



**irsi**

INDIGENOUS RESEARCH  
SUPPORT INITIATIVE

Relational  
accountability in  
climate change  
research: A  
repository of  
research  
partnerships  
between UBC &  
B.C. Indigenous  
partners

FALL 2023

Pacheedaht unceded, traditional territory

# Acknowledgements, Gratitude & Relational Accountability

Acknowledging that the University of British Columbia (UBC) Point Grey campus occupies traditional, ancestral, and unceded xʷməθkʷəy̓əm (Musqueam) territory, and as uninvited guests and occupiers on this land, we have an important responsibility to acknowledge the grounds on which we are privileged to gather in the pursuit of higher education.

This report is founded on the work of Michael Monclou, a Colombian and Latino PhD student at UBC Okanagan. Michael's dedication and expertise played a crucial role in establishing the groundwork for this project, offering a unique perspective that enriches our understanding of the global dimensions of climate research partnerships. I recognize the substantial contribution of Michael's work, which has laid the foundation for my own.

Reflecting on my own (un)learning journey at the Indigenous Research Support Initiative (IRSI) under the guidance of Sam Filipenko and Lerato Chondoma, for which I am forever grateful, positionality remains central to this discourse. Thus, my identity is rooted in being Jessica Groat, a mixed settler with Red River Métis, Cree, and European heritage. Paternally affiliated with the Mountain Métis of Jasper House, I grew up on these ancestral lands in Treaty 6 and 8 territory in colonially-named Alberta. More recently, I am an uninvited guest and occupier of the unceded territories of the xʷməθkʷəy̓əm, Sḵwx̱wú7mesh (Squamish), and səliilwətał (Tsleil-Waututh) Nations, a space colonially referred to as Vancouver. Aware that my presence stands as an uninvited guest on Coast Salish territory, and more largely, on all First Nations territories presented in this report, it is my obligation to walk gently in this space.

I also recognize the unaddressed burden placed on Indigenous communities in tackling climate change and the disproportionate consequences they face. With the aim to help alleviate this responsibility, this study serves as a small contribution to their dedicated efforts. The information in the database and report is crafted with the intention of sharing it directly with Indigenous communities.

Lastly, we must explicitly acknowledge that the university, in alignment with the patterns observed in many colonial institutions, lacks a sufficient level of transparency regarding the nature of their partnerships with Indigenous Nations. This deficiency poses a challenge to accountability. Consequently, the establishment of this repository is a direct and intentional response aimed at fostering enhanced transparency and accountability within this institution.

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# Introduction

## Acknowledging the Intersection: Climate Change, Indigenous Communities, and Ethical Research

Climate change stands as an urgent global concern, transcending borders and impacting communities on a worldwide scale. In Canada, this translates into a landscape transformed by increased temperatures, shorter cold seasons, glacier melt, and rising sea levels to name a few. [1] However, it is imperative to shift our focus towards the principles of climate justice, as this multifaceted issue not only encompasses the consequences of global warming and greenhouse gas emissions but also delves deeply into the question of fairness and equity. [2] The concept of climate justice reminds us that climate change isn't a uniform burden shared by all communities. Instead, it exacerbates existing inequalities, disproportionately affecting certain groups, particularly Indigenous communities- who bear a heavier share of the burden. These communities not only contend with environmental changes but also grapple with the lasting effects of colonial injustices. [1,2] This unequal burden arises from the profound connection between Indigenous peoples and their natural environments. For many Indigenous peoples, notions of land encompasses broader cultural and spiritual meanings, and significantly influences physical health, perceived health, mental well-being, resilience, and overall quality of life. [3]

Globally, Indigenous communities are confronted with distinct vulnerabilities and sensitivities to climate change. Cultural

practices and ways of being are tied to the lands, waters, and residency in areas undergoing rapid climate and socioeconomic transformations. [3] These factors result in risk profiles that differ significantly from those of non-Indigenous populations and vary even among different Indigenous groups. [1] Turning our focus to the multitude of Nations in British Columbia, many rely on the temperate and predictable seasonal resource abundance and environmental conditions. [4] However, these once-stable environmental characteristics are now undergoing profound shifts, rendering these communities more susceptible and uncertain in the face of these changes.

