



Horizontal evaluation of the Trans Mountain Expansion Project – Terrestrial Cumulative Effects Initiative

Final Report

July 2025



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Accessibility Statement

As of the date of publication, the document has been verified for accessibility.

If you have any questions about this document, please contact us at: audit-evaluation@ec.gc.ca

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List of Acronyms and Abbreviations

AHRF	Aquatic Habitat Restoration Fund
DFO	Fisheries and Oceans Canada
DG	Director General
ECCC	Environment and Climate Change Canada
EPB	Environmental Protection Branch
FTE	Full-time equivalent
GBA Plus	Gender-based analysis plus
NRCan	Natural Resources Canada
OSDP	Open Science and Data Platform
PORAB	Program Operations and Regional Affairs Branch
SSI	Salish Sea Initiative
TCEI	Terrestrial Cumulative Effects Initiative
TMX	Trans Mountain Expansion Project

1. Introduction

This report presents the findings from a horizontal evaluation of the Trans Mountain Expansion Project (TMX) – Terrestrial Cumulative Effects Initiative (TCEI).

Natural Resources Canada (NRCan) was the lead for the initial phase of the Initiative whereas Environment and Climate Change Canada (ECCC) was the lead department for the second phase and the government policy lead on cumulative effects. As lead for the second project phase of the program, ECCC coordinated with NRCan and Fisheries and Oceans Canada (DFO).

1.1 Background

The TCEI was one of eight targeted [TMX accommodation measures](#) developed by the Government of Canada in 2019 in response to concerns raised by Indigenous Groups during TMX Phase III Crown consultations. Throughout the consultation process for the TMX, Indigenous Groups identified a need for increased understanding of potential cumulative effects in their traditional territories and a desire for increased involvement in broader efforts to better understand and manage these potential effects. Cumulative effects refer to the combined effects of past, present, and foreseeable activities and processes.

The TCEI was a time-limited funding program delivered by ECCC, NRCan, and DFO that supported Indigenous capacity building and projects related to cumulative effects in mainland terrestrial and freshwater environments. The three TCEI delivery departments engaged with eligible Indigenous Groups to collaboratively develop and co-design the program.

1.2 Program overview

The TCEI was designed to address the concerns raised by Indigenous Groups regarding the TMX's contribution to the cumulative effects of development on the mainland terrestrial and freshwater environments — including potential cumulative impacts on air and water quality, fish and fish habitat, and wildlife — as well as the ways in which these affect Indigenous traditional use of land and resources. The TCEI also aimed to respond to a desire expressed by Indigenous Groups during TMX Phase III Crown consultations to increase their participation in efforts to understand and manage cumulative effects of development.

Originally available to 104 terrestrial groups on the TMX Crown List, the TCEI was extended to 15 additional groups in response to cumulative effects concerns raised during consultations. The resulting 119 groups became the TCEI-eligible Indigenous Groups. Among eligible

Indigenous Groups, there is considerable diversity in capacity and experience related to cumulative effects monitoring and analysis.

1.2.1 Resources

The TCEI was approved in 2019 as a \$92 million investment over five years (from fiscal year 2019-2020 to fiscal year 2023-2024). The Government of Canada allocated the resources across the three delivery departments as follows:

- \$39.8 million to ECCC.
- \$28.2 million to NRCan; and
- \$25 million to DFO.

The three departments were not tied to their respective funding envelopes and a high degree of collaboration occurred to adjust funding across departments to best respond to proposals from Indigenous groups (i.e., a shortfall in one department was covered by another where possible).

Of the total funding, \$65.5 million was available for Indigenous capacity building and projects related to cumulative effects in mainland terrestrial and freshwater environments. Given that eligible Indigenous Groups accessed funding later than expected due to factors such as the COVID-19 pandemic, various natural disasters, and the discovery of mass graves at residential school sites, the TCEI was extended to fiscal year 2024-2025, one year beyond the original planned sunset.

1.2.2 TCEI objectives and activities

The overarching objectives of the TCEI are to:

- Strengthen community capacity to advance cumulative effects work.
- Support Indigenous Groups' understanding of cumulative effects of human activities on mainland terrestrial and freshwater environments; and
- Improve information and knowledge sharing to support Indigenous Groups in decision-making and future analysis around major projects.

The TCEI had the following three main components designed to advance these objectives:

- Capacity and cumulative effects project funding.
- Engagement and governance activities; and
- Technical and advisory support services.

The design and delivery of these components changed over time in response to input from Indigenous Groups. This evolution is described in section [2.1 Design & delivery](#). A brief description of each component is provided below.

Capacity and cumulative effects project funding

The TCEI provided contribution funding to eligible Indigenous Groups to support community capacity building and cumulative effects projects focused on priorities and issues of local concern. Capacity funding (up to \$100,000 per fiscal year) was available through NRCan and could be used for a variety of activities related to obtaining, improving, and retaining the skills, knowledge, tools, equipment, and other resources needed to participate in the TCEI, and in cumulative effects efforts more broadly.

In addition to capacity funding, the TCEI provided access to a base allocation of \$300,000 in project funding, which was available to eligible Indigenous Groups through ECCC and DFO. Additional funding was available to address further needs, up to approximately \$500,000 total. The initial base allocation of \$300,000 ensured that all interested TCEI-eligible Indigenous groups were able to access funding. This funding was non-competitive; that is, proposals were not ranked or scored against each other but instead were funded if they met basic screening criteria and were submitted before the wrap up of the program. Proposed projects had to be Indigenous led; related to cumulative effects in terrestrial or freshwater environments; and take place within the timeframe of the TCEI. Indigenous Groups had the flexibility to choose if the funds would be put toward a single project, multiple smaller projects, contribute to a joint project with, or split between individual and group projects.

Engagement and governance activities

The TCEI was intended to be implemented through a co-development approach with Indigenous Groups, including a regionally based governance structure for the program. In response to input from Indigenous Groups during early engagement on the design of the program, a watershed-based collaboration was proposed by the program and accepted by Indigenous Groups. This is described in more detail in section [2.1.2 Watershed-based collaboration](#).

Technical and advisory support services

Recognizing the need to provide communities with support in assessing cumulative effects, the three TCEI delivery departments made scientific and technical support available to Indigenous Groups throughout the lifetime of the TCEI. This included the following:

- Assistance with development and refinement of proposals.

- Assistance with the design and implementation of cumulative effects projects.
- Facilitating connections to departmental scientists, to data and data sources such as the Open Science and Data Platform (OSDP);
- Supporting with data management and visualization; and
- Holding various workshops and training sessions, including early and frequent knowledge sharing sessions on cumulative effects over the lifetime of the TCEI.

One element of this component of the TCEI was to advance the state of knowledge on cumulative effects through preparation of a State of Knowledge Report. Through engagement with Indigenous Groups, this deliverable evolved into the web-based TCEI Toolkit. Additional details on this evolution are provided in section [2.1.3 State of Knowledge Activities: Knowledge Sessions and Toolkit](#).

1.2.3 Roles and responsibilities

The TCEI is a horizontal program involving ECCC, NRCan, and DFO. Roles and responsibilities of the three TCEI delivery departments include:

- **ECCC.** ECCC's Environmental Protection Branch (EPB) houses the TMX Secretariat as the central coordinating hub and the departmental lead for TMX accommodations. EPB is also responsible for providing expert support for the TCEI. The Regional Director General, West and North Regions is responsible for operational policy development and overall implementation of the TCEI, including engagement with Indigenous Groups, and administering funding agreements. The branches shared responsibility for organizing and delivering knowledge-sharing activities and co-developing the TCEI Toolkit
- **NRCan.** NRCan is responsible for the initial phase of the TCEI and in this role engaged with Indigenous Groups and administered TCEI capacity funding agreements. NRCan also contributed to the TCEI Toolkit and led on delivery of training sessions for the Open Science Data Platform.
- **DFO.** DFO is responsible for delivering contribution funding to Indigenous Groups to support capacity building and undertaking of cumulative effects projects relating to fish and fish habitat in mainland aquatic environments. DFO is also responsible for conducting cumulative effects research and providing to Indigenous Groups technical support on their TCEI projects as needed. DFO is providing a support role to ECCC in Indigenous engagement activities and is also supporting the co-development of the TCEI Toolkit, including contributing content on DFO-led research on cumulative effects.

In addition to the three TCEI delivery departments, eligible Indigenous Groups are responsible for proposing and implementing cumulative effects projects; participating in regional engagement sessions; and participating in knowledge-sharing activities and contributing to the TCEI Toolkit.

1.3 About the evaluation

The evaluation was undertaken by ECCC's Evaluation Division, in collaboration with NRCan and DFO. It was conducted in compliance with the *Financial Administration Act* and the Treasury Board Policy on Results (2016), and in accordance with ECCC's Audit and Evaluation Plan 2022 to 2027.

The evaluation assessed design and delivery, efficiency, resource allocation and use, governance, performance measurement, effectiveness, and ongoing relevance of the TCEI. It covered TCEI activities over the period from fiscal year 2019-2020, when federal departments first received support for the TCEI, to March 31, 2024. However, some information contained in this report reflects program activities that occurred through early autumn 2024.

1.3.1 Evaluation questions

The evaluation addressed the following issues and questions:

Design & delivery

1. Is the program design and delivery appropriate for achieving the TCEI objectives?

Efficiency

1. Are program resources appropriately allocated and utilized?

Governance

2. Are governance and engagement structures appropriate and effective?

Performance measurement

3. Is performance measurement appropriate and adequate to support decision-making?

Effectiveness

4. To what extent have the TCEI objectives been achieved?

Ongoing relevance

5. How has the TCEI investment positioned Indigenous Groups to achieve longer term cumulative effects objectives?
6. What are the ongoing needs of Indigenous Groups for capacity building related to cumulative effects, and how can future programming best respond to these needs?

