and you can start developing the indicators.”<sup>12</sup>

The Committee also heard that the use of the word “traditional” in relation to Indigenous knowledge and science can imply that such knowledge and practices are historical in nature, but that there is in fact a living body of knowledge, evolving practices, and diverse

---

8 SRSR, [Evidence](#), 13 February 2024, 1235 (Tammy Steinwand-Deschambeault).

9 SRSR, [Evidence](#), 8 February 2024, 1205 (Vicki Kelly).

10 SRSR, [Evidence](#), 6 February 2024, 1200 (Kori Czuy); SRSR, [Evidence](#), 6 November 2023, 1730 (Myrle Ballard, Chief Indigenous Science Advisor, Department of the Environment); SRSR, [Evidence](#), 27 November 2023, 1715 (Kevin Lewis); and SRSR, [Evidence](#), 29 November 2023, 1840 (Joe Dragon).

11 SRSR, [Evidence](#), 6 November 2023, 1730 (Myrle Ballard).

12 Ibid.

practitioners involved in Indigenous science to this day.<sup>13</sup> As Jamie Snook, Executive Director of the Torngat Wildlife Plants and Fisheries Secretariat, testified, “it’s not just the past. In all of our Indigenous communities in Canada, there is continued and ongoing monitoring in our communities.”<sup>14</sup>

However, “traditional” also encompasses the many generations-worth of knowledge that have been generated by Indigenous communities regarding the lands and waters they live in.<sup>15</sup> As Jeanette Armstrong, an Associate Professor who testified before the Committee as an individual, wrote in a brief, “[i]t is in the way Indigenous systems knowledge is produced and held as specific to places of constant use and observation, that is reproduced through countless generations that underlines its preciseness and reliability for environmental solutions-making.”<sup>16</sup>

Witnesses provided many examples of Indigenous knowledge and science, both historically and currently in practice. Some of those examples include:

- clam gardens on the Northwest coast developed by the Wei Wai Kum Nation thousands of years ago to cultivate clam populations as part of the Nation’s diet and the local ecosystem;<sup>17</sup>

---

13 SRSR, *Evidence*, 29 November 2023, 1740 (Bruce Maclean, Director, Maclean Environmental Consulting, As an individual); SRSR, *Evidence*, 29 November 2023, 1740 (Jamie Snook, Executive Director, Torngat Wildlife Plants and Fisheries Secretariat); SRSR, *Evidence*, 4 December 2023, 1610 (Mark Bonta, Geographer, As an individual); SRSR, *Evidence*, 4 December 2023, 1630 (Brenda Parlee, Professor, UNESCO Chair, University of Alberta, As an individual); SRSR, *Evidence*, 13 February 2024, 1235 (Tammy Steinwand-Deschambeault); Government of Alberta, *Indigenous Wisdom Advisory Panel Mandate and Roles Document*, May 2017; Government of Canada, *Tri-agency written brief for the House of Commons Standing Committee on Science and Research: Integration of Indigenous Traditional Knowledge and Science in Government Policy Development*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; and Bruce Maclean, “Written response to questions,” Written submission to the House of Commons Standing Committee on Science and Research, 2023.

14 SRSR, *Evidence*, 29 November 2023, 1735 (Jamie Snook).

15 SRSR, *Evidence*, 6 November 2023, 1600 (Marjolaine Tshernish); Jeanette Armstrong, *The Integration of Indigenous Traditional Knowledge and Science in Government Policy Development. How best to integrate Indigenous Traditional Knowledge and science into government policy development; how to resolve conflicts between the two knowledge systems*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2023; and SRSR, *Evidence*, 13 February 2024, 1150 (Dominique Henri).

16 Jeanette Armstrong, *The Integration of Indigenous Traditional Knowledge and Science in Government Policy Development. How best to integrate Indigenous Traditional Knowledge and science into government policy development; how to resolve conflicts between the two knowledge systems*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2023.

17 SRSR, *Evidence*, 8 February 2024, 1220 (Nancy Turner); SRSR, *Evidence*, 29 November 2023, 1720 (Anne Salomon); and SRSR, *Evidence*, 6 November 2023, 1740 (Myrle Ballard).



- halibut hooks among the Haida built to a specific size that allow juveniles and breeders to escape;<sup>18</sup>
- a system based on the number four among Indigenous Hawaiians, related to the number of fish that could be carried in each hand when harvesting from fish traps;<sup>19</sup>
- the use of annedda (a species of conifer) to cure scurvy, discovered by the Iroquois in the 16th century, explained to Jacques Cartier in the 17th century, and linked to annedda's Vitamin C content in the 19th century;<sup>20</sup>
- the Tlicho Government's co-management of caribou populations, including the Boots on the Ground caribou research program into declining caribou populations;<sup>21</sup>
- the Mohawk Council of Kahnawake's environmental protection office, which engages in extensive environmental monitoring and research on the impacts of climate change on the environment;<sup>22</sup>
- ranger and guardian programs that embed environmental monitoring, such as measuring ice thickness, monitoring ice travel safety and engaging in Indigenous fire management, as well as promoting cultural practices;<sup>23</sup> and,

---

18 SRSR, [Evidence](#), 29 November 2023, 1645 (K\_ii'iljuus Barbara Wilson).

19 SRSR, [Evidence](#), 6 February 2024, 1250 (Kori Czuy).

20 Yves Gingras, [Brief](#), Brief submitted to the Standing Senate Committee on the Energy, the Environment and Natural Resources, 24 January 2019; and SRSR, [Evidence](#), 6 February 2024, 1205 (Yves Gingras, Professor of History and Sociology of Science, Université du Québec à Montréal, As an individual).

21 SRSR, [Evidence](#), 13 February 2024, 1235 (Tammy Steinwand-Deschambeault).

22 SRSR, [Evidence](#), 8 February 2024, 1135 (Chief Jessica Lazare).

23 SRSR, [Evidence](#), 4 December 2023, 1640 (Brenda Parlee); SRSR, [Evidence](#), 8 February 2024, 1225 (Marjolaine Tshernish); SRSR, [Evidence](#), 29 November 2023, 1700 (Nang Jingwas Russ Jones, Hereditary Chief, Council of the Haida Nation); SRSR, [Evidence](#), 4 December 2023, 1725 (Mark Bonta); and Bruce Maclean et al., "Towards a Rights-Based Ice Monitoring Tigger," CGU HS Committee on River Ice Processes and the Environment, 2021.

- the promotion of subsistence harvesting to address issues of food security and food sovereignty, provide cultural and spiritual value, and contribute to wildlife health and management practices.<sup>24</sup>

Yves Gingras, Professor of History and Sociology of Science at the Université du Québec à Montréal, appearing as an individual, opposed a definition of Indigenous knowledge and science that situates it in terms of “the source, holders or users of that knowledge.”<sup>25</sup> He argues that “any knowledge, datum or theory is only true or false and has no ethnic nature. Certainly, we can celebrate the people who discovered it and boast of their nationality, gender or ethnicity, but that in no way means that the knowledge, in itself, has an ethnic or national character.”<sup>26</sup>

In a similar vein, Dominique Henri, a Research Scientist with the Department of the Environment, said that “[i]t’s important to keep in mind that scientific thought is universal. It applies to all people, regardless of their ethnic origin. All science is based on observation, but the methods used can differ.”<sup>27</sup>

## 1.2 Indigenous Knowledge and Science in Relation to Other Knowledge Systems

Witnesses spoke of both similarities and differences between Indigenous knowledge and science and other knowledge systems, particularly what was often referred to as “Western science.”<sup>28</sup>

As someone opposed to the term “Indigenous science”, Yves Gingras, in a 2022 article he submitted to the Committee for additional context, argued, “that science knows no

---

24 SRSR, *Evidence*, 6 November 2023, 1550 (Susan Kutz, Professor and Tier 1 Canada Research Chair in Arctic One Health, As an individual); Susan Kutz, “[Are we adequately prepared for emerging infectious diseases in the Canadian Arctic?](#)” *The Hill Times*, 13 June 2022; SRSR, *Evidence*, 8 February 2024, 1135 (Chief Jessica Lazare); SRSR, *Evidence*, 29 November 2023, 1720 (Anne Salomon); and SRSR, *Evidence*, 8 February 2024, 1220 (Nancy Turner).

25 Yves Gingras, *Brief*, Brief submitted to the Standing Senate Committee on the Energy, the Environment and Natural Resources, 24 January 2019.

26 Ibid.

27 SRSR, *Evidence*, 13 February 2024, 1155 (Dominique Henri).

28 “Western science” may be used to refer to a system of knowledge originating from predominantly European regions that is positivist, materialist, objective and quantitative. Western science is also based on academic transmission and publication. Fulvio Mazzocchi, “[Western science and traditional knowledge: Despite their variations, different forms of knowledge can learn from each other,](#)” *EMBO Reports*, Vol. 7, Issue 5, 2006.



nationality. I also believe that there is no such thing as “Western” science. It is clear from the historical development of most disciplines that many scientists from many countries have contributed to universal knowledge.”<sup>29</sup>

Carole Lévesque, a Full Professor with the Indigenous Peoples Research and Knowledge Network, emphasized that scientific methods can differ across societies, particularly in the social sciences, as “forms of knowledge that derive from an understanding of societies and their manifestations,” which are thus “practiced differently in Africa, South America and Canada.”<sup>30</sup>

Other witnesses described Western knowledge as individualist and reductionist, in comparison to Indigenous knowledge that has a more community-centred and social perspective.<sup>31</sup> Laurie Swami, President and Chief Executive Officer of the Nuclear Waste Management Organization, described the two systems as complementary but fundamentally different, stating that:

While Western knowledge gives us a framework for generating knowledge through experimentation, the knowledge it creates is sometimes not complete, is often inaccessible for Indigenous peoples, and often places us alone as humans at the centre of its findings... Indigenous knowledge offers a potentially diverse perspective in which humans are part of a greater relationship with the environment, a relationship that gives us insights into the workings of the world and the ethics of our decisions.<sup>32</sup>

Joe Dragon, Chairman of the Board of Directors of the Canadian Mountain Network/Braiding Knowledges Canada, also spoke of the different ways experience is measured in different knowledge systems:

Having gone through the Western academic system to get a Ph.D. studying caribou, I had to prove that I had the credentials to be in that type of government position as a wildlife biologist. From an Indigenous perspective... Well, my proof was when I was 10 years old and shot my first moose. With my father, I had to go through and be able to process that whole moose by myself. Now, it was a cow moose; I didn’t have any antlers to show, but my great-aunt made me a shell bag out of the ears, and that was my proof.