Given their enduring connection to their lands, rich knowledge systems, and traditions, Indigenous people have cultivated resilience as an essential skill, making their perspectives invaluable in climate change discussions. [4] In recent decades, there has been a growing recognition of the value of Indigenous knowledges (IK) in the context of climate policy and research, reflecting a broader acknowledgment of the unique insights and wisdom that Indigenous knowledge systems offer. [5] These systems are diverse and complex, but many share common principles such as relationality, interconnectedness, reciprocity, and balance, all grounded in a spiritual and land-based relationship. [5]

However, traditional Indigenous knowledges regarding climate-society interactions, rooted in myths, stories, traditions, and observations, have often been marginalized in mainstream discourse, presented as only complementary

to Western scientific perspectives. This approach lacks respect for these knowledges, fails to acknowledge the true governance of Indigenous communities, and results in knowledges becoming detached from their local context. [1,5] Moreover, this perspective wrongly appropriates Indigenous knowledges for scientific purposes, perpetuating the colonization of Indigenous ways of knowing and undervaluing the rich wisdom within traditional knowledge systems. Indigenous communities then become depicted as powerless victims of climate change, disregarding the influence of social, cultural, and economic factors in shaping their experience, understanding, and response to climate change.

Consequently, there is an urgent need to ground climate research in Indigenous research ethics specific to Indigenous community-based collaborations. [6] It is crucial to address Indigenous histories, including dispossession and environmental disruption, as both historical injustices and contemporary issues that contribute to identity disparities and health inequities today. To challenge the colonial dynamics in research, researchers must go beyond merely including Indigenous knowledges and instead focus their research partnerships on enhancing Indigenous adaptive capacities and self-determination.

### **UBC's Commitment as a Research Institution on Unceded Land**

Acknowledging the intricate link between Indigenous peoples and climate justice, and considering the historical and ongoing colonial injustices in research, it is vital that current and future research prioritize the voices, perspectives, and rights of Indigenous communities in this work. This approach is a

critical first step and is a commitment that extends to research institutions like the University of British Columbia (UBC), a renowned center for learning, teaching, and research.

In 2020, within the broader political timeline framed by the Truth and Reconciliation Commission (TRC) in 2015, the Declaration for the Rights of Indigenous Peoples Act (DRIPA) in 2019, and the United Nations Declaration of Rights for Indigenous Peoples (UNDRIP) soon to follow in 2021, UBC initiated the implementation of the Indigenous Strategic Plan (ISP) with the aim of embedding its commitment to safeguarding Indigenous human rights. [2] Seeking to move forward in reconciliation, the ISP consists of eight goals, each vital in supporting Indigenous communities, faculty, students, and staff. These goals prioritize advancing Indigenous rights throughout UBC leadership, advocating for truth and reconciliation processes, supporting research with Indigenous perspectives, Indigenizing UBC's curriculum, enriching Indigenous spaces and landscapes on campuses, recruiting Indigenous peoples, enhancing Indigenous networks and spaces, and providing wholistic supports to Indigenous students, staff, and communities. [7]

Within this same time frame, the Climate Emergency Task Force (CETF) was established in early 2021, following UBC's declaration of a Climate Emergency in 2019 and driven by student advocacy. The subsequent Climate Action Plans 2030 on both campuses emphasized the importance of addressing the disproportionate impacts of climate change on Indigenous and racialized communities, aligning with two of the nine strategic priorities: (1) Establish mechanisms

and processes that ensure Indigenous perspectives, communities, and worldviews shape the development and implementation of climate-related initiatives and policies; and (2) Operationalize UBC's commitments to climate justice by supporting climate leadership and initiatives led by Indigenous, Black, and People of Color (IBPOC) communities. [2]

As a research institution occupying unceded lands, UBC must recognize the need to progress beyond performative words and meaningfully contribute to the lives and wellbeing of Host Nations and Indigenous communities more broadly. Acknowledging that there is still a considerable distance to cover, and progress may be gradual, there is a firm call for UBC's commitment to climate justice, as outlined in the ISP and the CETF report, to mark the beginning of a genuine effort to work more substantively and collaboratively with Indigenous communities.