The complete evaluation matrix is in [Appendix](#).

1.3.2 Methodology

Multiple sources of information were used to answer the evaluation questions, with the aim of generating evidence-based findings and insights. During the evaluation design phase, an engagement session was held with eligible Indigenous Groups to foster their participation in the evaluation followed by a survey on how they wished to participate in and contribute to the evaluation. In addition, to facilitate participation by Indigenous Groups in the evaluation, a flexible approach was taken that offered various options and opportunities for Indigenous Groups to provide input over a period of approximately six months.

- **Document review.** The document review examined documents provided by the three delivery departments, including internal TCEI documents describing key activities, milestones, outputs, and progress against targets and deadlines; federal and departmental policy documents; and findings from previously conducted audits and evaluations.
- **Administrative data review.** The data review included grants and contributions administrative data, performance measurement information, and financial information, including planned and actual spending.
- **Key informant interviews.** A total of 21 interviews were conducted, involving 28 individuals. This included 12 interviews with 18 representatives of ECCC, NRCan, and DFO. In addition, it included nine interviews with 10 representatives of Indigenous Groups. Responses are quantified and categorized in this report using the scale shown in Table 1.

Table 1: Key informant interview quantification scale

Term	Definition
few	Few is used when less than 25% of participants have responded with similar answers.
some	Some is used when more than 25% but less than 50% of participants responded with similar answers.
half	Half is used when 50% of participants responded with similar answers.

a majority	A majority is used when more than 50% but fewer than 75% of the participants responded with similar answers.
most	Most is used when more than 75% and less than 90% of the participants responded with similar answers.
almost all	Almost all is used when 90% or more of the participants responded with similar answers.

- **Survey of Indigenous Groups.** A bilingual, web-based survey of TCEI-eligible Indigenous Groups was conducted to understand their experiences with the TCEI. The survey link was disseminated to all 119 Indigenous Groups (200+ unique email addresses). In total, 13 partially and fully completed surveys were received.¹
- **Case studies.** Three in-depth case studies were conducted. One focused on the TCEI’s State of Knowledge activities, and two focused on the activities and experiences of two Indigenous Groups that received TCEI funding. Stand-alone case study reports were prepared, and the community case study reports were circulated to community contacts for review. The finalized reports were provided to the communities to use as they wish. Excerpts from the case studies have been included in this report.

1.3.3 Limitations

The numerically limited participation by Indigenous Groups should not be interpreted as indicative of the value that communities placed on the TCEI, nor necessarily reflective of the totality of diverse experiences or perspectives of the 119 TCEI-eligible Indigenous Groups.

The evaluation revealed challenges in reconciling financial reporting inconsistencies across delivery departments, and a difficulty in determining TCEI spending across departments making it difficult to arrive at an accurate picture of TCEI spending over the period covered by this evaluation.

¹ This includes two completed surveys from the same individual representing one Indigenous Group. Both completed surveys (containing different responses) were included in the survey.

2. Findings

2.1 Design & delivery

Key findings: Overall, the design and delivery of the TCEI was appropriate for achieving the program objectives. However, concerns were expressed that the program's administrative requirements were challenging for Indigenous Groups with less capacity and experience.

2.1.1 Collaboration and co-development

The TCEI was based on a co-development approach from the onset, with all three TCEI delivery departments conducting extensive proactive outreach and engagement with Indigenous Groups to collaboratively develop the TCEI.

- Between September 2019 and December 2020, the three TCEI delivery departments met with Indigenous Groups through in-person workshops and meetings, and engaged bilaterally through phone calls, written correspondence, and meetings.
- In 2020, the Government of Canada shared the TCEI Discussion Paper with TCEI-eligible Indigenous Groups, which presented draft components of the initiative for feedback and discussion. These draft components were discussed in greater detail during the Fall 2020 TCEI Virtual Workshop Series and further refined.
- The TCEI funding guidelines and proposal template were initially launched in Spring 2021, but due to various challenges (described in section [2.1.7 TCEI implementation](#)), the funding call did not generate the expected number of submissions. Following additional engagement to further clarify the program objectives and scope, these materials were revised and shared with Indigenous Groups in March 2023.

To address the feedback provided by Indigenous Groups, program documents emphasized that TCEI funding was non-competitive and designed to be as flexible as possible, supporting a range of capacity and project activities focused on the priorities of highest importance to Indigenous Groups. In addition, the proposal process was simplified and streamlined.

Other aspects of the TCEI were also co-developed with Indigenous Groups. As described in detail below, the proposal to co-develop a regionally based formal governance structure was replaced with six watershed-based groupings focused primarily on knowledge sharing; and the planned State of Knowledge Report evolved into a web-based TCEI Toolkit.

2.1.2 Watershed-based collaboration

While the TCEI was originally intended to be implemented through a regionally based governance structure co-developed with Indigenous Groups, early engagement on the design of the program revealed that there was limited interest in formalized governance structures among Indigenous Groups. Furthermore, some were concerned that participating in TCEI governance would effectively signal acceptance of and support for the TMX. As an alternative to more formalized governance, a watershed-based collaboration, focusing primarily on information-sharing, was proposed by the program and accepted by Indigenous Groups. Six watershed-based groups were established, organized around the Athabasca-Peace, North and South Saskatchewan, Columbia, Upper Fraser, Thompson-Fraser Canyon, and Lower Fraser-South Coast watershed regions.

Throughout the TCEI, the three delivery departments provided facilitation support and coordination for bringing together Indigenous Groups and subject-matter experts in a series of TCEI-wide and local or watershed-based workshops. These workshops were a mix of virtual, hybrid and face-to-face, which broadly enabled the following three types of information sharing:

- 1) Understanding the TCEI program, funding, and application process.
- 2) Knowledge sharing sessions on cumulative effects topics; and
- 3) Workshops that guided development of the TCEI Toolkit (see section below).

2.1.3 State of Knowledge Activities: Knowledge Sessions and Toolkit

The knowledge sharing sessions were intended to provide opportunities for Indigenous Groups and departmental technical staff to share cumulative effects knowledge and ideas, identify and discuss shared priorities, coordinate and/or collaborate, and share updates or lessons learned from cumulative effects projects within watershed groups. Some included training on available cumulative effects data from federal resources. Participation in the TCEI-wide or watershed-based knowledge sharing workshops was optional and inclusive of all TCEI-eligible Indigenous Groups; representatives could include Elders and youth, in addition to technical staff.

Foundational documents included plans to produce a State of Knowledge Report to document and synthesize cumulative effects information gathered through the TCEI-funded projects at the discretion of TCEI participants, as well as Government of Canada cumulative effects data. Based on input from Indigenous Groups engaged during TCEI design, this evolved into a web-based TCEI Toolkit consisting of a variety of TCEI knowledge products and other data related to cumulative effects. The Toolkit was intended to be an enduring resource that could potentially inform future planning, assessment, and management processes.

The structure and content of the TCEI Toolkit were collaboratively developed through watershed-based and initiative-wide workshops. The State of Knowledge Kick-Off Meeting to explore the nature of this deliverable was held on April 5, 2023, and three rounds of hybrid State of Knowledge watershed-based workshops involving all six watershed regions were held between the Summer of 2023 and the Winter of 2024. The Summer 2023 workshops focused on drafting the guiding principles for the Toolkit; the Fall of 2023 workshops on reviewing the guiding principles and further developing the Toolkit content; and the Winter of 2024 workshops on capturing feedback from Indigenous Groups on the mock-up of the Toolkit. Additional working group meetings with Indigenous Groups were held in the Winter of 2024 to discuss the purpose and functionality of the Toolkit and the process for submitting project information. One engagement session was also held in the Spring of 2024 to provide updates on the Toolkit.

While not all TCEI-eligible groups within each watershed region have attended the State of Knowledge-related knowledge sharing sessions or Toolkit workshops and meetings described above, there has been a strong engagement of Indigenous Groups in the State of Knowledge initiative; program data indicate that between 34 and 60 Indigenous Groups attended each of these workshops/meetings. Across all six watershed groups, 50% of eligible Indigenous Groups participated in the Toolkit guidelines drafting workshops; 44% participated in the review of the Toolkit guiding principles; and 30% participated in the Toolkit mock-up feedback sessions.

2.1.4 Other examples of TCEI co-development and collaboration

The design and delivery of the TCEI also responded to and reflected the input provided by Indigenous Groups in various other ways in ensuring that:

- All members of the Indigenous Groups would have access to information about the TCEI and cumulative effects, TCEI knowledge materials aimed to balance technical, science-based information with high-level information targeted at a wider lay audience.
- Representatives from Indigenous Groups had opportunities to participate in implementing the TCEI. Various cross-cutting working groups were established involving representatives from Indigenous Groups as well as the Government of Canada (see section [2.3.2 Collaborative governance and engagement with Indigenous Groups](#)).

2.1.5 Indigenous Groups' perspectives on co-development and collaboration

Representatives of Indigenous Groups who participated in the evaluation interviews and survey shared various perspectives about their participation in TCEI co-development and implementation activities and the program's responsiveness to their needs and priorities, as described in detail below.

Perspectives on participation in TCEI co-development and implementation activities

Most representatives of Indigenous Groups who participated in interviews confirmed that there were numerous opportunities to get involved in the co-development of the TCEI. A few reported that they themselves attended these activities, and among these interviewees, all were satisfied with the approach taken. Furthermore, these interviewees reported that the collaboration and co-development of the TCEI was carried out in a meaningful way and described being able to speak freely in engagement sessions to voice their concerns, needs, and priorities. Similarly, among survey respondents, about two-thirds reported that they had participated in co-development or implementation activities. Approximately half of survey respondents agreed that their Nation/Group was satisfied with both the number and nature of opportunities to participate, with the remainder either disagreeing or indicating that they were neutral or did not know.