---

29 Yves Gingras, “No Such Thing as Western Science,” *Pour la Science*, 23 July 2022.

30 SRSR, *Evidence*, 8 February 2024, 1130 (Carole Lévesque, Full Professor, Indigenous Peoples Research and Knowledge Network).

31 SRSR, *Evidence*, 27 November 2023, 1715 (Michael DeGagné); SRSR, *Evidence*, 6 February 2024, 1200 (Kori Czuy); SRSR, *Evidence*, 27 November 2023, 1615 (Joseph Mays); and SRSR, *Evidence*, 8 February 2024, 1130 (Carole Lévesque).

32 SRSR, *Evidence*, 27 November 2023, 1545 (Laurie Swami, President and Chief Executive Officer, Nuclear Waste Management Organization).



That was my cultural proof... That's how we teach in our culture, but we don't need to publish it; it's a part of who we are.<sup>33</sup>

### 1.3 Historic and Ongoing Barriers Faced by Indigenous Communities in Engaging with Knowledge Practices

Witnesses discussed the challenges faced by Indigenous communities in practicing their systems of knowledge as a result of colonialism.<sup>34</sup> This includes the history of residential schools and the ways in which Western education systems discredited Indigenous knowledge systems, including the suppression of Indigenous languages.<sup>35</sup> Witnesses also spoke about how Indigenous knowledge of medicines has historically been appropriated by scientists without credit given. Examples given included psychedelic plants and Pacific yew, which have been used by Western scientists and the pharmaceutical industry to generate enormous profits.<sup>36</sup> As Michael Lyons, Priest in Charge, appearing as an individual in relation to his work on psychedelic plants, described:

[P]sychedelic plants such as peyote in the Native American Church context, as well as ayahuasca in the context of the South American shamans, have been used by Indigenous peoples around the world in the integration of their holistic model of health and healing, something that is not accounted for within the Western medical paradigm.<sup>37</sup>

---

33 SRSR, [Evidence](#), 29 November 2023, 1800 (Joe Dragon).

34 SRSR, [Evidence](#), 29 November 2023, 1800 (Joe Dragon); SRSR, [Evidence](#), 6 February 2024, 1110 (Monnica Williams, Canada Research Chair in Mental Health Disparities and professor at the University of Ottawa, As an individual); SRSR, [Evidence](#), 29 November 2023, 1650 (Bruce Maclean); SRSR, [Evidence](#), 6 November 2023, 1600 (Marjolaine Tshernish); SRSR, [Evidence](#), 4 December 2023, 1620 (Jared Gonet); SRSR, [Evidence](#), 6 February 2024, 1100 (Erika Dyck, Professor of History and Tier 1 Canada Research Chair in History of Health and Social Justice, As an individual); SRSR, [Evidence](#), 8 February 2024, 1145 (Chief Jessica Lazare); and SRSR, [Evidence](#), 8 February 2024, 1250 (Nancy Turner).

35 SRSR, [Evidence](#), 4 December 2023, 1620 (Jared Gonet); SRSR, [Evidence](#), 8 February 2024, 1105 (Chief Jessica Lazare); and SRSR, [Evidence](#), 8 February 2024, 1250 (Nancy Turner).

36 SRSR, [Evidence](#), 6 February 2024, 1145 (Monnica Williams); SRSR, [Evidence](#), 27 November 2023, 1535 (Michael Lyons, Priest in Charge, As an individual); and SRSR, [Evidence](#), 6 February 2024, 1150 (Lindsay Heller).

37 SRSR, [Evidence](#), 27 November 2023, 1535 (Michael Lyons).



It was noted that these experiences have resulted in an “inherent distrust” of Western institutions among some Indigenous communities.<sup>38</sup>

Witnesses also spoke to ongoing challenges faced by Indigenous communities, such as access to clean water, food and health care, which can make practicing traditional knowledge challenging.<sup>39</sup>

## CHAPTER 2: INCORPORATING INDIGENOUS KNOWLEDGE AND SCIENCE IN CANADIAN POLICY DEVELOPMENT

### 2.1 Terms to Describe Incorporating Indigenous Knowledge and Science

Witnesses discussed multiple ways of referring to the process of incorporating Indigenous knowledge and science in Canadian research and policy development, and the importance of choosing appropriate language.

Many of the terms the Committee heard incorporate concepts related to having parallel paths for different knowledge systems that act independently and with equal legitimacy but come together to share knowledge and develop collaborative solutions to societal issues.<sup>40</sup> As Kori Czuy, an Indigenous Science Consultant appearing as an individual, testified, “a parallel path is more about walking alongside one another and supporting one another.”<sup>41</sup>

Several witnesses spoke about two-eyed seeing, a concept put forward by Mik’maq elder Albert Marshall, which Susan Kutz, a Professor and Tier 1 Canada Research Chair in

---

38 SRSR, [Evidence](#), 6 February 2024, 1140 (Lindsay Heller); SRSR, [Evidence](#), 4 December 2023, 1620 (Jared Gonet); SRSR, [Evidence](#), 27 November 2023, 1630 (Alexandra Cropp); and Carmen Wong et al., “[Towards reconciliation: 10 Calls to Action to natural scientists working in Canada](#),” *FACETS*, Vol. 5, No. 1, 1 October 2020.

39 SRSR, [Evidence](#), 27 November 2023, 1550 (Joseph Mays); and SRSR, [Evidence](#), 6 February 2024, 1110 (Monnica Williams).

40 Joe Copper Jack, *Land and Peoples Relationship Model*, 25 May 2020; SRSR, [Evidence](#), 13 February 2024, 1225 (Danika Littlechild); SRSR, [Evidence](#), 6 November 2023, 1715 (Myrle Ballard); SRSR, [Evidence](#), 6 November 2023, 1745 (Sarah Kalhok Bourque, Director, Arctic Science Policy Integration, Department of Crown-Indigenous Relations and Northern Affairs); Government of Alberta, *Indigenous Wisdom Advisory Panel Mandate and Roles Document*, May 2017; SRSR, [Evidence](#), 29 November 2023, 1810 (Joe Dragon); SRSR, [Evidence](#), 8 February 2024, 1115 (Carole Lévesque); SRSR, [Evidence](#), 27 November 2023, 1640 (Michael DeGagné); SRSR, [Evidence](#), 29 November 2023, 1650 (K\_ii’iljuus Barbara Wilson); SRSR, [Evidence](#), 29 November 2023, 1735 (Jamie Snook); and SRSR, [Evidence](#), 6 February 2024, 1235 (Kori Czuy).

41 SRSR, [Evidence](#), 6 February 2024, 1235 (Kori Czuy).

Arctic One Health, appearing as an individual, described as “learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing and from the other eye with the strengths of Western knowledge and ways of knowing. It’s learning to use both eyes together for the benefit of all.”<sup>42</sup>

Danika Littlechild, an Assistant Professor at Carleton University, appearing as an individual, presented this within the framework of ethical space, which is

essentially a different methodological approach to understanding how to co-create new relationships between Indigenous and non-indigenous peoples. One of the things that ethical space asks us to do is to reassess our own positionality relative to various issues, and it tries to give an elevation to Indigenous systems without being interfered with by the mainstream.<sup>43</sup>

Other witnesses situated incorporating Indigenous knowledge through the lens of interdisciplinarity.<sup>44</sup> Carole Lévesque described how Indigenous knowledge supports greater interdisciplinarity in Western science. She highlighted that in Western science, there is often little collaboration between the social and natural sciences, and that “Indigenous knowledge systems can’t be understood as so many separate disciplines.”<sup>45</sup>

Myrle Ballard, meanwhile, testified to distinctions between bridging, braiding and weaving knowledge together:

Bridging means to connect the two sciences together to foster awareness, understanding, and recognition of Indigenous science as a science distinct from and equal to Western science. Braiding brings together the different ways of knowing and being by integrating the policies in Indigenous science and Western science that can work best. Weaving is to ensure that both Indigenous and Western science are employed to complement each other for better-informed decision-making.<sup>46</sup>

Braiding and weaving were metaphors put forward by numerous other witnesses and written submissions as to how Indigenous knowledge can be brought together with

---

42 SRSR, [Evidence](#), 6 November 2023, 1555 (Susan Kutz); and SRSR, [Evidence](#), 6 November 2023, 1715 (Myrle Ballard).

43 SRSR, [Evidence](#), 13 February 2024, 1225 (Danika Littlechild).

44 SRSR, [Evidence](#), 6 November 2023, 1715 (Marc D’Iorio); SRSR, [Evidence](#), 4 December 2023, 1755 (Mark Bonta); and SRSR, [Evidence](#), 8 February 2024, 1125 (Carole Lévesque).

45 SRSR, [Evidence](#), 8 February 2024, 1125 (Carole Lévesque).

46 SRSR, [Evidence](#), 6 November 2023, 1715 (Myrle Ballard).



other knowledge systems.<sup>47</sup> As Joe Dragon further explained, braiding as a metaphor implies a process that makes the result stronger, while maintaining “very distinct pieces of yarn that make up that braid.”<sup>48</sup>

Several witnesses spoke against using terminology such as “blend” and “integrate” when speaking about using Indigenous knowledge and science to support Canadian research and policy development.<sup>49</sup> Carole Lévesque described using integration terminology as follows:

From the moment you refer to integration, you downplay the role of knowledge and the entire structure of knowledge systems... When you talk about integrating knowledge and science, you reduce Indigenous knowledge to information, to specific data points. That doesn't mean it isn't important; it simply means we're losing sight of the entire social and community system that forms the basis of Indigenous knowledge... In an Indigenous context, if you merely integrate information and science, you lose sight of the ways in which knowledge is learned and transmitted. You lose sight of the intergenerational significance of that knowledge.<sup>50</sup>

## 2.2 How Indigenous Knowledge and Science is Currently Contributing to Canadian Research and Policy Development

Witnesses discussed the ways in which incorporating Indigenous knowledge and science in Canadian research and policy development can increase the comprehensiveness of

---

47 SRSR, [Evidence](#), 6 November 2023, 1745 (Sarah Kalkok Bourque); Government of Alberta, *Indigenous Wisdom Advisory Panel Mandate and Roles Document*, May 2017; SRSR, [Evidence](#), 29 November 2023, 1740 (Jamie Snook); SRSR, [Evidence](#), 29 November 2023, 1810 (Joe Dragon); and SRSR, [Evidence](#), 6 February 2024, 1135 (Lindsay Heller).