### **IRSI's Vital Role in Supporting Indigenous-Centered Research at UBC**

As a tangible step at UBC, the Indigenous Research Support Initiative (IRSI) actively bridges the gap between the university and Indigenous communities, collectives and organizations (ICCOs), fostering respectful, reciprocal relationships. IRSI empowers collaborative projects that are firmly grounded in community-led interests and principles of mutual accountability, contributing to the transformation of academic practices through the infusion of Indigenous perspectives and principles. [8] With guidance from an Advisory Committee that includes local Indigenous community members and UBC faculty and staff, IRSI not only drives collaborative partnerships but also enhances engagement

practices. [8] Furthermore, it provides vital support for research excellence across various levels, from institutional to national, all of which underscores UBC's deep commitment to climate justice and the well-being of Indigenous communities. [8]

As part of a broader movement, the BC Assembly of First Nations (BC AFN) declared a climate emergency, leading to the development of the BC First Nations Climate Strategy and Action Plan in 2022. [9] Upholding the principle of Indigenous self-determination, this plan delineates various actions for BC First Nations, government, industry, institutions, and others. Recognizing the responsibility to take action and guided by the request of the First Nations Leadership Council (FNLC)—a body comprising the political executives of the BC AFN, First Nations Summit, and the Union of BC Indian Chiefs (UBCIC)—as well as specific Nations, IRSI and the UBC Sustainability Hub have prioritized addressing the climate emergency with institutional accountability through the establishment of a comprehensive database. Climate research activities involving UBC and Indigenous partners were cataloged to provide transparency about the scope of partnerships and their pivotal role in addressing climate change challenges.

My role in this endeavor was to contribute to the analysis and understanding of the database, shedding light on the critical work undertaken to bridge the gap between UBC and Indigenous partners. This project represents an initial cornerstone on which UBC and Indigenous partners can build collaborative research partnerships to address the profound challenges of climate change and its impact on Indigenous communities.

# Methodology

Growing from an exploratory discussion about advancing shared priorities related to the climate emergency, this project began as an idea voiced by representatives from the First Nations Leadership Council (FNLC) and from individuals across the UBC climate research community. Within the broader context of their vision, a short-term goal was to establish a comprehensive database that inventories climate research activities involving UBC and First Nations. This undertaking commenced in May 2023 by IRSI in collaboration with the Sustainability Hub's Sustainability Scholars Program.

The scholar responsible for this research embarked on a methodical two-step approach: (1) Desktop Review: An initial phase dedicated to conducting a comprehensive review of existing materials and documents related to Memorandums of Understanding (MOUs) and research partnerships between UBC and First Nations, with a specific emphasis on climate change; and (2) Interviews: The second step of this research involved engaging in direct conversations with key stakeholders and individuals involved in climate-led projects at UBC and within partnering First Nations communities. [10]

Starting in September 2023, the third part of this project commenced, focusing on: (3) mixed-methods analysis of the collected database. Each of these phases will be further elaborated upon in the following sections.

## 1. Desktop Research Review

*IRSI Repository Consultation:* To initiate the

research, the IRSI Research Repository was carefully filtered through using keywords relevant to the research topic, including "Memorandums of Understanding," "MOU," "partnerships," "climate change," and other climate-change-related terms. [10]

*Mapping UBC Entities and Content Search:* A mapping exercise was undertaken to comprehensively understand the various Faculties, Schools, and Institutes of both UBC Vancouver and UBC Okanagan engaged in climate-related research with First Nations. (10) This process uncovered the fragmented nature of information on websites and the administrative complexity of UBC. After mapping out the relevant UBC entities, each website was thoroughly searched using keywords such as "Indigenous knowledge," "First Nations," "First Nations Partnerships," "Climate Change and First Nations," and "Indigenous Peoples," among others. [10]

*Information-Capturing Tool:* To organize and catalog the collected information, an Excel-based tool was developed. This tool encompassed key categories, including Year of Publication, Researchers/Contact, Project Title, Type of Source, Center/Initiative, UBC Vancouver, UBC Okanagan, First Nations Partner, Non-UBC Partner, Non-Indigenous Partner, Agreement/Protocol, Funding, Starting Year, Abstract, Locations, and Regions in British Columbia. [10]

## 2. Semi-Structured Interviews

The data collected through the aforementioned desktop research review phase was then

enriched with insights from semi-structured interviews.

*Informed Consent and Interview Guide:* In preparation for the semi-structured interviews, an informed consent form was developed and read to the interviewees, outlining that their personal and contact information would remain confidential. Secondly, an interview guide was created, encompassing both open-ended and multiple-choice questions. This guide sought to clarify the partnerships that interviewees were familiar with or engaged in with First Nations, including the duration of these partnerships and their primary goals of collaboration. [10]

*Selection of Participants:* The participants in the virtual semi-structured interviews were selected from UBC (both Vancouver and Okanagan campuses) and included academics, professors, and individuals with expertise who have either worked or are currently working closely with First Nations in British Columbia on climate change-related research. [10] The interviews were treated with confidentiality, and no personal or identifying information was included in the final report of results to ensure participants' privacy and confidentiality throughout the research process.