A few interviewees and survey respondents identified challenges related to participation in co-development, noting that they lacked awareness of, or were not informed about, co-development opportunities, or that they had limited capacity or resources to participate.

Perspectives on program responsiveness

Among the representatives of Indigenous Groups who participated in the evaluation interviews and who attended the co-development activities, all agreed that the TCEI was very responsive to the needs and priorities of the communities. They noted that much of their feedback was incorporated into the program. Additionally, interviewees noted that the co-development approach provided assurances that the TCEI was not prescriptive in its design; it rather allowed communities to use TCEI funding to advance initiatives that met their needs and interests. Interviewees also observed that the co-development approach supported communities in the use of their intimate and unique knowledge of the land to understand cumulative effects.

As a group, survey respondents expressed a wider range of perspectives concerning the responsiveness of the TCEI. About one-third agreed that the input their Nation/Group provided was taken into account in developing and implementing the TCEI, while about one-quarter agreed that overall, the input that Indigenous Groups provided was taken into account in developing and implementing the TCEI. The remaining respondents either disagreed or indicated that they were neutral or did not know.

A few interviewees and survey respondents described specific concerns related to program responsiveness. For example, concern was raised that collaborating with the Government of Canada on TCEI co-development effectively meant endorsing TMX or restricted the ability of Indigenous Groups to pursue legal action against it. However, interviewees also noted that Indigenous Groups were given assurances that participating in the TCEI did not constitute a de facto endorsement of TMX and would not affect their ability to proceed with legal action in the future. Another concern was that co-development meetings were more an opportunity to learn about the TCEI, rather than contribute to its co-development. One survey respondent noted that their Nation/Group's long-standing attempts to convey their concerns to federal departments have not been heard, although they did not share additional details.

2.1.6 Incorporation of equity, diversity and inclusion considerations

In addition to being developed collaboratively with Indigenous Groups as described above, the TCEI incorporated equity, diversity and inclusion considerations and gender-based analysis plus (GBA Plus) into its design and delivery. A GBA Plus assessment was conducted as part of an initial Treasury Board approval in 2019, and GBA Plus considerations were also addressed in TCEI design and delivery in the following ways:

- Making efforts to "acknowledge and reflect a variety of different aspects of traditional knowledge that is likely to be held by diverse people" and ensure that these diverse perspectives are incorporated into TCEI design and delivery.
- Inviting Elders, youth, and women to engagement sessions, and designing program features to be appealing to youth (involvement of youth in community learning was identified as a priority by many Indigenous Groups).
- Incorporating cultural practices such as ceremonial costs and tobacco offerings into the budget process; and
- Adjusting timelines to ensure that Indigenous Groups and community members would not be excluded from participation in the program.

2.1.7 TCEI implementation

TCEI-eligible Indigenous Groups were originally intended to have access to capacity funding until March 2022 and project funding until March 2024. However, the TCEI encountered several challenges that affected implementation and the original planned timelines, and that the program was subsequently extended for an additional year, ending in March 2025.

In the first years of the program, the discovery of mass unmarked graves at residential school sites, the COVID-19 pandemic, and extreme weather events such as wildfires and floods in British Columbia and Alberta shifted the attention of Indigenous Groups toward these more immediate priorities. In addition, some communities reported human resources challenges, such as lack of or insufficient qualified or experienced personnel and/or high turnover, which limited their capacity to prepare proposals and undertake TCEI projects. Others reported insufficient time to prepare proposals and/or undertake TCEI projects, and difficulties in obtaining necessary equipment or supplies. Program representatives reported that the amount of time required to engage with Indigenous Groups was initially under-estimated.

Some challenges also arose within the TCEI program itself. Challenges emerged because of differences in formally stated vision and objectives (see section [2.4 Performance Measurement](#)), funding processes, and TCEI resource levels of the three delivery departments. Each department had established and continued to advance their relationships in working with Indigenous Groups, which in a few instances were not completely in sync. Moreover, the absence of common financial authority levels for approvals, policy and process for managing contribution agreements and the lack of a central database for managing TCEI agreements across the three delivery departments delayed implementation.

Additionally, the lack of initial training for ECCC program staff on grants and contributions during program onboarding posed challenges. Finally, within ECCC, contribution funding agreement approvals were not timely, which was not well-aligned with the capacity of Indigenous Groups, or the timing of their planned project activities.

Steps were taken to mitigate challenges to implementation by enhancing outreach and communications, ensuring flexibility in funding, and providing technical support to Indigenous Groups.

- **Outreach and communications.** To reach potential participants when in-person meetings were not feasible, alternative communication methods such as Microsoft Teams and telephone calls were employed. In addition, engagement sessions offered by other programs were leveraged to raise awareness about TCEI funding among eligible Indigenous Groups and maximize the reach of the program.

- **Flexibility in funding.** In response to delays arising from external events as well as delays in funding approvals, TCEI funding was extended for an additional year (i.e., to fiscal year 2024-2025), and contribution agreements, which were originally fixed-year agreements, were adjusted to allow funds to be carried over from one year to the next. In addition, the pace of approval was enhanced by increasing ECCC’s funding threshold for amounts requiring Director General (DG) approval from \$100,000 to \$500,000. Together, these adjustments have maintained flexibility within the program and enabled Indigenous Groups to access TCEI funding, despite challenges and delays.
- **Administrative, technical, and scientific support and assistance.** The support and assistance that were available to Indigenous Groups as a core component of the TCEI was important to overcoming challenges during proposal development and project implementation. Although some Indigenous interviewees reported that they did not require technical support because they had internal expertise or were able to hire consultants, most interviewees, as well as most survey respondents, reported that they received such support or assistance. This included working one-on-one to develop projects that aligned with funding requirements, suggestions for how to improve their proposals, answers to questions and/or additional information to enhance their proposal, assistance in adjusting project workplans as needs and interests evolved, as well as an extended timeline for proposal submission or project implementation. All of those who received technical support or assistance believe it was helpful in overcoming their proposal or project implementation challenges.

In addition, to address challenges and inefficiencies arising from the different delivery approaches and processes of the delivery departments, departmental roles and responsibilities were analyzed early in the TCEI implementation process to identify opportunities to improve coordination and enhance efficiency. However, it is unclear precisely what changes were made as a result of this analysis.

2.1.8 Strengths of the TCEI design and delivery

Several features of the TCEI design and delivery are perceived as strengths by program representatives as well as by representatives of Indigenous Groups who provided input into this evaluation. These features have been instrumental in facilitating participation in the TCEI on the part of Indigenous Groups.

- **Co-development approach.** The co-development approach that was taken to TCEI design and delivery was generally seen as a key strength of the program by those who participated in the evaluation. That said, there is evidence (albeit limited) that some

Indigenous Groups lacked awareness of co-development opportunities, had limited capacity to participate, or were ambivalent or uncertain about the extent to which the input provided by their Nation/Group and Indigenous Groups in general was considered in developing and implementing the TCEI.

- **Flexibility.** The TCEI was designed to support a diversity of cumulative effects capacity and project activities focused on the needs and priorities of highest importance to Indigenous Groups that reflected, for example, specific culturally valued species; air, water, or land ecosystems; cumulative effects training; and/or preferences for certain types of information or data formats. Furthermore, the program was flexible in its funding timelines in response to unforeseen events and circumstances. This flexibility is seen as both appropriate and necessary for communities to develop projects based on their self-assessed needs and their priorities in relation to cumulative effects.
- **Administrative, technical, and scientific support.** The three TCEI delivery departments made administrative, technical, and scientific support available to Indigenous Groups throughout the lifetime of the TCEI. Indigenous Groups greatly appreciated the support they received during the proposal writing phase and throughout the entire lifecycle of their project, which enabled them to address challenges related to either or both of completing their proposals and advancing their projects.

2.1.9 Considerations for future program design and delivery

A number of considerations emerged from the evaluation that may inform the design and delivery of future cumulative effects funding programs and future accommodations programs more broadly. These relate to optimal program delivery, the administrative requirements for funding programs, the accessibility of government program resources to community members, and the funding mechanism used.

Optimal program delivery

The TCEI is one of four TMX accommodation measures that provide funding for cumulative effects activities. The other three are the Aquatic Habitat Restoration Fund (AHRF) and the Salish Sea Initiative (SSI), both delivered by DFO; and the Terrestrial Studies Initiative, delivered by NRCan.

Program representatives explained that initially, the four programs emerged incrementally to be as responsive as possible, as quickly as possible, to the diversity of needs of Indigenous Groups expressed as part of TMX consultations. An important early TMX accommodation objective was to initiate and deliver multiple programs that aligned with the different requests

made by Indigenous Groups – for terrestrial work, for aquatic ecosystems, for marine ecosystems, for capacity building, for training, for creating knowledge, for restoration, etc. Thus, while all four programs addressed cumulative effects, they had slightly different objectives (for example, AHRF included funding for restoration work, SSI supported marine initiatives, while TCEI did not). Furthermore, program representatives explained that this approach enabled Indigenous Groups to access specialized subject matter expertise within the three departments.

Although the four programs were designed and delivered separately, program representatives reported that it was recognized early on that there was a high degree of overlap among the Indigenous Groups that were likely to seek funding through them. As such, steps were taken to support inter-program coordination, streamline contribution agreement delivery, enhance overall efficiencies, and support Indigenous Groups' concerns regarding capacity limitations. For example:

- Significant effort was placed in coordinating engagement sessions to advance co-development commitments. Combined SSI-AHRF-TCEI sessions were planned where possible.
- DFO initiated a process to bring all programs under one set of Terms and Conditions. This allowed for the use of one contribution agreement template package to flow different sources of funds, resulting in the administrative burden being carried by DFO rather than funding recipients. Program recipients reported that Indigenous Groups were very appreciative of this approach.