48 SRSR, [Evidence](#), 29 November 2023, 1810 (Joe Dragon).

49 SRSR, [Evidence](#), 29 November 2023, 1650 (K\_ii'iljuus Barbara Wilson); SRSR, [Evidence](#), 27 November 2023, 1640 (Michael DeGagné); SRSR, [Evidence](#), 29 November 2023, 1810 (Joe Dragon); SRSR, [Evidence](#), 6 November 2023, 1600 (Natan Obed, President, Inuit Tapiriit Kanatami); SRSR, [Evidence](#), 8 February 2024, 1100 (Carole Lévesque); Jeanette Armstrong, *The Integration of Indigenous Traditional Knowledge and Science in Government Policy Development. How best to integrate Indigenous Traditional Knowledge and science into government policy development; how to resolve conflicts between the two knowledge systems*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2023; SRSR, [Evidence](#), 8 February 2024, 1120 (Carole Lévesque); and SRSR, [Evidence](#), 6 February 2024, 1135 (Lindsay Heller).

50 SRSR, [Evidence](#), 8 February 2024, 1120 (Carole Lévesque).

the resulting findings and policies.<sup>51</sup> As described by Cheryl-Ann Johnson, a Researcher and Wildlife Ecologist with the Department of the Environment:

It's the complementarity of the two knowledge systems. The Arctic is very hard to monitor and survey for animals, and it's very expensive, so our information about Peary caribou numbers is sporadic at best. If you combine that with people who have been on the land, are intimately aware of this species and have a long-term knowledge of trends, you get a much better sense of how numbers have changed over time, and why.<sup>52</sup>

Many examples of the ways Indigenous knowledge and science are already being incorporated into Canadian research and policy making were presented by witnesses and in written submissions to the Committee, and are summarized below.

### 2.2.1 Indigenous Knowledge in the Federal Government

Natan Obed, President of Inuit Tapiriit Kanatami, the national organization representing Inuit priorities, highlighted its role in settling modern treaties and implementing co-management structures in a large portion of Canada's land mass.<sup>53</sup> Inuit Tapiriit Kanatami has also released a National Inuit Strategy on Research and worked with the Government of Canada on adopting the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).<sup>54</sup>

Canada adopted the *United Nations Declaration on the Rights of Indigenous Peoples Act* on 21 June 2021 and released the UN Declaration Action Plan on 21 June 2023.<sup>55</sup> Nancy Turner, a Distinguished Professor Emerita appearing as an individual, testified that this commitment, alongside the Calls to Action of the Truth and Reconciliation Commission (TRC) of Canada, "provide an obvious and appropriate starting point" for further including Indigenous knowledge and science in research and policy making.<sup>56</sup> Further support for

---

51 SRSR, [Evidence](#), 6 November 2023, 1730 (Patrice Simon, Director General, Wildlife and Landscape Science, Department of the Environment); SRSR, [Evidence](#), 4 December 2023, 1615 (Kyle Bobiwash); Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; SRSR, [Evidence](#), 27 November 2023, 1655 (Kelsey Wrightson); and SRSR, [Evidence](#), 27 November 2023, 1610 (Laurie Swami).

52 SRSR, [Evidence](#), 13 February 2024, 1200 (Cheryl-Ann Johnson, Researcher, Wildlife Ecologist, Department of the Environment).

53 SRSR, [Evidence](#), 6 November 2023, 1600 (Natan Obed).

54 Ibid.

55 Government of Canada, [Implementing the United Nations Declaration on the Rights of Indigenous Peoples Act](#).

56 SRSR, [Evidence](#), 8 February 2024, 1220 (Nancy Turner).



the implementation of UNDRIP and for the Calls to Action of the Truth and Reconciliation Commission of Canada was given by multiple witnesses and written submissions.<sup>57</sup>

Representatives from the Department of the Environment also spoke to the recent development of the Indigenous Science Division, which “is meant to advance and consider Indigenous knowledge systems at the same time as we progress in looking at Western science.”<sup>58</sup>

Patrice Simon, Director General of Wildlife and Landscape Science at the Department of the Environment, also spoke to the Department’s collaboration with Indigenous peoples across Canada, and data collection and interpretation related to wildlife and their habitat.<sup>59</sup> As an example, Cheryl-Ann Johnson described the process for setting recovery objectives for Peary caribou:

One thing we did with Peary caribou is set the recovery objective for the species in partnership with our Inuit partners. If you look at the Peary caribou recovery strategy and those recovery objectives, you'll see that there's a specific statement in there that speaks to allowing sustainable Inuit harvests. It's about maintaining populations not at the minimum to prevent them from going extinct but at a higher level to allow Inuit communities to harvest those populations.<sup>60</sup>

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was also mentioned by witnesses several times in relation to the incorporation of Indigenous knowledge in Canadian policy development, including the Aboriginal Traditional Knowledge Subcommittee and the incorporation of Indigenous knowledge in the assessment of species such as killer whales, ivory gulls and Torngat Mountains caribou.<sup>61</sup>

Georgina Lloyd, Assistant Deputy Minister of Northern Affairs at the Department of Crown-Indigenous Relations and Northern Affairs, provided examples of how the department engages with Indigenous peoples and knowledge to support its mandate:

---

57 SRSR, *Evidence*, 4 December 2023, 1630 (Brenda Parlee); SRSR, *Evidence*, 27 November 2023, 1540 (Alexandra Cropp); and Carmen Wong et al., “[Towards reconciliation: 10 Calls to Action to natural scientists working in Canada](#),” *FACETS*, Vol. 5, No. 1, 1 October 2020.

58 SRSR, *Evidence*, 6 November 2023, 1715 (Marc D’Iorio); SRSR, *Evidence*, 13 February 2024, 1135 (Patrice Simon, Director General, Wildlife and Landscape Science, Department of the Environment); and SRSR, *Evidence*, 6 November 2023, 1715 (Myrle Ballard).

59 SRSR, *Evidence*, 13 February 2024, 1135 (Patrice Simon).

60 SRSR, *Evidence*, 13 February 2024, 1155 (Cheryl-Ann Johnson).

61 SRSR, *Evidence*, 29 November 2023, 1730 (Jamie Snook); and SRSR, *Evidence*, 27 November 2023, 1720 (Jeannette Armstrong).

- the Northern Contaminants Program, which takes a partnership approach “by which government at federal and territorial levels, Indigenous organizations and governments, academia and local communities all have a say in the research, the monitoring and the supporting outreach activities that are undertaken;”<sup>62</sup>
- a co-developed Arctic and Northern Policy Framework, which sets out changes in “the way knowledge is gathered, created and shared” and makes it clear “that Indigenous knowledge and scientific knowledge will be equally considered in decision-making;”<sup>63</sup>
- a Northern resource co-management structure, which “intentionally integrates traditional and scientific knowledge by virtue of the regimes created by legislation” and through commitments from modern treaties;<sup>64</sup> and
- treaty negotiation practices that include commitments for “federal departments to respond to requests from treaty First Nations to explore a co-management and shared decision-making arrangement.”<sup>65</sup>

In a written submission to the Committee, the tri-agency of granting councils (SSHRC, NSERC, and CIHR), outlined that in response to the Truth and Reconciliation Commission of Canada’s Call to Action 65, the granting councils have pursued coordinated action to support Indigenous research and education.<sup>66</sup>

Call to Action 65 states:

We call upon the federal government, through the Social Sciences and Humanities Research Council, and in collaboration with Aboriginal peoples, post-secondary institutions and educators, and the National Centre for Truth and Reconciliation and its

---

62 SRSR, *Evidence*, 6 November 2023, 1705 (Georgina Lloyd, Assistant Deputy Minister, Northern Affairs, Department of Crown-Indigenous Relations and Northern Affairs); and SRSR, *Evidence*, 6 November 2023, 1745 (Sarah Kalhok Bourque).

63 SRSR, *Evidence*, 6 November 2023, 1705 (Georgina Lloyd).

64 Ibid.

65 Ibid.

66 Government of Canada, *Tri-agency written brief for the House of Commons Standing Committee on Science and Research: Integration of Indigenous Traditional Knowledge and Science in Government Policy Development*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.



partner institutions, to establish a national research program with multi-year funding to advance understanding of reconciliation.<sup>67</sup>

Kelsey Wrightson, Executive Director of the Dechinta Centre for Research and Learning, described the tri-agency's work in this area, including the strategic plan to support Indigenous research and training in Canada and increased institutional eligibility for Indigenous-led non-profit organizations to hold research grants, but added that she herself has still experienced challenges accessing tri-council research funding in her role.<sup>68</sup>

Bruce Maclean, Director of Maclean Environmental Consulting, appearing as an individual, also highlighted a partnership between Parks Canada and the Mikisew Cree, Athabasca Chipewyan and Fort Chipewyan Métis in Alberta to co-manage the Wood Buffalo National Park Area and develop an integrated research and monitoring program through the development of a non-profit: the Nipîy Tu Research and Knowledge Centre.<sup>69</sup>

Nang Jingwas Russ Jones, Hereditary Chief of the Council of the Haida Nation, described the co-development of a Haida Gwaii herring rebuilding plan by the Haida Nation, Fisheries and Oceans Canada, and Gwaii Haanas protected area staff.<sup>70</sup> The plan involved the use of traditional knowledge to establish reference points and target levels for fisheries management and stock rebuilding, as well as leading to a better understanding of the effects of different types of fisheries, among other contributions.<sup>71</sup>

In combination with other departments, the Office of the Chief Science Advisor (OCSA) has also developed the Indigenous-Science, Technology, Engineering and Mathematics (I-STEM) Cluster, a pan-government initiative to, in the words of Chief Science Advisor Mona Nemer, "facilitate the recruitment of Indigenous scientists and scholars, but also to facilitate the understanding of culturally sensitive issues and how to best liaise with the community."<sup>72</sup>

---

67 Truth and Reconciliation Commission of Canada, [\*Truth and Reconciliation Commission of Canada: Calls to Action\*](#), 2015.