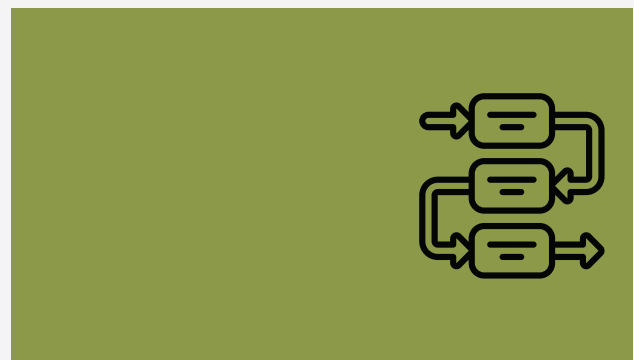
*Conduct of Interviews:* A total of sixteen interviews were conducted, representing diverse faculties and including three Indigenous scholars. IRSI played a pivotal role in establishing contact with these individuals and coordinating their availability. These interviews were conducted via Zoom, with both audio and video recording to ensure the accuracy of transcriptions and capture valuable insights from the experiences and perspectives of these interviewees. [10]

### 3. Data Analysis:

In the analysis phase, a distinctive approach was adopted, drawing upon both qualitative insights from semi-structured interviews and quantitative data from the populated database. It's important to note that the database was not initially designed to integrate qualitative and quantitative data. Rather, the decision to do so emerged as an analytical strategy to enrich the complexities uncovered in the database with nuanced knowledge gleaned from the interviews.

Semi-structured interviews were examined for overarching themes, providing a qualitative lens to the analysis. Simultaneously, the database underwent analysis to understand the geographical distribution of research, funding sources, and the nature of research partnerships, among others. Descriptive statistics were generated to complement these inquiries.

Reflecting on this mixed-methods design, the approach involved simultaneous data collection and analysis of both qualitative and quantitative datasets, each informing the other to understand the intricate landscape surrounding climate change research partnerships with Indigenous partners at UBC.





# Our Findings

The database encompasses various research partnerships, each characterized by the following descriptors: Year of Publication, Researchers/Contact, Project Title, Type of Source, Center/Initiative, UBC Vancouver, UBC Okanagan, First Nations Partner, Non-UBC, non-Indigenous partner, Agreement/Protocol, Funding, Starting Year, Abstract, Locations, and Regions in B.C.

Some sections serve primarily as work identifiers (Researcher and Title) and are not subjected to analysis. In addition, certain descriptors exhibit significant similarities, rendering separate analysis unnecessary (Year of Publication was not analyzed, as Starting Year suffices).

**The database documented 55 partnerships, encompassing a wide range of collaborative efforts.**

## 16 interviews

**WERE CONDUCTED AND INCLUDED BOTH INDIGENOUS AND NON-INDIGENOUS RESEARCHERS AT UBC**



Complementing this quantitative foundation, a qualitative analysis of the semi-structured Interviews delves into the nuanced aspects of the research. Aligning with the organization of the information-capture tool, the interview results are grouped by topic and question. However, owing to time constraints during informal interviews, not all questions received uniform attention across interviewees. Consequently, some questions received only limited responses, and are therefore unsubstantiated. These responses are excluded from the main analysis and can be found in Appendix B.

This integration highlights the dynamic interplay between quantitative and qualitative elements, demonstrating how the interview data not only reinforces the trends identified through descriptive statistics but also introduces novel perspectives that were not originally contemplated in the database's design. While the Descriptive Statistics offer a macroscopic view, the Qualitative Analysis enriches the narrative by exploring nuances and uncovering unanticipated dimensions within the research partnerships.

## What categories of projects are found in the database?

The database encompasses a diverse array of collaborative efforts, spanning from Memorandum of Understanding (MoU) to Research Projects, Action Plan Drafts, Reports, Literature Reviews, Proposals, Policies, Workshops, and more. These projects have been organized into five distinct categories, namely Research and Reports, Educational and Knowledge Sharing, Agreements and Collaborations, Planning and Strategy, and Other. For a detailed breakdown of these project categories, please consult Appendix A.



Research & Reports: 21



Planning & Sharing: 6



Educational & Knowledge Sharing: 18



Other: 1



Agreements & Collaborations: 9

There is a strong emphasis on generating knowledge with research projects and reports, as well a commitment to disseminating knowledge and fostering learning, through the literature reviews, workshops, toolkits, and others.