Program representatives agreed that cumulative effects work is an important element of reconciliation and that the design and delivery of future funding programs for cumulative effects could be enhanced to improve accessibility. There was general agreement that a single window front end, with multiple departments coordinating on the back end to establish joint delivery mechanisms such as shared Terms and Conditions and tracking tools, could be implemented. Program representatives emphasized the importance of spending time upfront to ensure that program design is optimal and of building co-management commitments into program goals and objectives.

Administrative requirements

Indigenous Groups who participated in the evaluation offered a range of perspectives on the administrative requirements associated with TCEI funding. Among interviewees, some appreciated the staged proposal process and regarded the proposal requirements as appropriate in their level of detail. Some others noted that the proposal documents included

too much technical information and were therefore not accessible to laypeople in their communities or aligned with their communities' approaches to proposal development. In addition, for communities with limited administrative or cumulative effects capacity, the administrative burden associated with proposal submission and project reporting was excessive, notwithstanding the program's acknowledged efforts to streamline and simplify the proposal process in response to concerns raised during engagement on TCEI design.

Similarly, survey respondents had varied opinions on the proposal process and their funding agreement, with half agreeing that:

- The TCEI proposal requirements were clear and easy to understand.
- Developing their proposal required a manageable level of effort.
- Their Nation/Group received feedback on their proposal(s) within a reasonable timeframe.
- The terms and conditions of their funding agreement(s) are clear and easy to understand.
- The reporting requirements are manageable; and
- The reporting requirements are clear.

Most of the remaining respondents either were neutral or indicated that they did not know; only one disagreed. Although the small number of participants in the interviews and survey limits the extent to which firm conclusions can be drawn, this feedback suggests that future opportunities to clarify and/or streamline proposal submission and reporting requirements would be welcome and would facilitate program participation.

Accessibility of resources

Related to the above points, one representative from Indigenous Groups who participated in interviews raised concerns about the accessibility of TCEI resources. They reported that some of the resources that were provided in workshops were difficult to share with community members because they were not written for the layperson. This interviewee strongly encouraged the development of resources that are accessible to all community members. Suggestions included greater use of visually based tools; more hands-on or field-based learning (rather than reports); and greater effort to develop more engaging resources through inclusion of infographics, games, and personal stories or story-telling elements.

Funding mechanism

Finally, some program representatives noted that the use of contribution agreements was seen as paternalistic by Indigenous Groups (although this concern was not raised by any of the Indigenous Groups who participated in this evaluation) and suggested that grants would have been a more appropriate funding mechanism for accommodation measures. On the other

hand, according to one program representative, grants would not have been able to deliver the same amount of funding to Indigenous Groups. Some program representatives were of the view that accommodation measures should be funded through ongoing (A-base) funding rather than grants and contributions funding, as this would be more consistent with the spirit of accommodation measures and the Government of Canada's commitment to reconciliation. Indigenous Groups expressed a preference and need for ongoing funding for cumulative effects activities regardless of funding mechanism (see section [2.6 Ongoing relevance](#)).

2.2 Efficiency

Key findings: There is no standardized approach to financial reporting across the TCEI delivery departments, and it was not possible, within the timeframe of the evaluation, to produce an accurate overall picture of TCEI spending. That said, as of September 30, 2024, it was projected that 82% of available funding would be disbursed to Indigenous Groups by the end of the TCEI in March 2025. Steps were taken to address inefficiencies in program delivery arising from factors such as staffing challenges within ECCC and interdepartmental differences in policies and processes.

The lack of a standardized approach to financial reporting across the TCEI delivery departments made it difficult to produce an accurate overall picture of planned and actual program expenditures. The available data indicates that:

- Overall, for TCEI, actual expenditures were lower than planned in each fiscal year for which figures are available (2020-2021 to 2023-2024).
- DFO and ECCC spent less than planned in each fiscal year from 2020-2021 to 2023-2024, while NRCan spent considerably more (41%) than planned between 2019-2020 and 2023-2024.
- All three departments reprofiled a proportion of unspent contributions funding to be used in subsequent years, in response to various challenges affecting program implementation (see section [2.1.7 TCEI implementation](#)). In addition, a substantial amount of funds was transferred between departments to best support all eligible requests for funding. During the first phase of the initiative dedicated to capacity-building, program representatives noted a strong interest from indigenous groups in capacity-building funding. Nevertheless, NRCan did not have sufficient funds to meet the demand. ECCC and DFO provided some funding to NRCan to address this need. In the second phase of the program, during which project funding was available, ECCC found that it had higher demand than available

resources could handle. NRCan provided funds to ECCC to support this demand.² The flexibility and ability to move funds across departments benefitted funding recipients and supported positive program outcomes.

As of September 30, 2023:

- A total of \$46.49 million (71% of the \$65.5 million available for contributions) had been allocated to eligible Indigenous Groups.
- A total of \$29.06 million (44% of the total available for contributions and 63% of the total amount allocated) had been disbursed.

Based on all project proposals submitted by September 30, 2024, it was projected that a total of \$53.92 million in funding would be disbursed to Indigenous Groups by the end of the TCEI in March 2025. This represents 82% of the total funding available through the program.

Some program representatives believe that TCEI resources were fairly and appropriately allocated among departments, given their respective responsibilities. They, nevertheless, noted that several resource-related challenges were encountered.

- ECCC representatives noted that the TCEI was launched very rapidly without appropriate staffing up and training within ECCC in key areas such as administering grants and contributions programs and working with Indigenous Groups. They indicated that the number of full-time equivalents (FTEs) that ECCC had allocated to the TCEI at program inception was inadequate, and time was required to adequately staff the program. On the other hand, DFO and NRCan representatives indicated that these departments had an appropriate number of FTEs to carry out their TCEI responsibilities. Both DFO and NRCan had previous experience — as a result of the AHRF, SSI, and the Terrestrial Studies Initiative — in implementing accommodations programs.
- The lack of standardized grants and contributions funding policies and processes across the delivery departments contributed to delivery inefficiencies. A substantial level of effort over approximately the first 18 months of the TCEI was required to resolve these inconsistencies, often at more senior levels than the usual operational implementation of such a program would entail. Staff resources were required to develop workable solutions

² NRCan staff indicated that they had been allocated phase 2 funding in years 4 and 5, with the understanding that this was to be transferred to ECCC, as they were not in a position to disburse project funding directly to recipients.

to address approval delays, reprofiling of funds, and disbursement of funds to Indigenous Groups.

Program representatives noted that interdepartmental transfers, along with adjustments to the terms and conditions of funding agreements, ensured that funding was not lapsed, and that Indigenous Groups would receive TCEI funds despite approval and reprofiling delays. Program representatives noted that positive working relationships among the delivery departments were critical to facilitating funding reallocation.

2.3 Governance

Key findings: A formalized approach to TCEI horizontal governance and delivery exists. This is considered effective by program representatives who note well-defined roles and responsibilities, a high level of senior management engagement, and various interdepartmental committees and working groups to support coordination and implementation.

2.3.1 Interdepartmental governance

The TMX initiative is governed by various senior management committees — at the Deputy Minister, Assistant Deputy Minister, DG, and Director levels — as well as various interdepartmental and intradepartmental working groups.

According to foundational documents, the governance structure for the TCEI was to consist of an interdepartmental DG Steering Committee, reporting to the overall TMX governance framework, to oversee the development, operations, and management of the TCEI. The interdepartmental DG Steering Committee was to be supported by two working groups — Engagement and Governance, and Technical and Project Support — to support the implementation of the three components of the TCEI.

Internal documents indicate that, in addition to the interdepartmental DG Steering Committee, the TCEI is currently supported by the following governance structures:

- Two additional committees at the DG level; a committee responsible for interdepartmental coordination and a committee responsible for ECCC departmental coordination on the TCEI — the ECCC Bilateral (Environmental Protection Branch Operations Directorate and West and North Regions) TMX DG Committee; responsible for ECCC departmental coordination on the TCEI.

- An interdepartmental Director-level Committee provided strategic and operational policy guidance and coordination through the initial years of the program, until the Spring of 2024 when, during the final year, director communications switched to an as needed basis.
- Two interdepartmental working groups; that is, the TMX Working Group, which is responsible for interdepartmental coordination on all TMX accommodation measures; and the TCEI Toolkit Task Team, responsible for coordinating the Toolkit, OSDP training, and the Knowledge Series.

As noted in section [2.1.7 TCEI implementation](#), program staff undertook an analysis of departmental roles and responsibilities in order to identify opportunities to improve coordination and enhance efficiency, but it is unclear what changes were implemented as a result of it. For example, it is unclear if the governance structure described above predated this analysis or was developed as a result of it.

Overall, program representatives from all three departments believe that the TCEI governance structure is effective and works well. They cited numerous strengths, including:

- Well-defined roles and responsibilities of the delivery departments.
- A high level of engagement by departmental executives responsible for the program.
- The creation of numerous interdepartmental committees and working groups for engagement, funding, and technical support; and
- Shared access to information through GCDocs and SharePoint to enhance workflow and collaboration.

However, program representatives reported that at a practical level, timelines were sometimes insufficient for NRCan and DFO to review documentation provided by ECCC, which limited the extent to which they could participate in discussions. In addition, it was at times difficult to convene meetings with senior managers, due to their busy schedules.