68 SRSR, [\*Evidence\*](#), 27 November 2023, 1655 (Kelsey Wrightson).

69 SRSR, [\*Evidence\*](#), 29 November 2023, 1650 (Bruce Maclean).

70 SRSR, [\*Evidence\*](#), 29 November 2023, 1655 (Nang Jingwas Russ Jones).

71 Ibid.

72 SRSR, [\*Evidence\*](#), 27 February 2024, 1115 (Mona Nemer, Chief Science Advisor, Office of the Chief Science Advisor); SRSR, [\*Evidence\*](#), 4 December 2023, 1620 (Kyle Bobiwash); and Government of Canada, [\*Tri-agency written brief for the House of Commons Standing Committee on Science and Research: Integration of Indigenous Traditional Knowledge and Science in Government Policy Development\*](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.



The OCSA has also appointed an Indigenous scholar from the University of Manitoba as a researcher in residence to help advise the office on how to include consideration of Indigenous knowledge into their policies, such as their approach to open science.<sup>73</sup> NSERC has a similar position for a Scholar in Residence to establish greater Indigenous representation and provide advice to senior management.<sup>74</sup>

The Canadian Mountain Network explained their role as a network of centres of excellence established in 2019 to pioneer “ethical and equitable ways of conducting natural science that respect Indigenous peoples.”<sup>75</sup> Established as a not-for-profit organization and funded by the Government of Canada, 60% of projects funded by the Canadian Mountain Network are Indigenous-led or co-led, and projects “combine natural, health and social sciences with humanities and place-based knowledge.”<sup>76</sup> The Canadian Mountain Network is currently transitioning to the name Braiding Knowledges Canada, with an additional five years of federal funding past 1 April 2024.<sup>77</sup>

## 2.2.2 Indigenous Knowledge and Provincial and Territorial Government Programs

Witnesses presented several examples of ways in which territorial and provincial governments are incorporating Indigenous knowledge in their own research and policy practices. These scenarios present potential models for what can be done at the federal level.

Heather Sayine-Crawford, Director of the Wildlife Management Division at the Government of the Northwest Territories (GNWT), spoke of how the territory incorporates Indigenous knowledge in their policies and practices.<sup>78</sup> The territory’s traditional knowledge policy “requires the GNWT to consider available traditional knowledge in all environmental management actions and decisions.”<sup>79</sup> Co-management

---

73 SRSR, [Evidence](#), 27 February 2024, 1115 (Mona Nemer).

74 Government of Canada, [Tri-agency written brief for the House of Commons Standing Committee on Science and Research: Integration of Indigenous Traditional Knowledge and Science in Government Policy Development](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.

75 SRSR, [Evidence](#), 29 November 2023, 1800 (Joe Dragon).

76 Ibid.

77 Canadian Mountain Network, [Brief](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 18 December 2023.

78 SRSR, [Evidence](#), 13 February 2024, 1215 (Heather Sayine-Crawford).

79 Ibid.



boards have also been “established as the main instruments of wildlife management in areas where land claims have been settled.”<sup>80</sup>

Heather Sayine-Crawford illustrated this system through the approach undertaken while preparing species status reports, where reports include two parts: an Indigenous knowledge component and a scientific knowledge component.<sup>81</sup> Each report is tailored to the specific knowledge system, to “ensure that each knowledge system’s autonomy, uniqueness and validity are represented and respected.”<sup>82</sup> The process also allows experts in the two knowledge systems and from different fields of study to learn from each other.<sup>83</sup> The final assessment produced at the end of the process “can be supported by criteria from either or both knowledge systems as appropriate. We can expect the knowledge-specific assessments to sometimes contain different results.”<sup>84</sup>

Witnesses also discussed co-management relationships developed as a result of the Labrador Inuit Land Claims Agreement for Nunatsiavut, such as the Torngat Wildlife, Plants and Fisheries Secretariat.<sup>85</sup>

In Alberta, Indigenous knowledge is considered in the environmental science program, through “legislated monitoring and reporting requirements that included establishing parallel advisory panels to advise the chief scientist and the Government of Alberta.”<sup>86</sup>

Nang Jingwas Russ Jones described the Haida Gwaii Marine Plan in British Columbia, which was co-developed by the Haida Nation and the province of British Columbia in 2015, and incorporated traditional knowledge during its development.<sup>87</sup>

### 2.2.3 Indigenous Knowledge in International Policy

Witnesses spoke to several examples of Indigenous knowledge being included in important international policy development, such as the United Nations work in this

---

80 Ibid.

81 Ibid.

82 Ibid.

83 Ibid.

84 Ibid.

85 SRSR, [Evidence](#), 29 November 2023, 1700 (Jamie Snook).

86 SRSR, [Evidence](#), 13 February 2024, 1210 (Danika Littlechild).

87 SRSR, [Evidence](#), 29 November 2023, 1655 (Nang Jingwas Russ Jones).

area.<sup>88</sup> For example, the *Convention on Biological Diversity*, to which Canada is a party, “is the first and most longstanding formalized mechanism for the inclusion and integration of Indigenous traditional knowledge.”<sup>89</sup> As mentioned previously, UNDRIP was also identified as an important international document regarding the incorporation of Indigenous knowledge into governmental decision-making.<sup>90</sup>

Marc D’lorio, Assistant Deputy Minister of the Science and Technology Branch at the Department of the Environment, further mentioned the work that the department does with the Inuit Circumpolar Council regarding the increased rate of warming in the Arctic and related international work.<sup>91</sup>

Several witnesses also spoke of Australia as an international example of how Indigenous knowledge can be meaningfully incorporated into policy-making.<sup>92</sup> Mark Bonta, a geographer who appeared before the Committee as an individual, gave the example of how Indigenous communities in Australia’s Northern Territory “own the land. They bring scientists in to work for them—they hire them.”<sup>93</sup>

#### 2.2.4 Indigenous Knowledge and Western Science-based Research

Other witnesses discussed ways in which Indigenous knowledge holders work with researchers and organizations whose work is based in Western science to develop comprehensive methods that can inform policy making.

---

88 Danika Billie Littlechild, [Brief](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 9 February 2024; SRSR, [Evidence](#), 13 February 2024, 1210 (Danika Littlechild); and SRSR, [Evidence](#), 6 November 2023, 1600 (Natan Obed).

89 SRSR, [Evidence](#), 13 February 2024, 1210 (Danika Littlechild); and Danika Billie Littlechild, [Brief](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 9 February 2024.

90 SRSR, [Evidence](#), 6 November 2023, 1600 (Natan Obed); SRSR, [Evidence](#), 8 February 2024, 1220 (Nancy Turner); SRSR, [Evidence](#), 4 December 2023, 1630 (Brenda Parlee); SRSR, [Evidence](#), 27 November 2023, 1540 (Alexandra Cropp); and Carmen Wong et al., “[Towards reconciliation: 10 Calls to Action to natural scientists working in Canada](#),” *FACETS*, Vol. 5, No. 1, 1 October 2020.

91 SRSR, [Evidence](#), 6 November 2023, 1725 (Marc D’lorio).

92 SRSR, [Evidence](#), 4 December 2023, 1610 (Mark Bonta); and SRSR, [Evidence](#), 29 November 2023, 1835 (Joe Dragon).

93 SRSR, [Evidence](#), 4 December 2023, 1610 (Mark Bonta).



Carole Lévesque spoke to the development of the Indigenous Peoples Research and Knowledge Network, commonly referred to as the Dialog network, which was established to build relationships between universities and Indigenous communities.<sup>94</sup>

Kelsey Wrightson described the Dechinta Centre for Research and Learning, a land-based post-secondary research and education institution that works alongside Indigenous elders, creates “multi-generational learning spaces for accredited post-secondary programs,” and partners with Western research institutions to conduct research.<sup>95</sup>

Michael DeGagné, President and Chief Executive Officer of Indspire, highlighted their model, which funds Indigenous college, university and trade students, and has led to an increased understanding of when and how often Indigenous knowledge is incorporated into post-secondary education programs.<sup>96</sup> He also highlighted the University of Victoria’s Indigenous Law program, as a “uniquely Indigenous” program that teaches law using Indigenous methodology, such as story-based pedagogy.<sup>97</sup>

In Quebec, the École d’études autochtones within the Université du Québec en Abitibi-Témiscamingue is a “unique multidisciplinary school” that develops programs and research projects “dictated by the Indigenous partners we have in the jurisdictions or communities, and we conduct them with Indigenous people.”<sup>98</sup>

Erika Dyck, a Professor of History and Tier 1 Canada Research Chair in the History of Health and Social Justice, appearing as an individual, also testified to collaboration between the Native American Church and psychedelic researchers in Saskatchewan to develop “protocols on the safe use of psychedelics in group therapy.”<sup>99</sup>

Jeanette Armstrong spoke about several collaborations between the University of British Columbia Okanagan and the Syilx Nation related to food insecurity and declining

---

94 SRSR, [Evidence](#), 8 February 2024, 1100 (Carole Lévesque).

95 SRSR, [Evidence](#), 27 November 2023, 1655 (Kelsey Wrightson).

96 SRSR, [Evidence](#), 27 November 2023, 1640 (Michael DeGagné).

97 Ibid., 1705.

98 SRSR, [Evidence](#), 29 November 2023, 1815 (Hugo Asselin).

99 SRSR, [Evidence](#), 6 February 2024, 1100 (Erika Dyck).

populations of certain species of cultural significance, such as the relationship between grizzly bears and black huckleberry.<sup>100</sup>

A written submission to the Committee by the Canadian Brain Research Strategy also outlined their development of an Indigenous Knowledge Holders Group and Indigenous outreach and engagement activities to bring together Indigenous leaders to contribute to the strategy.<sup>101</sup>

## 2.3 Resolving Conflicts and Disputes

Witnesses discussed ways that different knowledge systems can appear to conflict and how to ensure they can be considered respectfully when making policy decisions.

Some witnesses suggested that resolving any apparent conflict can be done through focusing more on similarities than differences.<sup>102</sup> As Chief Jessica Lazare of the Mohawk Council of Kahnawake testified, “[o]ften, conflict can arise when focus is on the differences. It is important to also see the similarities to realize that there are different perspectives and approaches to reach common goals.”<sup>103</sup>

---

100 Jeanette Armstrong, *The Integration of Indigenous Traditional Knowledge and Science in Government Policy Development. How best to integrate Indigenous Traditional Knowledge and science into government policy development; how to resolve conflicts between the two knowledge systems*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2023.