In agreement with these sentiments, researchers shed light on how they viewed their specific areas of research in terms of these partnership projects.

**Researchers were asked:** *With First Nations partners, what specific areas of research are you doing that relate to climate change? Can you describe your research partnerships? What are the main objectives or goals of these?*

“

One interviewee emphasized their role in **education and community building** rather than traditional research, taking on a more **observational role**.

Similarly, another interviewee underscored that their partnerships primarily focused on **recognizing and leveraging the knowledge held by the partner nations**.

”

## Within the wide realm of climate change, what are these projects key interests?

Reviewing the keywords in each project, several overarching themes became evident in the dataset. Bracketed numbers represent the count of project keywords. It's worth noting that these projects often incorporate multiple themes within their individual initiatives. The cross-cutting themes underscore how climate change intersects with a variety of other issues, demonstrating the interconnected nature of these projects.

- 1 Indigenous Rights, Governance & Cultural Resilience (35)**

Across the diverse projects, a common thread lies in their commitment to the principles of Indigenous rights, sovereignty, governance, and cultural resilience. While these projects may encompass a range of themes, they frequently prioritize the intersection of these values with climate change. They engage in complex dialogues addressing racism, colonialism, power imbalances, the criminalization of land defenders, and the path towards truth, reconciliation, and decolonization.
- 2 Climate Mitigation, Adaptation & Justice (34)**

This comprehensive category unites projects addressing various focuses of climate change, from understanding its impacts to taking measures for mitigation and adaptation. Projects here touch upon topics like floods and fires, the pursuit of a low-carbon future, strategies to reduce carbon and greenhouse gas emissions, as well as initiatives for climate justice.
- 3 Clean Energy, Sustainability, & Resource Management (33)**

This category encompasses a wide spectrum of projects, with a central focus on clean energy, sustainability, and resource management. These initiatives span from energy sovereignty and clean energy generation to ecosystem-based management, capacity-building, and social-economic impact assessment. This category reflects the collective commitment to fostering a low-carbon, sustainable future through sustainable development and efficient resource use.
- 4 Community Health, Well-being, & Social Determinants (22)**

This category encompasses projects addressing community health, well-being, and the multifaceted influence of social determinants. Topics range from opioid overdose and public health to housing, social sustainability, vulnerability profiles, and pandemic response.
- 5 Education, Knowledge Exchange, & Policy (22)**

This category epitomizes the multidisciplinary nature of these initiatives, incorporating a wide range of projects such as student-led programs, Indigenous learning pathways, and knowledge sharing. These projects also address topics related to sustainability in education, research, legal research, and natural resource policy.

## **6 Community Engagement & Research (15)**

This category focuses on community engagement, equitable research relationships, and social impact. Projects here foster partnerships with industry, businesses, and the public sector while also addressing social sustainability. Additionally, they include cooperative research, leadership, behavior change, and participatory community-led research, highlighting a holistic approach to both community engagement and research initiatives.

## **7 Land Conservation & Biodiversity (14)**

In this category, projects focus on preserving ecosystems, mapping biodiversity, and practicing sustainable land management. Some projects draw on Indigenous cultural practices, like tree forest cultural burning. Additionally, certain initiatives explore how responsible mining and mineral research can align with land conservation.

## **8 Food Security & Sustainable Agriculture (10)**

This category encompasses projects that promote Indigenous food sovereignty, sustainable farming practices, and cultivating community gardens, including local native plant gardens.

## **9 Water Resources & Conservation (10)**

In this category, projects revolve around safeguarding water resources and preserving their quality. This includes efforts to maintain water purity, study watersheds, ensure groundwater quality, and protect aquatic ecosystems, including salmon.