2.3.2 Collaborative governance and engagement with Indigenous Groups

As described in section [2.1.2 Watershed-based collaboration](#), early engagement on TCEI design revealed limited interest in formalized governance structures among Indigenous Groups. A watershed-based collaboration, focusing primarily on information-sharing, was proposed by the program and accepted by Indigenous Groups.

Indigenous Groups also participated in several working groups established as part of the TCEI, including the Indigenous Led Projects Working Group; the Networking and Collaboration Working Group; and the OSDP Training Group.

2.4 Performance measurement

Key findings: There is currently no overarching logic model or common set of outcomes and indicators for the TCEI. It is therefore unclear to what extent the delivery departments are using performance information to support decision-making or sharing performance information with Indigenous Groups. Some program representatives suggested that, in the future, performance indicators should be developed in collaboration with Indigenous Groups to enhance their meaningfulness and usefulness to Indigenous Groups.

While no overarching logic model for TCEI has been developed, expected results have been identified for the TCEI. In addition, each department identified its own expected outcomes and corresponding indicators at the time of drafting the foundational documents and has modified these ever since. Given a lack of common program outcomes and indicators across the three delivery departments, it was not possible to frame the evaluation around a set of outcomes common to all three departments. Furthermore, the extent to which the delivery departments are using performance information to support decision making is not clear. Similarly, it is unclear whether TCEI performance information is shared with Indigenous Groups.

Some program representatives raised questions about the meaningfulness and usefulness of the TCEI performance indicators for Indigenous Groups. They reported that the indicators were developed prior to the Treasury Board submission and without any input from Indigenous Groups. Although the design of the TCEI subsequently evolved following Treasury Board submission based on input from Indigenous Groups, no adjustments were made to the performance indicators.³ Program representatives were of the view that performance indicators for accommodation measures funding should be ones that are important to communities. It was suggested that engagement with Indigenous Groups should take place prior to Treasury

³ It is unknown if the performance indicators were a point of discussion during engagement with Indigenous Groups on TCEI design.

Board submission to develop performance indicators that are meaningful and useful not only to the Government of Canada, but also meaningful and useful to Indigenous Groups.

2.5 Effectiveness

Key findings: Overall, TCEI met its objectives. It was successful in strengthening community capacity for advancing cumulative effects work; supporting Indigenous Groups' understanding of cumulative effects of human activities on mainland terrestrial and freshwater environments; and improving information and knowledge sharing to support Indigenous Groups in decision-making and future analysis around major projects.

2.5.1 Strengthen community capacity to advance cumulative effects work

Key findings: As of March 31, 2024, 85% of all TCEI-eligible Indigenous Groups had signed capacity funding contribution agreements and 87% had signed project contribution agreements — exceeding the program's target of 75% of eligible Indigenous Groups with signed project agreements. Those who were interviewed and surveyed agreed that they have **strengthened their capacity to advance cumulative effects** work because of the TCEI.

One of the three objectives of the TCEI was to strengthen community capacity to advance cumulative effects work. It consisted of providing capacity and project funding as well as administrative, technical, and scientific support to eligible Indigenous Groups.

As of March 31, 2024, the TCEI had signed a total of 205 contribution agreements with Indigenous Groups.

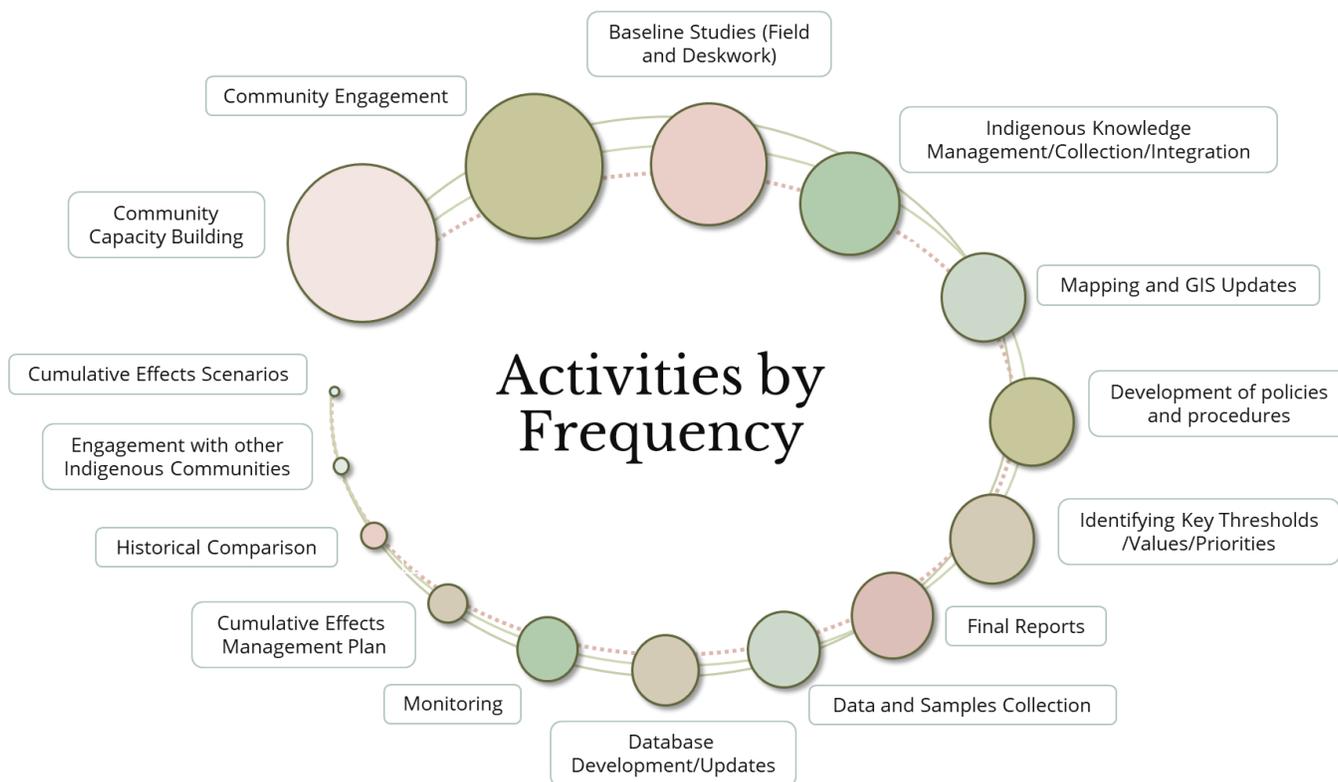
- **Capacity funding:** In total, 85% of TCEI-eligible groups (n=101) signed TCEI Phase I capacity funding contribution agreements with NRCan as of March 31, 2024. The majority of these agreements (72%) were closed by December 6, 2023.
- **Project funding:** A total of 106 eligible groups have submitted a Phase II project funding proposal. Of these, 104 had signed project funding contribution agreements by March 31, 2024, of which three-quarters were signed with ECCC and one-quarter with DFO. A large majority of these projects (85%) were still underway as of March 31, 2024.

The 104 Indigenous Groups with signed contribution agreements in place as of March 31, 2024, represent 87% of the 119 TCEI-eligible Indigenous Groups — surpassing the program’s target of 75%.

Indigenous Groups used capacity funding for a variety of purposes, such as hosting community meetings or conducting community engagement; hiring and training staff; purchasing equipment; and developing courses on cumulative effects or school curricula with lessons on cumulative effects. The most common types of activities included community capacity building; community engagement; baseline studies (field and deskwork); and Indigenous Knowledge management/collection/integration.

Project funding has likewise been used to carry out a variety of cumulative effects projects based on communities’ self-identified needs and priorities. These include cumulative effects monitoring and or management projects; program development; land disturbance analysis; and other initiatives. Specific examples include developing spatial tools and databases; using drone images and infrared technology to examine land uses; and collecting data to support modelling on cumulative stressors to predict future impacts. Figure 1 provides an overview of the range of activities undertaken by TCEI-funded projects, based on program documentation.

Figure 1: TCEI-funded project activities by frequency



All representatives of Indigenous Groups who were interviewed agreed that the TCEI has strengthened their community's capacity to undertake cumulative effects work. Among survey respondents, more than half agreed that their Nation/Group is better equipped to undertake or participate in cumulative effects monitoring or studies; two said it was too soon to know as their project was still ongoing and one was neutral. Similarly, all those interviewed reported that TCEI funding has strengthened their community's capacity by enabling them to:

- Hire and/or train community members to work on cumulative effects projects — for example, to undertake ongoing data collection.
- Purchase new equipment — such as drones, wildlife cameras, all-terrain vehicles, and snowmobiles — to support their cumulative effects work, which has enabled them to gain access to their land in a way that had not been possible in the past.
- Develop information technology-based tools (e.g., databases, modelling tools) to enable them to continue cumulative effects work into the future.
- Use data gathered through the TCEI project to develop a Kindergarten to Grade 12 curriculum on environmental monitoring and analysis, thereby strengthening capacity for future generations.
- Identify areas of concern related to cumulative effects, compile data to analyze cumulative effects, and develop plans to address cumulative effects
- Build the capacity to undertake work for which they had hired third party organizations in the past, allowing for stronger stewardship of their land.

Program representatives highlighted that some Indigenous Groups who would not ordinarily have engaged with the Government of Canada wished to submit proposals for additional funding for cumulative effects activities, which they highlighted as evidence of the effectiveness of the TCEI in building the capacity of Indigenous Groups to advance their cumulative effects priorities.

Test Community Case Study: Otipemisiwak Métis Nation of Alberta Association

The Otipemisiwak Métis Nation of Alberta Association (MNA) received both capacity and project funding through the TCEI. MNA used capacity funding for the following activities:

- Hold staff workshops and meetings to discuss cumulative effects.
- Administer surveys to MNA citizens to determine cumulative effects needs.
- Collect geographic data related to cumulative effects.
- Provide Geographic Information Systems training to MNA staff; engage with leadership and citizens through workshops to increase understanding of cumulative effects; and
- Organize discussions on court cases related to cumulative effects in other jurisdictions to strengthen engagement and build capacity in this area for the Métis Nation within Alberta.