101 Andrew Manitowabi, *Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.

102 SRSR, *Evidence*, 8 February 2024, 1105 (Chief Jessica Lazare); SRSR, *Evidence*, 8 February 2024, 1150 (Carole Lévesque); SRSR, *Evidence*, 29 November 2023, 1840 (Monique Dubé); SRSR, *Evidence*, 27 November 2023, 1610 (Laurie Swami); SRSR, *Evidence*, 27 November 2023, 1615 (Alexandra Cropp); and SRSR, *Evidence*, 27 November 2023, 1615 (Joseph Mays).

103 SRSR, *Evidence*, 8 February 2024, 1105 (Chief Jessica Lazare).



Other witnesses discussed the need to put different knowledge systems on an equal footing, emphasizing respect and not assuming the superiority of one system over another.<sup>104</sup> Carole Lévesque explained this as follows:

The idea isn't to start off with science as the main dish and to add an ingredient that comes from Indigenous sciences, Indigenous knowledge and Indigenous knowledge systems. The idea instead is to see how we can find potential responses in both systems and how we can make them coexist rather than integrate them.<sup>105</sup>

Part of this, witnesses explained, involves acknowledging the biases and limitations of all people involved in the process.<sup>106</sup> For example, Anne Salomon, Professor of Applied Marine Ecology and Social-Ecological System Science, appearing as an individual, testified that her institution “considers much of our evidence-based process and the generation of knowledge as being devoid of values, yet it's often not, because values influence the kinds of questions we ask, the kind of data we consider legitimate and the data we collect.”<sup>107</sup> She testified that through increasing collaboration with Indigenous communities, she has learned to be “very explicit about the values that we have and how that influences the questions we ask.”<sup>108</sup>

When discussing the perceived superiority of Western scientific knowledge over Indigenous knowledge and science, Lindsay Heller, Indigenous Fellow at Simon Fraser University's Morris J. Wosk Centre for Dialogue, appearing as an individual, said the following regarding the scientific method:

The scientific method follows a fairly linear path: observation, formulating a question, hypothesis, experimentation, analysis, conclusion, peer review and results sharing. Western scientific experiments follow this formula and results are published in scientific journals. This publication of results establishes a hierarchy where published scientific

---

104 Andrew Manitowabi, *Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; SRSR, *Evidence*, 13 February 2024, 1300 (Danika Littlechild); SRSR, *Evidence*, 8 February 2024, 1225 (Marjolaine Tshernish); SRSR, *Evidence*, 6 February 2024, 1105 (Lindsay Heller); SRSR, *Evidence*, 13 February 2024, 1250 (Heather Sayine-Crawford); SRSR, *Evidence*, 8 February 2024, 1150 (Carole Lévesque); SRSR, *Evidence*, 6 February 2024, 1200 (Kori Czuy); SRSR, *Evidence*, 4 December 2023, 1755 (Brenda Parlee); SRSR, *Evidence*, 29 November 2023, 1840 (Hugo Asselin); SRSR, *Evidence*, 29 November 2023, 1715 (Bruce Maclean); SRSR, *Evidence*, 6 November 2023, 1600 (Natan Obed); SRSR, *Evidence*, 6 November 2023, 1735 (Myrle Ballard); SRSR, *Evidence*, 27 November 2023, 1550 (Joseph Mays); and SRSR, *Evidence*, 8 February 2024, 1105 (Chief Jessica Lazare).

105 SRSR, *Evidence*, 8 February 2024, 1155 (Carole Lévesque).

106 SRSR, *Evidence*, 13 February 2024, 1300 (Danika Littlechild); and SRSR, *Evidence*, 29 November 2023, 1730 (Anne Salomon).

107 SRSR, *Evidence*, 29 November 2023, 1730 (Anne Salomon).

108 Ibid.

data is best and anything else is inferior. I always counter this argument by stating that Indigenous people, too, follow a scientific method. The consequences of failure go far beyond a failed experiment or exclusion from a journal. Experimentation by Indigenous people is built on observations and interpretations of the natural world, which allow us to predict how parts of the world work. These experiments are repeatable and reliable, have rigour, are accurate and follow a peer-review process.<sup>109</sup>

Lindsay Heller went on to describe how if Indigenous knowledge is inaccurate or false, the results can be devastating, such as how incorrect sea ice knowledge can lead to individuals falling through the ice and perishing.<sup>110</sup>

Yves Gingras also spoke of prioritizing verifiable information when considering the perspectives of multiple groups, and not focusing on the cultural origin of that information: “The knowledge that you need to build into scientific policies is not traditional knowledge, but rather knowledge “*simpliciter*”, as philosophers put it. It means knowledge that has been validated.”<sup>111</sup> Hugo Asselin, a Full Professor appearing as an individual, pushed back on the use of the word “validation”, arguing that “we must avoid always thinking that Indigenous knowledge must be validated by science. Otherwise, you would have to accept that Indigenous knowledge validates the science, and the constant reciprocal validation would become ridiculous.”<sup>112</sup> Instead, he spoke of the difference between an anecdote presented by a single person or an experiment conducted once, and information that is presented by multiple people or repeated in multiple tests, regardless of the cultural origin of the initial observation.<sup>113</sup>

Witnesses also spoke of willingness to change as an important way to address perceived conflicts or disputes, with Chief Jessica Lazare testifying that “[i]t’s good to have your convictions, but at the same time, it’s good to evolve and to change, as we are natural beings.”<sup>114</sup> Hugo Asselin presented an example in the Northwest Territories of a government survey that reported that a caribou herd had disappeared.<sup>115</sup> Indigenous communities responded that the herd had migrated to another area, and had to repeat this information several times before government employees investigated and confirmed

---

109 SRSR, [Evidence](#), 6 February 2024, 1105 (Lindsay Heller).

110 Ibid.

111 SRSR, [Evidence](#), 6 February 2024, 1225 (Yves Gingras).

112 SRSR, [Evidence](#), 29 November 2023, 1820 (Hugo Asselin).

113 Ibid.

114 SRSR, [Evidence](#), 8 February 2024, 1150 (Chief Jessica Lazare).

115 SRSR, [Evidence](#), 29 November 2023, 1820 (Hugo Asselin).



the herd was in the location indicated by the Indigenous communities.<sup>116</sup> As Hugo Asselin ended this story he added: “Sometimes we have to admit that one of the two methods was wrong. In my example, science was wrong, but sometimes it’s Indigenous knowledge. No one is perfect. When there are discrepancies, the idea is to conduct separate audits to try to determine where the error is.”<sup>117</sup>

A method put forward by witnesses to address perceived conflicts between knowledge systems was open communication and relationship building.<sup>118</sup> Marc D’lorio spoke of the importance of building communication channels and relationships before any conflicts develop, testifying that “[t]he first thing we try to do is come up with our methods and approaches in tandem. Doing so often helps us get ahead of the problems we’re likely to run into later.”<sup>119</sup> Brenda Parlee, a Professor and UNESCO Chair at the University of Alberta, appearing as an individual, presented the following scenario as an example of how further dialogue can help resolve seeming inconsistencies:

A few of the examples where we’ve seen knowledge conflicts are to do with the very iconic polar bear population. There is conflict among some scientists and Inuit and Inuvialuit knowledge systems, and some of that has to do with the kinds of data that are being compared. When we dig more deeply into the root of the knowledge, we determine that people are looking at different indicators—at different time scales or subpopulations, for example.<sup>120</sup>

Witnesses also found it important to note that conflicts do not only arise between Indigenous knowledge and science and Western knowledge, but that internal conflicts are a regular part of Western scientific processes and Indigenous knowledge practices.<sup>121</sup>

---

116 Ibid.

117 Ibid.

118 SRSR, [Evidence](#), 8 February 2024, 1145 (Chief Jessica Lazare); Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; SRSR, [Evidence](#), 4 December 2023, 1730 (Mark Bonta); SRSR, [Evidence](#), 4 December 2023, 1635 (Brenda Parlee); Susan Kutz and Matilde Tomaselli, “Two-eyed seeing’ supports wildlife health,” *Science*, Vol. 364, No. 6446, 21 June 2019; SRSR, [Evidence](#), 29 November 2023, 1840 (Monique Dubé); SRSR, [Evidence](#), 27 November 2023, 1610 (Laurie Swami); SRSR, [Evidence](#), 27 November 2023, 1630 (Alexandra Cropp); SRSR, [Evidence](#), 29 November 2023, 1650 (Bruce Maclean); and SRSR, [Evidence](#), 29 November 2023, 1655 (Nang Jingwas Russ Jones).

119 SRSR, [Evidence](#), 6 November 2023, 1740 (Marc D’lorio).

120 SRSR, [Evidence](#), 4 December 2023, 1755 (Brenda Parlee).

121 Ibid.; SRSR, [Evidence](#), 4 December 2023, 1730 (Mark Bonta); SRSR, [Evidence](#), 6 November 2023, 1550 (Susan Kutz); and SRSR, [Evidence](#), 6 November 2023, 1735 (Marc D’lorio).



## 2.4 Increasing the Use of Indigenous Knowledge and Science in Canadian Research and Policy Development

Witnesses made many suggestions on how the Government of Canada can increase the use of Indigenous knowledge and science in Canadian research and policy development.

### 2.4.1 Early Engagement

Many witnesses spoke to the importance of engaging with Indigenous communities and knowledge holders early in research and policy development processes to ensure that their contributions can help meaningfully shape the results.<sup>122</sup>

Part of this process is building relationships prior to introducing specific projects or policies.<sup>123</sup> As Lindsay Heller explained, “[t]ake the time to get to know these individuals, to get to know the historical aspects of what that community has faced and is facing, and go into that relationship to build trust and really establish a basis for doing this work together.”<sup>124</sup>

Therefore, the Committee recommends:

#### Recommendation 1

**That the Government of Canada encourage researchers to build relationships with Indigenous communities prior to identifying specific research projects.**

#### Recommendation 2

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering**

---

122 SRSR, [Evidence](#), 6 February 2024, 1240 (Kori Czuy); Carmen Wong et al., “[Towards reconciliation: 10 Calls to Action to natural scientists working in Canada](#),” *FACETS*, Vol. 5, No. 1, 1 October 2020; SRSR, [Evidence](#), 29 November 2023, 1835 (Joe Dragon); SRSR, [Evidence](#), 29 November 2023, 1820 (Monique Dubé, Executive Director, Canadian Mountain Network/Braiding Knowledges Canada); SRSR, [Evidence](#), 6 November 2023, 1600 (Marjolaine Tshernish); SRSR, [Evidence](#), 27 November 2023, 1540 (Alexandra Cropp); SRSR, [Evidence](#), 27 November 2023, 1705 (Kelsey Wrightson); SRSR, [Evidence](#), 29 November 2023, 1710 (Bruce Maclean); SRSR, [Evidence](#), 29 November 2023, 1710 (Anne Salomon); SRSR, [Evidence](#), 29 November 2023, 1750 (Hugo Asselin); SRSR, [Evidence](#), 29 November 2023, 1710 (K\_i’iljuus Barbara Wilson); SRSR, [Evidence](#), 8 February 2024, 1115 (Chief Jessica Lazare); and SRSR, [Evidence](#), 4 December 2023, 1635 (Brenda Parlee).