## **10 Relationality & Indigenous Knowledge Systems (8)**

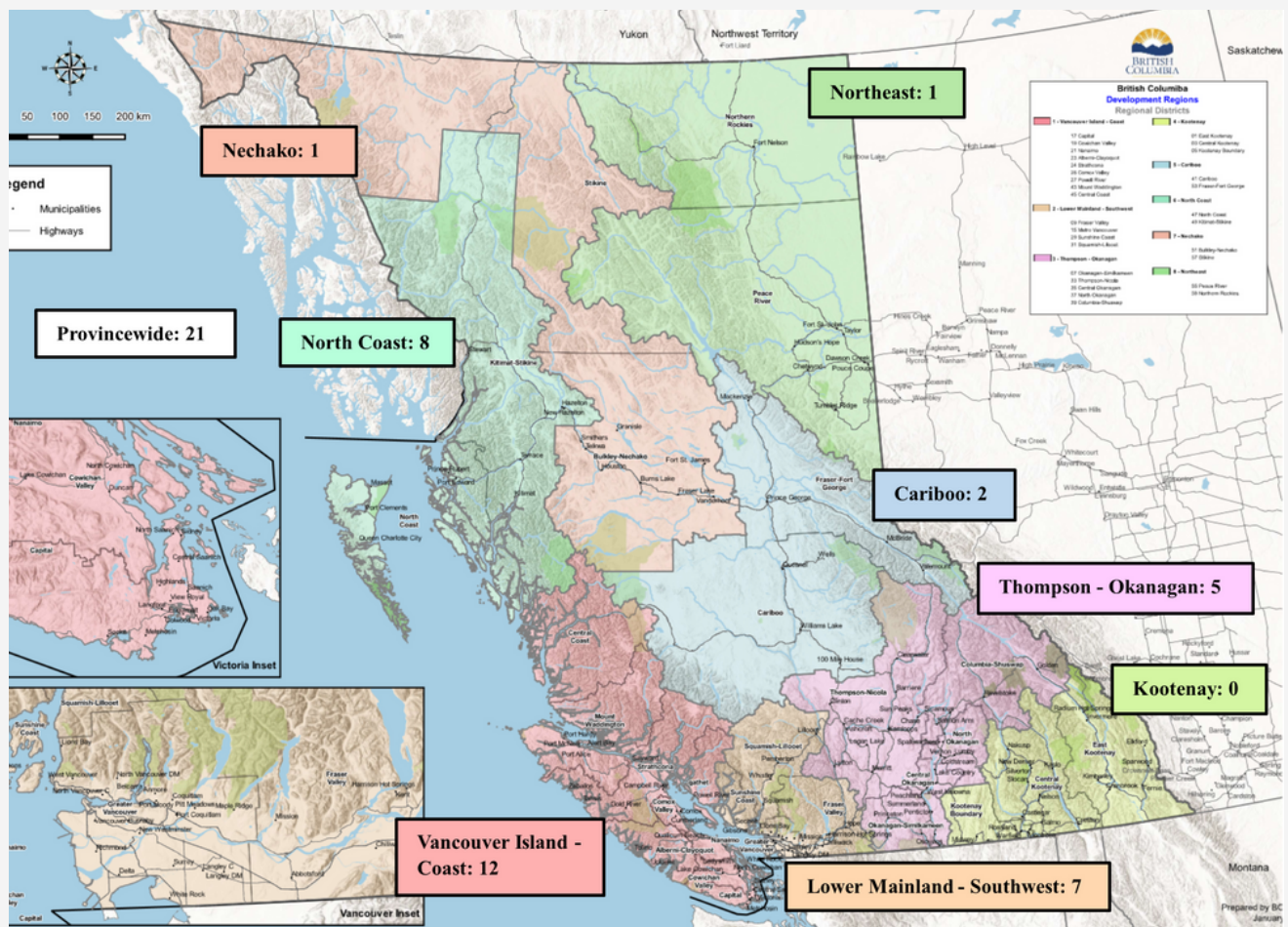
In this category, projects explore the interconnectedness of ecological systems and the application of Indigenous knowledge for sustainable livelihoods. Emphasizing holistic approaches and relationship-building within whole system ecology, these projects celebrate Indigenous wisdom and its contribution to ecological well-being.

The database has meticulously documented 55 partnerships, encapsulating a wide array of collaborative efforts. Upon examination, it becomes clear that Indigenous Rights, Governance, & Cultural Resilience are one of the standout themes, with 35 projects directly addressing these critical issues. The importance of Indigenous rights, coupled with the dataset's strong emphasis on climate justice, is particularly significant because Indigenous communities often bear a disproportionate impact from climate change. [1-4] Recognizing and addressing Indigenous rights in the context of climate justice is widely viewed as indispensable for fostering sustainability and strengthening climate resilience. [1,2] Closely trailing behind are the categories of Climate Mitigation, Adaptation & Justice, and Clean Energy, Sustainability, & Resource Management, represented in 34 and 33 projects, respectively. This aligns with the primary selection criteria for projects in this dataset, emphasizing the global urgency of proactive climate action in addressing broader environmental and socio-economic issues. [2] Moreover, there is a commendable commitment to community engagement, community well-being, and research across the entire dataset, suggesting a holistic, collaborative approach to addressing complex, diverse, and interconnected challenges.