Subsequently, project funding was used to conduct research and gather the types of data that MNA citizens had identified during the capacity building project; identify gaps in western science models of cumulative effects; and develop an internal catalogue of resources that can be used to better understand cumulative effects.

Overall, MNA representatives reported that the TCEI has enabled MNA to:

- Build staff capacity in conducting community engagement activities and in technology areas needed to collect and analyze data on cumulative effects.
- Use technology such as drone camera footage to map land and produce a baseline assessment of the present state of the environment.
- Create a framework to allow MNA citizens to better understand the immediate and long-term cumulative impacts on their environment.
- Develop knowledge transfer materials and obtain user feedback to help improve these materials and make them more effective.
- Support the Otipemisiwak governance districts that are implementing ecosystem impact assessments by helping them better understand cumulative effects.

2.5.2 Support Indigenous Groups' understanding of cumulative effects of human activities on mainland terrestrial and freshwater environments

Key findings: Although most funded projects (85%) were still underway by the end of 2023-2024, there is early evidence that Indigenous Groups have **gained valuable knowledge and understanding about cumulative effects** as a result of their projects. They indicated that their Nation/Group now has a better understanding of the environmental impacts or cumulative effects of human activities.

The second objective of the TCEI was to support Indigenous Groups' understanding of the cumulative effects of human activities on mainland terrestrial and freshwater environments. The TCEI pursued this objective through funding Indigenous Groups to undertake cumulative effects projects, as well as through the development of knowledge products and watershed-based and initiative-wide knowledge-sharing activities.

Although some qualified their remarks by noting that their community's funded project is still ongoing, all representatives of Indigenous Groups who were interviewed as well as about half of survey respondents agreed that their community has gained valuable knowledge and understanding about cumulative effects as a result of their project. In addition, about half of those surveyed agreed that their Nation/Group has a better understanding of the environmental impacts or cumulative effects of human activities.

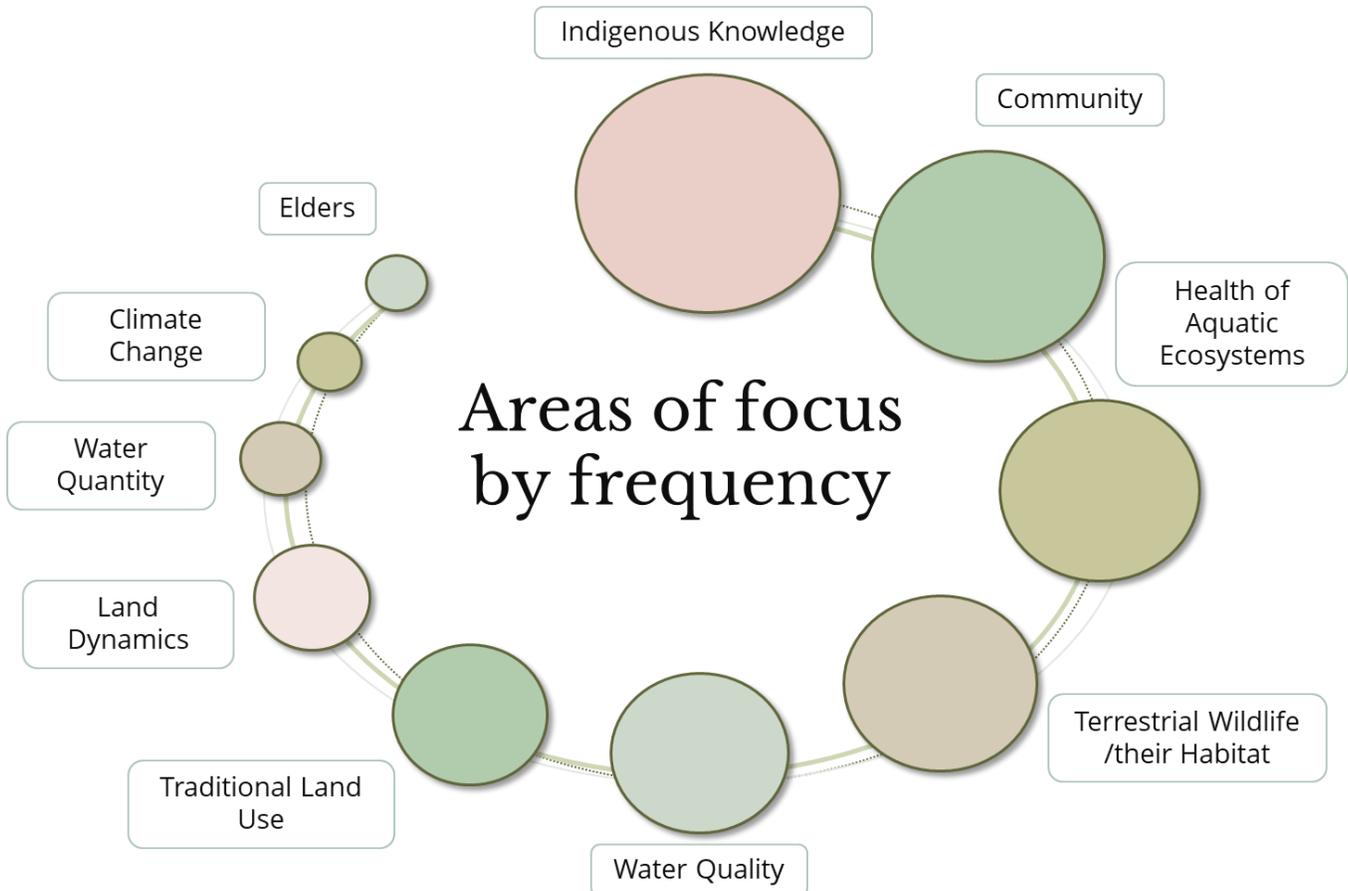
Some interviewees described specific types of knowledge gained and/or specific knowledge products they have developed with TCEI funding, such as story maps of cumulative effects published online; a detailed management plan to address cumulative effects, along with a corresponding digital toolkit (described as a "cheat sheet" to the management plan); and a YouTube video — which although primarily intended to support dialogue between the community and the TCEI regarding additional funding, also shared new knowledge about cumulative effects gained through the TCEI-funded project.

Representatives of Indigenous Groups who were interviewed described various monitoring and analysis activities that they have undertaken with TCEI funding, including monitoring of creek pollution and contamination; analysis of the impact of off-reserve water redirection; water and soil testing for contamination; assessing the impact of the oil and gas, forestry, and agriculture sectors on the land; flooding and drainage monitoring; and wetland restoration.

Across all TCEI-funded projects, the most common areas of focus related to Indigenous Knowledge; community; health of aquatic ecosystems; terrestrial wildlife and their habitat; and

water quality. Figure 2 below provides an overview of the areas of focus of TCEI-funded projects according to program documents.

Figure 2: TCEI-funded project areas of focus



2.5.3 Improve information and knowledge sharing to support Indigenous Groups in decision-making and future analysis around major projects

Key findings: TCEI activities have resulted in **information and knowledge sharing to support decision-making and future analysis around major development projects** on the part of Indigenous Groups. Among Indigenous Groups who participated in an interview or the survey, a majority have used information and knowledge gained through their TCEI projects to inform analysis and decision-making or expect to do so in the future. The TCEI Toolkit will serve as an enduring resource to support cumulative effects projects and analysis.

The third objective of the TCEI is to improve information and knowledge sharing to support Indigenous groups in decision-making and future analysis around major projects.

In addition to providing funding to Indigenous Groups to undertake cumulative effects projects, the TCEI aimed to achieve this objective by developing knowledge products and by undertaking a range of knowledge-sharing activities.

For example, DFO produced summaries of Government of Canada cumulative effects research and made Government of Canada publications and data available through the OSDP.

The TCEI supported numerous opportunities and venues for knowledge sharing, both among Indigenous Groups as well as between Indigenous Groups and representatives of the delivery departments (see section [2.1.3 State of Knowledge Activities: Knowledge Sessions and Toolkit](#)). Between June 2020 and September 2024, the program hosted 13 Learning Series knowledge-sharing sessions. The latter, focused on cumulative effects from both Western Science and Indigenous perspectives, as well as findings from other cumulative effects research projects. The program also conducted presentations on wildfires and water quality. Examples include DFO science knowledge sharing sessions on broader cumulative effects work that DFO has undertaken (e.g., sensitivity of Coho salmon to changing stream temperatures and flow; land use and warming stream temperatures; cumulative effects threats to rivers), as well as delivery of presentations by First Nations governments and the [Indigenous Centre for Cumulative Effects](#). Overall, approximately two-thirds of communities attended the knowledge-sharing sessions.

These State of Knowledge activities were a central element of the TCEI's knowledge development and knowledge-sharing activities. The collaborative approach taken to State of Knowledge activities was described in detail in section [2.1.3 State of Knowledge Activities: Knowledge Sessions and Toolkit](#). The planned outcome of these activities is the development of the TCEI Toolkit, a web-based toolkit collaboratively developed among Indigenous Groups and the TCEI delivery departments and housed on the Government of Canada platform. The overarching aim of the Toolkit is to help Indigenous Groups connect with one another and continue to build cumulative effects capacity. Ultimately, the Toolkit is intended to be an enduring resource that Indigenous Groups can use to inform future cumulative effects work as well as analysis and decision-making on major projects. ECCC intends to explore options for communities to continue to add information to the web-based Toolkit, though resources have not been confirmed to support this. As of November 2024, the Toolkit was still in development.