123 SRSR, [Evidence](#), 27 November 2023, 1700 (Kevin Lewis); and SRSR, [Evidence](#), 27 November 2023, 1655 (Kelsey Wrightson).

124 SRSR, [Evidence](#), 6 February 2024, 1140 (Lindsay Heller).



**Research Council of Canada and the Canadian Institutes of Health Research—review funding criteria to ensure that all research projects affecting Indigenous populations in Canada have established relationships with the relevant communities and received their consent and support for the project prior to approving funding.**

### **Recommendation 3**

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research—examine the representation of Indigenous knowledge holders on their review panels and work with Indigenous communities to support the appropriate evaluation of applications for funding that affect Indigenous communities.**

#### **2.4.2 Ongoing Engagement**

Beyond the initial conception of research and policy, witnesses spoke to the importance of engaging with Indigenous communities throughout the process of developing, communicating, implementing and evaluating policy and research.<sup>125</sup> Using the Committee’s study as an example, Kori Czuy posed the following questions:

What is your plan to work alongside communities throughout this process and not just today or through these meetings? I suggest that it’s something that communities have to be a part of at every step, not just in these conversations. They’re a great starting point, but I think it really is about ongoing work and about, again, doing the work.<sup>126</sup>

It was also noted by several witnesses that the timelines imposed on research and policy development can often present challenges for developing meaningful relationships and encouraging fulsome participation, and that flexibility in timelines should be encouraged

---

125 SRSR, [Evidence](#), 27 November 2023, 1540 (Alexandra Cropp); SRSR, [Evidence](#), 6 February 2024, 1245 (Kori Czuy); Émilie Deschênes et al., “Mobilizing Research Knowledge to Develop Public Policy Involving First Nations and Inuit,” Research report submitted to the Fonds de recherche du Québec - Société et Culture (FRQSC), as part of the collaborative action regarding research knowledge mobilization in developing public policy involving First Nations and Inuit, 2023; SRSR, [Evidence](#), 29 November 2023, 1710 (Bruce Maclean); SRSR, [Evidence](#), 29 November 2023, 1750 (Hugo Asselin); and Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.

126 SRSR, [Evidence](#), 6 February 2024, 1245 (Kori Czuy).

to promote respectful and meaningful collaboration between Indigenous communities and Western scientists and policy makers.<sup>127</sup>

Therefore, the Committee recommends:

#### **Recommendation 4**

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research— review funding criteria to ensure that all projects affecting Indigenous communities in Canada have sufficient timelines to ensure the ongoing participation of the affected communities and encourage participation across all stages of the project.**

#### **2.4.3 Alignment with Existing Policies**

Witnesses spoke of building on existing policies, such as the work of the Truth and Reconciliation Commission, the National Inquiry into Missing and Murdered Indigenous Women, Section 35 of the *Constitution Act*, and international instruments such as UNDRIP, the *United Nations Framework Convention on Climate Change* and the *Convention on Biological Diversity*.<sup>128</sup>

As Kori Czuy testified, “[t]here are many suggestions. There’s the TRC. There’s UNDRIP. They’re all there. You just have to do them. It’s about doing the work to understand what those mean.”<sup>129</sup>

Regarding Canadian policy, K\_ii'iljuus Barbara Wilson, Haida Scholar and Matriarch of the St'awaas X\_aaydaG\_a, Ruling Eagle Clan, Cumshewa, appearing as an individual, also identified specific challenges related to Indigenous knowledge and the *Species at Risk Act*, where “people are not able to go out and harvest the foods they require. There is

---

127 Ibid., 1240; SRSR, *Evidence*, 29 November 2023, 1805 (Monique Dubé); and Andrew Manitowabi, *Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future*, Brief submitted to the House of Commons Standing Committee on Science and Research, 2024.

128 SRSR, *Evidence*, 6 November 2023, 1715 (Myrle Ballard); SRSR, *Evidence*, 27 November 2023, 1600 (Alexandra Cropp); SRSR, *Evidence*, 6 February 2024, 1220 (Kori Czuy); SRSR, *Evidence*, 29 November 2023, 1650 (Bruce Maclean); SRSR, *Evidence*, 29 November 2023, 1740 (K\_ii'iljuus Barbara Wilson); SRSR, *Evidence*, 29 November 2023, 1740 (Nang Jingwas Russ Jones); Canadian Mountain Network, *Brief*, Brief submitted to the House of Commons Standing Committee on Science and Research, 18 December 2023; SRSR, *Evidence*, 13 February 2024, 1210 (Danika Littlechild); and Danika Billie Littlechild, *Brief*, Brief submitted to the House of Commons Standing Committee on Science and Research, 9 February 2024.

129 SRSR, *Evidence*, 6 February 2024, 1220 (Kori Czuy).



no braiding there; it's a separation, a division of ideas that can't match, so it's a necessity to change the laws."<sup>130</sup> Danika Littlechild also recommended making use of the *Canadian Environmental Protection Act*, "which provides for ministerial advisory bodies" that include representatives from Indigenous governments, and the *UN Declaration on the Rights of Indigenous Peoples Act* Action Plan as frameworks for further federal work in this area.<sup>131</sup>

More broadly, Danika Littlechild recommended the creation of formalized mechanisms or legislation that provide autonomy to Indigenous communities."<sup>132</sup>

Therefore, the Committee recommends:

#### **Recommendation 5**

**That the Government of Canada accelerate implementation of the *United Nations Declaration on the Rights of Indigenous Peoples Act* Action Plan, and the recommendations of the Truth and Reconciliation Commission and the National Inquiry Into Missing and Murdered Indigenous Women and Girls, and report regularly to ensure that progress is being made without delay.**

#### **Recommendation 6**

**That the Government of Canada replicate the National Advisory Committee established in the *Canadian Environmental Protection Act* in other ministries to ensure Indigenous communities' input into Canadian federal policy development.**

---

130 SRSR, *Evidence*, 29 November 2023, 1720 (K\_i'iljuus Barbara Wilson).

131 SRSR, *Evidence*, 13 February 2024, 1210 (Danika Littlechild); and Danika Billie Littlechild, *Brief*, Brief submitted to the House of Commons Standing Committee on Science and Research, 9 February 2024.

132 SRSR, *Evidence*, 13 February 2024, 1210 (Danika Littlechild).

## 2.4.4 Supporting Indigenous Communities and Indigenous Sovereignty

Witnesses spoke to the need to support Indigenous communities so that they can focus on their own policy and research priorities.<sup>133</sup>

This can include increased sovereignty over lands and waters, and the development of more co-management programs.<sup>134</sup> As Jared Gonet, a PhD Candidate in Conservation Biology that appeared before the Committee as an individual, testified, “I recommend that Indigenous sovereignty over lands and waters be acknowledged and that true decision-making authority through co-management or co-relationships be intertwined with how Indigenous knowledge walks with and informs government policy.”<sup>135</sup>

Some witnesses also identified the importance of ensuring that any Indigenous knowledge provided to support research and policy development remains under the ownership of the Indigenous communities and knowledge holders who provided that knowledge.<sup>136</sup> Resources such as the First Nations Principles of Ownership, Control, Access and Protection (OCAP®) and the National Inuit Strategy on Research have also set out guidelines on how to recognize and enforce community ownership and control over Indigenous knowledge.<sup>137</sup> The First Nations Principles of OCAP® “establish how First Nations’ data and information will be collected, protected, used, or shared” and “asserts that First Nations alone have control over data collection processes in their communities, and that they own and control how this information can be stored,

---

133 SRSR, [Evidence](#), 4 December 2023, 1635 (Brenda Parlee); Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; SRSR, [Evidence](#), 4 December 2023, 1620 (Jared Gonet); SRSR, [Evidence](#), 6 February 2024, 1205 (Kori Czuy); SRSR, [Evidence](#), 4 December 2023, 1615 (Kyle Bobiwash); SRSR, [Evidence](#), 29 November 2023, 1615 (K\_i'iljuus Barbara Wilson); SRSR, [Evidence](#), 29 November 2023, 1650 (Bruce Maclean); Émilie Deschênes et al., “Mobilizing Research Knowledge to Develop Public Policy Involving First Nations and Inuit,” Research report submitted to the Fonds de recherche du Québec - Société et Culture (FRQSC), as part of the collaborative action regarding research knowledge mobilization in developing public policy involving First Nations and Inuit, 2023; SRSR, [Evidence](#), 29 November 2023, 1655 (Nang Jingwas Russ Jones); and SRSR, [Evidence](#), 27 November 2023, 1640 (Michael DeGagné).

134 SRSR, [Evidence](#), 4 December 2023, 1620 (Jared Gonet); Canadian Mountain Network, [Brief](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 18 December 2023; SRSR, [Evidence](#), 29 November 2023, 1650 (Bruce Maclean); SRSR, [Evidence](#), 29 November 2023, 1750 (Hugo Asselin); and SRSR, [Evidence](#), 4 December 2023, 1635 (Brenda Parlee).

135 SRSR, [Evidence](#), 4 December 2023, 1620 (Jared Gonet).

136 SRSR, [Evidence](#), 27 November 2023, 1605 (Laurie Swami); SRSR, [Evidence](#), 27 November 2023, 1625 (Joseph Mays); and SRSR, [Evidence](#), 29 November 2023, 1650 (Bruce Maclean).