# What are the geographical patterns in the distribution of these partnerships within British Columbia?

Partnerships were categorized into eight distinct regional areas based on BC Government regional distinctions: Cariboo, Mainland/Southwest, Nechako, North Coast, Northeast, Provincewide, Thompson-Okanagan, and Vancouver Island/Coast.

Two of these projects are listed in multiple regions, North Coast and Vancouver Island-Central Coast, as they are managed under the Coastal First Nation Great Bear Initiative, which encompasses First Nations across the central and north coast regions. This dual listing underscores the interconnectivity and shared responsibilities of these projects across regions, acknowledging that some issues and research efforts transcend geographic boundaries.



**Figure 1.** Projects distribution based on BC Government census regions.

The distribution of projects across different census regions in British Columbia offers valuable insights into the geographic focus of these initiatives. Notably, province-wide projects are the most prevalent, highlighting the need to address climate change challenges comprehensively, regardless of specific regions.

A substantial number of projects can be seen in the Vancouver Island-Central Coast region, followed by the North Coast. This emphasis could be attributed to these regions already experiencing hazards and impacts related to climate change, given their unique ecosystems and climate change vulnerabilities. [11,12] Collaborative efforts and partnerships within these regions could also be significant drivers for the concentration of projects. The Coastal First Nations collective, as discussed earlier, plays a pivotal role in advocating for and protecting the Great Bear Rainforest. [13] The Mainland/Southwest and Thompson-Okanagan regions also attracts a substantial number of projects, which can be rationalized by UBC's geographic proximity.

There are fewer projects in regions like Cariboo, Nechako, and Northeast, likely due to the presence of other institutions (i.e. UNBC) that already have preestablished relationships and collaborate with Indigenous communities in these different regions.

### **Which UBC Vancouver and UBC Okanagan schools, faculties, or administrative units have actively participated in these projects and partnerships?**

Included were various schools, faculties, and administrative units at both UBC Vancouver and UBC Okanagan where identified projects and partnerships were active. These entities are categorized more broadly into the following areas: Social Sciences & Humanities, Healthcare & Life Sciences, Applied Sciences & Sustainability, University Leadership & Initiatives, and Other. Information in the database covers 13 faculties, schools, and institutes at UBC Vancouver and 4 at UBC Okanagan. Bracketed numbers represent individual projects.

<b>UBC Vancouver</b>	<b>UBC Okanagan</b>
University Leadership & Initiatives (23)	University Leadership & Initiatives (2)
Social Sciences & Humanities (13)	Social Sciences & Humanities (1)
Applied Sciences & Sustainability (12)	Applied Sciences & Sustainability (1)
Healthcare & Life Sciences (2)	*Outside of UBC, this faculty member was supported through Simon Fraser University.
Other (1)*	

**Units represented in collaboration with UBC Vancouver:** President and Vice-Chancellor's Office, Vice-President of Research and Innovation, Faculty of Arts, Sauder School of Business, School of Public Policy and Global Affairs, UBC Library, Department of Civil Engineering, Faculty of Science, Faculty of Forestry, School of Architecture and Landscape, School of Community and Regional Planning, School of Audiology and Speech Sciences, Faculty of Land and Food Systems, Simon Fraser University.

**Units represented in collaboration with UBCO:** Fipke Center for Innovative Research, Office of the President, Irvin K. Barber Faculty of Arts and Social Sciences, and School of Engineering.

**Several faculties/schools (UBC Vancouver) not explicitly\* represented in this database**

**include:** Faculty of Dentistry, Faculty of Education, Extended Learning, Graduate and Postdoctoral Studies, School of Journalism, School of Kinesiology, School of Library, Archival and Information Studies, Faculty of Medicine, School of Music, School of Nursing, Faculty of Pharmaceutical Sciences, School of Social Work, UBC Vantage College, and the Vancouver School of Economics.

\*These faculties/schools were not explicitly named in the database, however this does not negate their involvement in other partnerships.

A comparable pattern of limited faculty representation is observed at the UBCO location as well. This commonality at both UBC Vancouver and UBC Okanagan suggests a broader trend, potentially indicating that certain faculties may not be actively involved in research and partnerships with Indigenous partners. Without assuming intentions, it is noteworthy that these omissions may reflect a systemic trend rather than being specific to geographical locations, raising questions about the engagement of certain faculties in initiatives involving Indigenous partnerships.