Almost all representatives of Indigenous Groups who were interviewed reported that members of their community participated in TCEI information and knowledge-sharing sessions. They appreciated the casual atmosphere and frequency of the sessions, which allowed communities

to participate and bring forward questions and concerns when needed. Interviewees also appreciated that information was made available online after the sessions, to be accessed by those who could not attend in person.

The experiences of communities with the knowledge-sharing sessions were largely positive, even though most interviewees reported that capacity limitations and meeting fatigue limited their ability to participate as much as they wished to. One interviewee noted that sessions often combined information from several watersheds, which may have disinclined some Indigenous Groups from participating because they consider some of the information to be irrelevant to them. Another noted that their community is hesitant to share the information it has gathered because of how information has been used by government against Indigenous Groups, including, in their view, in the recent past.

Overall, some representatives of Indigenous Groups who were interviewed agreed that their community has gained knowledge and understanding of cumulative effects as a result of the TCEI knowledge-sharing activities in which they participated. Among Indigenous Groups who responded to the survey, about half agreed that their Nation/Group has gained valuable knowledge as a result of knowledge-sharing activities in their watershed; TCEI-wide knowledge-sharing activities; and their involvement with State of Knowledge activities.

Furthermore, Indigenous Groups who were interviewed indicated that they have used the knowledge gained through their TCEI project to inform analysis and decision-making, or noted that although their project is still ongoing, they expect to use the information they collect and the knowledge they gain to inform analysis and decision-making in the future. Among survey respondents, more than half agreed that they have better information about cumulative effects that they can use in future analysis and decisions about regional development activities.

Overall, because of the TCEI, many communities are better equipped with cumulative effects knowledge to support analysis and decision-making related to regional development activities.

Community Case Study: Esk'etemc First Nation

Esk'etemc First Nation received both capacity and project funding through the TCEI. Esk'etemc used capacity funding to tour the land with British Columbia government employees and consultants to observe how various land uses impact the watershed. Funding was also used to coordinate training with external organizations to support community members' understanding of cumulative effects and the process for collecting baseline cumulative effects data.

Subsequently, Esk'etemc implemented a multi-year TCEI project funded by DFO to increase its understanding of cumulative effects in the Alkali Creek watershed. Prior to this project, the most recent water quality and aquatic habitat studies of the Alkali Creek watershed were almost three decades old. Since then, land use in Esk'etemc's traditional territory has increased significantly, and the resulting individual and cumulative effects from activities such as road building, recreation, forestry, and cattle grazing had not been assessed to determine their impact.

To increase their understanding of development impacts on the Alkali Creek watershed, Esk'etemc undertook the following project tasks:

- Researching and purchasing vehicles, equipment, and supplies necessary to complete a drone survey and related field work; and
- Collecting baseline watershed data by engaging community members to gather relevant knowledge and determine information gaps; training Esk'etemc staff in drone survey methods; conducting drone surveys to collect, map, and analyze watershed data; and developing a database to hold baseline watershed data and train Esk'etemc staff on database management methods.

Overall, TCEI funding was significant in building Esk'etemc's capacity to access, observe, sample, and monitor remote areas by providing the required equipment, vehicles, and training. In addition, Esk'etemc's TCEI projects have resulted in improved knowledge of the impacts of different land uses on the Alkali Creek watershed. Data collected through the project indicated that cattle in the area were negatively impacting the fish population. The community is using this information to restore the land and improve the health of the watershed. Esk'etemc intends to continue to monitor the cumulative effects of various land uses and changes (e.g. forest fires and landslides) to inform land use management.

2.5.4 Development of trust and meaningful engagement

Key findings: Program representatives believe that the TCEI has helped to **develop trust and meaningful engagement** between the three TCEI delivery departments and Indigenous Groups. Among Indigenous Groups who participated in an interview or the survey, a majority agreed that trust and meaningful engagement have improved. Both Indigenous Groups and program representatives expressed concern about the lack of longer-term funding to support ongoing cumulative effects work.

In developing the TCEI, it was noted that its implementation could enhance trust between Indigenous communities and the Crown. TCEI-expected results stated by two of three delivery departments included the intent that TCEI contribute to trust building and meaningful engagement between Indigenous Groups and the Government of Canada.

Half of the program representatives highlighted various ways in which, in their view, the TCEI contributed to trust and relationship building, including through maintaining flexibility in the types of projects funded as well as project timelines; customizing engagement approaches and technical/scientific support to match the needs and readiness levels of communities; hosting in-person meetings in different watershed communities; and incorporating staff who were involved in the TMX consultations to build on previously established relationships. Importantly, all program representatives noted that their overtures to aid communities with accessing and implementing TCEI-funded work were met positively and with appreciation.

ECCC representatives pointed to the high uptake of TCEI funding among Indigenous Groups — including by some who had not previously engaged with or been funded by ECCC — as evidence of enhanced trust and meaningful engagement (104 of 119 eligible Groups received funding). Since the launch of the TCEI, ECCC has developed new relationships with many Indigenous Groups which, from their perspective, has helped to advance reconciliation. As another example of the TCEI's contribution to reconciliation, program representatives noted that oral feedback was approved by the Treasury Board as an option for TCEI reporting, in response to a request made by the program.

Among representatives of Indigenous Groups who were interviewed and surveyed, a majority believe the TCEI has led to more meaningful engagement and enhanced trust between their Nation/Group and the federal departments involved in the TCEI. Among survey respondents, about one-third agreed that the program has led to more meaningful engagement between their Nation/Group and federal departments involved in regional development activities, and the same proportion agreed that it has enhanced trust between their Nation/Group and the federal departments involved in the program, with most of the remainder indicating a neutral response or indicating that it was too soon to know.

All of those who were interviewed reported that the co-development process for the TCEI, as well as the ongoing support provided throughout the lifecycle of TCEI-funded projects, were examples of meaningful engagement that led to building trust. However, many were disappointed and concerned that there are no plans to continue funding the cumulative effects work that the TCEI helped to initiate (see section [2.6 Ongoing relevance](#)).

2.6 Ongoing relevance

Key findings: The TCEI was successful in supporting Indigenous Groups to improve capacity for and initiate cumulative effects monitoring and analysis. However, participants in the evaluation, including Indigenous Groups and program representatives, agreed that the extent to which this work will continue will be limited without additional and/or sustained funding, particularly given the ongoing needs of Indigenous Groups related to cumulative effects. A flexible funding model, ongoing communication and engagement between the Government of Canada and Indigenous Groups, and Indigenous leadership of knowledge development and sharing activities were identified as important elements for consideration for future programming.

All survey respondents and representatives of Indigenous Groups who were interviewed reported that their Nation or Group intended to continue cumulative effects monitoring and studies after their TCEI project concluded. However, some indicated that without additional funding, this work would be limited to ongoing or ad hoc data collection, rather than expanded or strategic data collection, or would be dependent on the support of volunteers. Similarly, some program representatives indicated that there is a need for ongoing and/or long-term funding to support Indigenous Groups in further developing and strengthening the skills, processes, and resources that have been supported by the TCEI.

Interviewees and survey respondents identified numerous specific ongoing needs related to cumulative effects monitoring and knowledge. These include:

- Additional capacity, including further extension of TCEI project timelines, to collect, analyze, and interpret data in order to inform land use planning and decision-making.
- Ongoing training and skills development for community members, including technological skills.
- Youth capacity and knowledge building related to cumulative effects (e.g., through training, school curricula, and/or mentoring).
- Expanding awareness and building the knowledge base related to ecological and biological areas and cumulative effects.
- Development of a national cumulative effects database.
- Nation-to-Nation cumulative effects mentorship, cross-training opportunities, and knowledge exchange; and

- Resources to address the negative impacts of cumulative effects and improve the health of the land.

Program representatives and representatives of Indigenous Groups provided several suggestions on how future programming could respond to the needs of Indigenous Groups related to cumulative effects, including the following.

- Prioritize a flexible funding model that emphasizes interaction, engagement, and mentorship among Indigenous Groups; enables communities to pursue their unique needs and priorities; and supports both efforts to improve understanding of cumulative effects and action to mitigate cumulative effects.
- Prioritize Indigenous leadership in developing knowledge products and knowledge-sharing processes and provide compensation for this work; a specific suggestion was to establish an Indigenous Advisory Group to oversee State of Knowledge activities.
- Continue to build on the foundation laid by the TCEI by clearly communicating to Indigenous Groups how the Government of Canada is addressing or plans to address cumulative effects (e.g., in legislation and/or policy), and by providing opportunities for Indigenous Groups to provide input.

3. Lessons learned, Recommendation, Management Responses and Action Plan

Given that the TCEI funding ends on March 31, 2025, and there is no concrete plan to renew it in its existing form, the main findings are lessons for the future that require no action plan. The following lessons learned are pertinent to ECCC, DFO and NRCan. The lessons learned aim to support reflection and discussion on the design of future cumulative effects initiatives, Indigenous initiatives and in some cases, general departmental programming. Further, reflecting these lessons in future programming will continue to nurture the evident trust generated by TCEI program leads with the Indigenous groups.

The recommendation is addressed to the Assistant Deputy Minister of Environment Protection Branch in collaboration with the Assistant Deputy Minister of Programs, Operations and Regional Affairs Branch, as the senior departmental officials responsible for the TCEI.

Lessons learned 1:

Recognizing that the co-development approach was a key strength of TCEI implementation, future Indigenous programming (including cumulative effects programming) should reflect the additional flexibility, time, and program resources that co-development requires, specifically for program design and delivery, establishing governance as well as outcomes and co-developed performance measures relevant to Indigenous groups.