137 Carmen Wong et al., [“Towards reconciliation: 10 Calls to Action to natural scientists working in Canada,”](#) *FACETS*, Vol. 5, No. 1, 1 October 2020.



interpreted, used, or shared.”<sup>138</sup> The National Inuit Strategy on Research, developed by Inuit Tapiriit Kanatami, “identifies areas for partnership and action that can strengthen the impact, efficacy, and usefulness of Inuit Nunangat research for Inuit.”<sup>139</sup>

Witnesses further spoke of how partnerships between Indigenous communities and researchers or policy makers should ensure that Indigenous communities benefit from any results, or are provided with reciprocal support if their priorities differ from that of the researcher.<sup>140</sup> Joseph Mays, Program Director of the Indigenous Reciprocity Initiative of the Americas within the Chacruna Institute for Psychedelic Plant Medicines, and Alexandra Cropp, Senior Manager of Operations for Mokwateh, both provided examples related to the use of Indigenous medicines in pharmaceutical research and product development, and ensuring that the communities who provided knowledge related to the medicine are financially compensated and communities are able to continue to access and use the medicines.<sup>141</sup>

Some witnesses also recommended oversight of locally-relevant federal policy by any impacted Indigenous communities, such as an Indigenous oversight body for COSEWIC or the development of a localized list of Indigenous Advisors to consult when policies affect their regions.<sup>142</sup> It was also recommended that policy departments increase their Indigenous staff.<sup>143</sup>

Therefore, the Committee recommends:

- 
- 138 First Nations Information Governance Centre, [The First Nations Principles of OCAP®](#).
- 139 Inuit Tapiriit Kanatami, [National Inuit Strategy on Research](#).
- 140 SRSR, [Evidence](#), 27 November 2023, 1605 (Alexandra Cropp); SRSR, [Evidence](#), 6 February 2024, 1105 (Lindsay Heller); Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; SRSR, [Evidence](#), 29 November 2023, 1750 (Hugo Asselin); and Carmen Wong et al., [“Towards reconciliation: 10 Calls to Action to natural scientists working in Canada,”](#) *FACETS*, Vol. 5, No. 1, 1 October 2020.
- 141 SRSR, [Evidence](#), 27 November 2023, 1625 (Joseph Mays); and SRSR, [Evidence](#), 27 November 2023, 1605 (Alexandra Cropp).
- 142 SRSR, [Evidence](#), 29 November 2023, 1710 (Bruce Maclean); Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024; Danika Billie Littlechild, [Brief](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 9 February 2024; and SRSR, [Evidence](#), 27 November 2023, 1720 (Jeannette Armstrong).
- 143 Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024; SRSR, [Evidence](#), 29 November 2023, 1755 (Hugo Asselin); and SRSR, [Evidence](#), 29 November 2023, 1650 (Bruce Maclean).

### **Recommendation 7**

**That the Government of Canada explore additional opportunities to support self-determination in Indigenous communities across Canada, such as the development of co-management agreements pertaining to land and resources with Indigenous communities.**

### **Recommendation 8**

**That the Government of Canada explore methods to incorporate Indigenous-led research priorities, such as the First Nations Principles of Ownership, Control, Access and Protection (OCAP®) and the National Inuit Strategy on Research, into federal policies and practices.**

### **Recommendation 9**

**That the Government of Canada, in collaboration with Indigenous governments, organizations and communities, explore the ways in which Indigenous data sovereignty and collective rights can be better supported in Canadian policy and law.**

### **Recommendation 10**

**That the Government of Canada increase Indigenous participation in policy development, such as through increased Indigenous hiring or the development of a comprehensive list of local Indigenous advisors.**

## **2.4.5 Education and Training**

Recognizing that Indigenous experts are often in high demand and may not be available for inclusion in all relevant policy development and research projects, witnesses recommended ensuring, at a minimum, that team members involved in projects impacting Indigenous communities complete required courses on Indigenous history and knowledge as part of job requirements or through required courses to complete university degrees, for example.<sup>144</sup> In a written submission to the Committee to support her testimony, Nancy Turner recommended using Truth and Reconciliation Day as a professional development day for government staff to learn more about Indigenous

---

144 Nancy Turner, "Integration of Indigenous Traditional Knowledge and Science in Government Policy Development," Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024; Carmen Wong et al., "[Towards reconciliation: 10 Calls to Action to natural scientists working in Canada](#)," *FACETS*, Vol. 5, No. 1, 1 October 2020; SRSR, *Evidence*, 4 December 2023, 1635 (Jared Gonet); and SRSR, *Evidence*, 27 November 2023, 1700 (Kevin Lewis).



history, culture and knowledge.<sup>145</sup> Where possible, witnesses also recommended that projects build in time “on the ground,” so that non-Indigenous team members can better understand local contexts.<sup>146</sup> As Chief Jessica Lazare testified:

I would say that if you want to learn, we'll take you hunting. If you want to learn, come to our community, and we'll show you what it means to be a community. We'll show you what it means to us to harvest, so that you can fully understand and that snickering can be discontinued.<sup>147</sup>

Witnesses also spoke of ways the federal government can support greater Indigenous participation in research and policy development through building capacity in those areas with education.<sup>148</sup> Lindsay Heller recommended offering scholarships for Indigenous students to address financial barriers to education, as well as ensuring post-secondary institutions have Indigenous representation in their leadership and support Indigenous engagement at their institutions.<sup>149</sup> Speaking specifically about Indigenous psychologists, Monnica Williams, a Canada Research Chair in Mental Health Disparities and Professor at the University of Ottawa, appearing as an individual, testified that:

We need to first ask ourselves why there are so precious few Indigenous scientists and scholars in Canada in the first place. Less than two years ago, I admitted the first Indigenous student into the University of Ottawa's doctoral program in clinical psychology. I've had a front-row seat to the institutional barriers she faces to get the education she needs to become a scholar who can conduct the very research needed to benefit her community.<sup>150</sup>

According to witnesses, supporting greater Indigenous participation in research and government can also involve reconsidering how funding decisions, job postings and

---

145 Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024.

146 Ibid.; SRSR, [Evidence](#), 6 February 2024, 1230 (Kori Czuy); SRSR, [Evidence](#), 29 November 2023, 1835 (Monique Dubé); SRSR, [Evidence](#), 8 February 2024, 1220 (Nancy Turner); and SRSR, [Evidence](#), 8 February 2024, 1145 (Chief Jessica Lazare).

147 SRSR, [Evidence](#), 8 February 2024, 1145 (Chief Jessica Lazare).

148 SRSR, [Evidence](#), 6 February 2024, 1155 (Lindsay Heller); SRSR, [Evidence](#), 6 February 2024, 1110 (Monnica Williams); SRSR, [Evidence](#), 27 November 2023, 1640 (Michael DeGagné); Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; Carmen Wong et al., “[Towards reconciliation: 10 Calls to Action to natural scientists working in Canada](#),” *FACETS*, Vol. 5, No. 1, 1 October 2020; SRSR, [Evidence](#), 29 November 2023, 1650 (Bruce Maclean); and SRSR, [Evidence](#), 4 December 2023, 1615 (Kyle Bobiwash).

149 SRSR, [Evidence](#), 6 February 2024, 1155 (Lindsay Heller).

150 SRSR, [Evidence](#), 6 February 2024, 1110 (Monnica Williams).



promotion criteria evaluate experience, and broadening those to include not just metrics such as formal education and publication history, but also community and cultural experience, such as hunting and harvesting.<sup>151</sup>

Witnesses further identified the important role intergenerational learning within Indigenous communities plays in ensuring the ongoing growth and vitality of Indigenous knowledge and languages, which act as important conduits of that knowledge.<sup>152</sup>

Several witnesses spoke of the importance of developing and supporting institutions that support Indigenous knowledge development and education within Indigenous communities.<sup>153</sup> For instance, Kyle Bobiwash, an Assistant Professor appearing as an individual, spoke of how professors are able to dedicate paid time to fundamental research, but “land-based educators and knowledge-holders in our communities don’t have that same resourcing support to continue developing and building their local knowledge system.”<sup>154</sup>

Therefore, the Committee recommends:

### **Recommendation 11**

**That the Government of Canada review and bolster training requirements for public servants to ensure that all employees receive sufficient training in Indigenous history and practices, and to provide specialized training for those working directly with Indigenous communities.**

---

151 SRSR, *Evidence*, 6 February 2024, 1245 (Kori Czuy); SRSR, *Evidence*, 27 November 2023, 1710 (Jeannette Armstrong); and SRSR, *Evidence*, 6 February 2024, 1125 (Erika Dyck).

152 SRSR, *Evidence*, 27 November 2023, 1655 (Kelsey Wrightson); Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024; and Carmen Wong et al., “[Towards reconciliation: 10 Calls to Action to natural scientists working in Canada](#),” *FACETS*, Vol. 5, No. 1, 1 October 2020.

153 SRSR, *Evidence*, 27 November 2023, 1640 (Michael DeGagné); SRSR, *Evidence*, 27 November 2023, 1655 (Kelsey Wrightson); Andrew Manitowabi, [Immersing and Utilizing Indigenous Knowledge in Policy to Bridge Brain Science with the Future](#), Brief submitted to the House of Commons Standing Committee on Science and Research, 2024; SRSR, *Evidence*, 27 November 2023, 1710 (Jeannette Armstrong); SRSR, *Evidence*, 29 November 2023, 1710 (Bruce Maclean); SRSR, *Evidence*, 4 December 2023, 1615 (Kyle Bobiwash); Nancy Turner, “Integration of Indigenous Traditional Knowledge and Science in Government Policy Development,” Written submission to the House of Commons Standing Committee on Science and Research, 3 February 2024; and SRSR, *Evidence*, 8 February 2024, 1235 (Nancy Turner).

154 SRSR, *Evidence*, 4 December 2023, 1615 (Kyle Bobiwash).



### **Recommendation 12**

**That the Government of Canada, through the federal granting councils—the Social Sciences and Humanities Research Council, the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research—enhance supports for Indigenous students and researchers.**

### **Recommendation 13**

**That the Government of Canada review experience criteria for positions within the public service and for external funding opportunities to ensure that different forms of cultural experience, such as on-the-land experience, are considered in hiring, promotion, and funding decisions when appropriate.**

### **Recommendation 14**

**That the Government of Canada, through the Canada Foundation for Innovation, increase investment in Indigenous research and post-secondary educational institutions.**

### **Recommendation 15**

**That the Government of Canada continue to support Indigenous language revitalization, such as federal funding for Indigenous language initiatives and the use of Indigenous place names in federal documents.**

## APPENDIX A: LIST OF WITNESSES

---

The following table lists the witnesses who appeared before the committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the committee’s [webpage for this study](#).