The co-development approach used to design the TCEI allowed the department and its departments to build programming that is based on innovative and culturally sensitive governance structures, to create forums and working groups to share cumulative effects knowledge, information, to build relationship among the cumulative effects communities, and to allow for the creation of tools to support recipients.

Participants in the co-development process recognized that the TCEI was carried out in a meaningful way and mentioned having been able to speak freely in engagement sessions to voice their concerns, needs, and priorities. This is a testament to the use of co-development as a tool to foster meaningful relationships between Indigenous groups and nations and Government of Canada's entities.

Lessons learned 2:

The TCEI is one of four TMX accommodation measures that provided funding for cumulative effects activities. Although the four programs were designed and delivered separately, there

was strong consensus that there were similarities between some of the initiatives and a high degree of overlap among the Indigenous Groups that were likely to seek funding through them.

Program representatives agreed that cumulative effects work is an important element of reconciliation and that the design and delivery of future funding programs for cumulative effects could be enhanced to improve accessibility. There was consensus that a single window front end could be implemented, with multiple departments coordinating on the back end to establish joint delivery mechanisms such as shared Terms and Conditions and tracking tools, could be implemented. Program representatives emphasized the importance of spending time upfront to ensure that program design is optimal and of building co-management commitments into program goals and objectives.

With the objectives of gaining efficiencies and supporting the creation of strong relationships with participants, delivery partner departments should consider taking the necessary steps to ensure that the delivery of the program will be optimal and tailored to the end user needs in future horizontal Indigenous programs. This could include:

- A single window (i.e.: single department) to dispense all cumulative effect proposal, funding and reporting measures for Indigenous groups in a more client focused and effective manner to reduce administrative workload and complexity.
- Development of centralized and standardized processes for financial reporting, contribution agreement policies and approvals, and reporting on results should be considered in the design of Indigenous funding programs, coordinated by a single department, to improve efficiency.
- Implementation of a multi-departmental advisory and governance structure to interface with and support Indigenous group's participation, understanding of cumulative effect and available data, avoid implementation delays, and reduce complexity for the eligible Indigenous groups.

Recommendation 1:

Recognizing the practices that the Terrestrial Cumulative Effects Initiative (TCEI) has put in place to generate meaningful Indigenous engagement with the program and the results it yielded, the Assistant Deputy Minister of Environmental Protection Branch, in collaboration with the Assistant Deputy Minister of Programs, Operations and Regional Affairs Branch

should develop an approach to widely disseminate the story of the TCEI and the above lessons learned across the department to support awareness and to contribute to the ongoing optimization of the Indigenous engagement, capacity building and cumulative effects funding across ECCC.

Management Response:

The Assistant Deputy Minister of Environmental Protection Branch agrees with the recommendation.

The Environmental Protection Branch is committed to widely disseminating the story of the TCEI and the lessons learned across ECCC. It will develop various communication materials (e.g., presentation, a placemat, and internal communication) focused on the co-development of the program with Indigenous groups and enhancing design and delivery of future cumulative effects funding programs.

The audiences for the presentation will be existing governance committees and community of practices in the fields of cumulative effects, environmental assessment, grants and contributions, reconciliation and engagement with Indigenous nations as well as Indigenous science and general science.

EPB and West and North Region (now in Program Operations and Regional Affairs Branch (PORAB)) have already presented TCEI program results and lessons learned at the following meetings:

2. Director General Policy Committee.
3. Environmental Management Committee; and
4. Environmental Assessment Director General Committee.

The attendees of the meetings were Directors General and Executive Directors from EPB, Science and Technology Branch, Canadian Wildlife Service, Meteorological Service of Canada and PORAB.

The main purpose of the above meetings was to share lessons learned from the TCEI and inform future work with Indigenous communities, either on the theme of cumulative effects, co-development and/or the delivery of grants and contribution programs. These meetings contributed to the ongoing optimization of Indigenous engagement, funding program co-development, and capacity building related to cumulative effects by sharing this information with ECCC senior managers working on similar issues.

Next Steps

Going forward, EPB and West and North Region will host additional presentations and create other written communications (e.g., articles, placemats) for ECCC-wide publication to further implement the recommendation from the Audit and Evaluation Branch.

Action 1: Develop, finalize, and make a presentation at a series of virtual information sessions within ECCC about the TCEI Lessons Learned and the story of TCEI.

Deliverable	Timeline	Responsible
Presentations to existing governance and committees (e.g., Environmental Assessment Division, Environmental Assessment Learning Series, EPB Community of Practice and Reconciliation and Indigenous Engagement, ECCC Science Café, Centre of Excellence for Grants and Contributions or Financial Management Authorities and Indigenous Science Division)	June 30, 2025	DG, Environmental Protection Operations Directorate, EPB

Action 2: Develop, finalize, and publish an article for the ECCC News Bulletin about the TCEI Lessons Learned and the TCEI Toolkit.

Deliverable	Timeline	Responsible
Publish ECCC Bulletin blog post	June 30, 2025	DG, Environmental Protection Operations Directorate, EPB

Action 3: Develop, finalize and distribute a placemat (e.g., a summary, one-page document with images/numbers/words) about the TCEI Lessons Learned and the TCEI Toolkit.

Deliverable	Timeline	Responsible
TCEI Placemat that will be distributed broadly across ECCC using a curated distribution list of relevant recipients	June 30, 2026	Regional Director General, West and North Region, PORAB

4. Annex

In March 2025, the Government of Canada presented on the TCEI Program Evaluation Report to TCEI eligible Indigenous groups. This included an overview of the process and the findings for feedback and discussion. These findings were later discussed in greater detail during a dedicated virtual discussion session with Indigenous groups providing opportunity to ask questions and give further comment. Subsequent to that virtual session, Indigenous groups were invited to provide written comment.

This Annex reflects that discussion and the additional comments from representatives from TCEI eligible Indigenous groups in March and April 2025. The table below includes all of the comments received from Indigenous groups, aligned with the evaluation themes in the report.

Theme	Comments from TCEI-eligible Indigenous group
Design & Delivery	<ul style="list-style-type: none"> • A suggestion was made to create a contact list to help maintain connections built during TCEI work. • One participant expressed that the evaluation was well done, and they look forward to the final report. • One participant expressed appreciation for inclusion in the TCEI Gathering and accommodation of specific needs. • Participant recommended that Indigenous groups must be involved in project structure and governance from the onset to ensure unique voices are reflected to meet self-determining goals.
Efficiency	<ul style="list-style-type: none"> • Participants raised concerns about long waiting times for funding disbursement, stating these created challenges in aligning work with field seasons which can lead to cascading impacts on project delivery. • Recommendation that available funding be delivered more quickly, and that the process be streamlined to avoid amendments to workplans after delays.
Effectiveness	<ul style="list-style-type: none"> • The long wait times for receiving funding was raised and how this could affect program effectiveness. It was noted that more timely delivery of funds to fit in with field seasons would make it easier to implement the projects. Delays in funding can have cascading effects on cumulative effects projects.

	<ul style="list-style-type: none"> • A recommendation for available funding to be delivered more quickly and to streamline the process, which would avoid having to adjust and for amendments to the original workplan once funding is received.
<p>Ongoing Relevance</p>	<ul style="list-style-type: none"> • Participants stressed the importance of continuing cumulative effects work, emphasizing the need for ongoing cumulative effects funding. • Recommendation for groups who are early in the CE process, that on-going support is needed to build on the knowledge and understanding of preliminary phases and ensure the continuity of work. • Concern regarding the follow through on sustainable evaluation and monitoring of industrial development that impacts Indigenous ways of being and the government’s commitment to partnerships that lead to systemic change. • Participant raised the need to prioritize and protect Treaty and Inherent Rights including: <ol style="list-style-type: none"> 1. Cultural land-use mapping and historical baseline: <ul style="list-style-type: none"> - Work with Elders, Knowledge Holders, and land users such as Trappers, Hunters, and Fishers to document traditional areas for harvesting, spiritual practices, and seasonal movements. - Develop historical baselines using oral histories, archival maps, and Indigenous knowledge to show changes over time. - Use GIS and story-mapping tools to visually track spatial and temporal loss of access and ecosystem integrity. 2. Treaty and Inherent Rights indicators: <ul style="list-style-type: none"> - Develop culturally relevant Treaty and Inherent Rights Indicators with Indigenous nations (e.g., moose population trends, fish habitat health, access to key harvesting sites). - Indicators should reflect both ecological and socio-cultural thresholds that affect the meaningful exercise of rights. - Embed these indicators into the core assessment methodology, not as an add-on. 3. Loss of cultural and traditional livelihood assessment: <ul style="list-style-type: none"> - Implement a process to evaluate the loss of culture and traditional livelihood practices such as intergenerational

	<p>knowledge sharing, language, and land-based education with the impacts of cumulative effects.</p> <ul style="list-style-type: none">- Assess whether cumulative impacts may push communities past a "cultural tipping point" where traditional practices can no longer be sustained.- Use these findings to inform mitigation and policy <p>4. Nation-led field verification and seasonal use studies</p> <ul style="list-style-type: none">- Conduct seasonal land-use studies and field visits with Nation land users to verify predicted impacts and validate spatial models.- Assess barriers such as access restrictions, noise disturbance, habitat fragmentation, and contamination.- Ensure findings are directly integrated into project design and regulatory decisions. <p>5. Modeling to assess impacts on Treaty and Inherent Rights:</p> <ul style="list-style-type: none">- Develop spatial planning models that assess the compatibility of proposed developments with the exercise of Treaty and Inherent Rights.- Use layered spatial analysis to evaluate cumulative overlaps of disturbances (roads, industrial zones, deforestation, etc.) and identify areas of critical importance for Treaty and Inherent Rights practice.
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