Organizations and Individuals	Date	Meeting
<p><b>As an individual</b></p> <p>Susan Kutz, Professor and Tier 1 Canada Research Chair in Arctic One Health</p>	2023/11/06	63
<p><b>Department of Crown-Indigenous Relations and Northern Affairs</b></p> <p>Rebecca Chouinard, Director, Natural Resources and Environment</p> <p>Sarah Kalhok Bourque, Director, Arctic Science Policy Integration</p> <p>Georgina Lloyd, Assistant Deputy Minister, Northern Affairs</p>	2023/11/06	63
<p><b>Department of the Environment</b></p> <p>Myrle Ballard, Chief Indigenous Science Advisor</p> <p>Marc D'Iorio, Assistant Deputy Minister, Science and Technology Branch</p> <p>Paul MacDonald, Director, Indigenous Science Division</p> <p>Patrice Simon, Director General, Wildlife and Landscape Science</p>	2023/11/06	63
<p><b>Institut Tshakapesh</b></p> <p>Marjolaine Tshernish, Executive Director</p>	2023/11/06	63
<p><b>Inuit Tapiriit Kanatami</b></p> <p>Carrie Grable, Director, Inuit Qaujisarvingat</p> <p>Natan Obed, President</p>	2023/11/06	63

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>As an individual</b> Jeannette Armstrong, Associate Professor Michael Lyons, Priest in Charge	2023/11/27	67
<b>Dechinta Centre for Research and Learning</b> Kelsey Wrightson, Executive Director	2023/11/27	67
<b>Indspire</b> Michael DeGagné, President and Chief Executive Officer	2023/11/27	67
<b>Mokwateh</b> Alexandra Cropp, Senior Manager of Operations	2023/11/27	67
<b>Nuclear Waste Management Organization</b> Laurie Swami, President and Chief Executive Officer	2023/11/27	67
<b>The Chacruna Institute for Psychedelic Plant Medicines</b> Joseph Mays, Program Director, Indigenous Reciprocity Initiative of the Americas	2023/11/27	67
<b>University of Saskatchewan</b> Kevin Lewis, Assistant Professor	2023/11/27	67
<b>As an individual</b> Hugo Asselin, Full professor Bruce Maclean, Director, Maclean Environmental Consulting Anne Salomon, Professor of Applied Marine Ecology and Social-Ecological System Science K_ii'iljuus Barbara Wilson, Haida Scholar and Matriarch of the St'awaas X_aaydaG_a, Ruling Eagle Clan, Cumshewa	2023/11/29	68
<b>Canadian Mountain Network/Braiding Knowledges Canada</b> Joe Dragon, Chairman, Board of Directors Monique Dubé, Executive Director	2023/11/29	68
<b>Council of the Haida Nation</b> Nang Jingwas Russ Jones, Hereditary Chief	2023/11/29	68
<b>Torngat Wildlife Plants and Fisheries Secretariat</b> Jamie Snook, Executive Director	2023/11/29	68

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>As an individual</b> Kyle Bobiwash, Assistant Professor Mark Bonta, Geographer Jared Gonet, PhD Candidate, Conservation Biology Brenda Parlee, Professor, UNESCO Chair, University of Alberta	2023/12/04	69
<b>As an individual</b> Kori Czuy, Indigenous Science Consultant Erika Dyck, Professor of History and Tier 1 Canada Research Chair in History of Health & Social Justice Yves Gingras, Professor of History and Sociology of Science, Université du Québec à Montréal Lindsay Heller, Indigenous Fellow, Simon Fraser University, Morris J. Wosk Centre for Dialogue Monnica Williams, Canada Research Chair in Mental Health Disparities, and professor at the University of Ottawa	2024/02/06	71
<b>As an individual</b> Nancy Turner, Distinguished Professor Emerita	2024/02/08	72
<b>Indigenous Peoples Research and Knowledge Network</b> Carole Lévesque, Full Professor	2024/02/08	72
<b>Institut Tshakapesh</b> Marjolaine Tshernish, Executive Director	2024/02/08	72
<b>Mohawk Council of Kahnawake</b> Jessica Lazare, Chief	2024/02/08	72
<b>Simon Fraser University</b> Vicki Kelly, Associate Professor	2024/02/08	72
<b>As an individual</b> Danika Littlechild, Assistant Professor, Carleton University	2024/02/13	73

<b>Organizations and Individuals</b>	<b>Date</b>	<b>Meeting</b>
<b>Department of the Environment</b> Dominique Henri, Research Scientist Cheryl-Ann Johnson, Researcher, Wildlife Ecologist Patrice Simon, Director General, Wildlife and Landscape Science	2024/02/13	73
<b>Government of the Northwest Territories</b> Heather Sayine-Crawford, Director, Wildlife Management Division	2024/02/13	73
<b>Tlicho Government</b> Tammy Steinwand-Deschambeault, Director, Department of Culture and Lands Protection	2024/02/13	73

## **APPENDIX B: LIST OF BRIEFS**

---

The following is an alphabetical list of organizations and individuals who submitted briefs to the committee related to this report. For more information, please consult the committee's [webpage for this study](#).

**Armstrong, Jeannette**

**Littlechild, Danika**

**Canadian Brain Research Strategy**

**Canadian Institutes of Health Research**

**Canadian Mountain Network/Braiding Knowledges Canada**

**Natural Sciences and Engineering Research Council**

**Social Sciences and Humanities Research Council**





## REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the committee requests that the government table a comprehensive response to this report.

A copy of the relevant *Minutes of Proceedings* (Meetings Nos. [63](#), [67](#), [68](#), [69](#), [71](#), [72](#), [73](#), [74](#), [85](#), [89](#), & [93](#)) is tabled.

Respectfully submitted,

Valerie Bradford  
Chair



## **Supplementary Report submitted by the Bloc Québécois**

The Bloc Québécois wants to thank the staff of the Library of Parliament, the clerks, and the interpreters for all the work done as part of this study. We would also like to acknowledge the essential contribution of the witnesses for their enlightening presentations.

This supplementary opinion aims to express the concerns of the Bloc Québécois regarding certain recommendations in the report. We believe that this report raises serious concerns about academic freedom, in terms of definitions, and creates confusion about its objectives.

### **Academic freedom**

Recommendations number two and four are directly in opposition to the concept of academic freedom and could ultimately restrict the ability of certain researchers to do their work.

We believe that the committee should not recommend that the government develop science policies based on grounds of discrimination, such as race, skin color, sex, gender identity or expression, pregnancy, sexual orientation, marital status, age except to the extent provided by law, religion, political beliefs, language, ethnicity or national origin, social condition, disability, or use of a means to overcome this handicap. The only criteria that should guide the awarding of research grants must be the quality and relevance of the research projects. It is not the scientists or researchers who should be evaluated, but their research proposals. Thus, criteria that relate to the researchers rather than their ideas should be rejected.

Furthermore, the use by the federal government of its spending power is an intrusion into an area of exclusive jurisdiction of Quebec and the provinces. While the government can fund scientific research, it has no power to dictate conditions that influence the educational environment and academic activities. Thus, the federal government should at least ensure that its public action is carried out while respecting the prerogatives of Quebec and the provinces, starting with respect for the law.

On June 3, 2022, the National Assembly of Quebec adopted the Act on academic freedom in the university sector.

The law includes the following elements:

Article 1 stipulates that the mission of universities “includes the production and transmission of knowledge through research and teaching activities and through services to the community.”

Article 2 defines the establishments concerned, while Article 3 defines academic freedom closely following the formulation adopted by UNESCO in 1997:

“3. The right to academic freedom is the right of any person to exercise freely and without doctrinal, ideological, or moral constraints, such as institutional censorship, an activity through which they contribute to the accomplishment of the mission of an academic institution.

This right includes the freedom:

1° of teaching and discussion;

2° of research, creation and publication;

3° to express one’s opinion on society and on an institution, including the one to which the person belongs, as well as on any doctrine, dogma or opinion;

4° to participate freely in the activities of professional organizations or academic organizations.

It must be carried out in accordance with the standards of ethics and scientific rigour generally recognized by the university environment and considering the rights of other members of the university community.”

Federal funding of scientific research should respect the laws of Quebec, the principle of academic freedom and university autonomy.

### **A problem of definition**

This report maintains a form of intellectual confusion through its inability to define the terms it uses. Several witnesses stated that it was impossible to define what “indigenous knowledge and knowledge” were, particularly due to the existence of many distinct indigenous communities. We also share this observation, given the numerous definitions submitted by the witnesses. At the moment, there does not seem to be a consensus on what constitutes indigenous knowledge. This confusion is exacerbated by the fact that the term science, knowledge, and belief were used by many witnesses without being defined. Consequently, recommendation 3: “to examine the representation of Indigenous knowledge holders on their review panels” within the federal tri-agency funding programs deserves to be further explored and better defined before being pursued. In the current situation, we are entitled to wonder what method would be used to define whether it is a belief or knowledge.

Still in connection with the definitions, some witnesses supported the need not to give ethnicity, religion or nationality to science and scientific knowledge. There are

researchers from different origins, with their own cultures, but scientific facts and research, once confirmed, are universal, and can therefore in principle benefit everyone. The knowledge, which results from a rigorous and scientific process, in order to validate what was initially a belief, an opinion, benefits everyone and goes beyond sociological and geographical divisions. This process, itself established by the scientific community, and validated by the Supreme Court, does not differentiate between types of knowledge whether traditional or not. We believe that scientists from the indigenous community must be supported, and this can be done without ethnicizing the science itself.

### **Report Objectives**

The present report maintains the ambiguity between two enterprises of a different nature: the first, political, which aims to promote and perpetuate the culture of different indigenous communities and the second, scientific, which seeks to have indigenous knowledge recognized as being equal or of the same value as modern scientific discourse. If the Bloc Québécois, from a perspective of reconciliation, fully subscribes to the first objective, we are of the opinion that the second is of an epistemic nature and that this committee has neither the competence nor the authority to decide such a question. We maintain that it is preferable for this second question to be debated by the scientific community. In this regard, recommendation 10 would benefit from clarification to define what “indigenous participation in policy development” means, in the context of a study focusing on indigenous knowledge and scientific knowledge. As one witness said: there is no such thing as “Western” or “indigenous” science, or simply science validated by researchers from different social, ethnic and geographic origins.

We recognize the many barriers that face researchers from Indigenous communities. This is why we support initiatives that will help break down these systemic barriers, so that individuals who wish to participate in the discussion have a real opportunity to do so by having access to the necessary scientific resources. As such, Report 13 of the Standing Committee on Indigenous and Northern Affairs (INAN): Education as a Healing Tool: A Pathway to Improve Graduation Rates and Academic Outcomes for Indigenous Students contains many important recommendations that the government should hurry to implement.