Most projects are rooted in university-wide initiatives, supported by insightful comments from interviewees. This trend could indicate several factors:

1. University-wide initiatives are often publicly accessible and information around specific faculty projects are more elusive, as evidenced by challenges in data collection.
2. Certain faculties may not prioritize climate change research as it does not traditionally fall within their siloed academic scope.
3. Climate change research also tends to be interdisciplinary in nature, driven by university-wide initiatives and not confined to individual faculties.
4. Individual researchers may hesitate to initiate relationships independently with Indigenous communities, a sentiment echoed by interviewees calling for decentralization in engagement efforts and emphasizing that "the ultimate responsibility lies with the institution."
5. Specific faculties may face a scarcity of researchers, especially Indigenous researchers, interested in this type of research and partnerships. This shortage could reflect difficulties in recruiting and retaining Indigenous faculty/staff, potentially stemming from culturally unsafe work environments—a concern highlighted by interviewees advocating for greater Indigenous representation in leadership roles and a culturally safe environment at UBC.

## What First Nation partners are these research collaborations with?

There is a wide distribution of First Nation partners evident in the database, either as the First Nations themselves, councils, alliances, organizations, and additional representative collectives of Nations. These are not differentiated by their positions with and within each other, and no partner was grouped with another or excluded in the pursuit of simplicity/readability or for fear of repetition. Therefore, it is important to note that some of these partners could be, and are, likely representing similar interest groups. Find the full list of these partners in Appendix A.

# 79

### FIRST NATION PARTNERS

There are a total of 79 First Nations partners listed, however these do not represent individual collaborations. Multiple partners were identified in various projects, with one project noting 49 First Nation partners.

Additionally, there were 5 projects that had multiple, undisclosed First Nation partners, while 11 projects listed no information in this area.

With most First Nation partners represented in only one or maybe two partnerships, there were a few partners that showed up more frequently in the various projects. These include: Musqueam Indian Band (11 partnership mentions), Squamish Nation (6 partnership mentions), Coastal First Nations (7 partnership mentions), Coast Salish First Nations (4 partnership mentions), Tsleil-Waututh Nation (3 partnership mentions), Lil'wat First Nation (3 partnership mentions), and Nisga'a First Nation (3 partnership mentions).

Looking at geographical proximity to the university, the partnerships with Musqueam Indian Band, Squamish Nation, Tsleil-Waututh Nation, and Lil'wat First Nation are expected.

Additionally, the collectives, and specifically Coastal First Nations, is expected to be more frequent among the partnerships as well for a few reasons. From the perspective of Coastal First Nations, this unique alliance of 9 coastal Nations acknowledges that “each Nation has its own distinct culture, governance and territory ... [but] stand together, support each other and work together to fulfill these commitments” to the Great Bear Rainforest. [13] This alliance has the potential to streamline resources, expertise, and influence, reducing administrative and operational costs for individual Nations. Referring to anecdotal evidence gathered during previous community conversations, there is a shared understanding that collaborative efforts and the strength in numbers among Indigenous communities can lead to shared benefits and bolster negotiating power when engaging with institutions, like UBC.





Listed partnerships likely encompass a spectrum, spanning from deep engagement to exploratory conversations. With the database exclusively derived from publicly available information or obtained through interviews of the UBC partner, the scope of partnerships cannot be fully discerned. This means it is crucial for us to adopt a critical stance when assessing how UBC researchers communicate and report on their collaborative partnerships, particularly considering the need to assess transparency and potential performative aspects in their attempts at reconciliation. [14]

With researchers potentially exaggerating both the quantity and quality of these relationships, UBC, like other colonial institutions, often emerges as the primary beneficiary. This elevation often serves to bolster institutional reputation as leaders in reconciliation and diversity. Institutions may further benefit by appropriating, simplifying, and romanticizing Indigenous knowledge to serve their research agendas and secure funding. This raises critical questions about whether these collaborations are performative gestures or if they signal meaningful institutional changes. We must challenge whether these institutional benefits come at the expense of Indigenous communities, prompting inquiries into power dynamics.

Transparency in reporting also becomes paramount, ensuring that information is complete and accurate, avoiding selective highlights that may mask challenges or power imbalances. This critical evaluation is necessary to ensure that institutional engagement authentically contributes to reconciliation, prioritizing the well-being and agency of Indigenous partners.

## What is the scope of these partnerships between UBC and First Nation partners?

While some projects were dedicated to establishing protocols and agreements with First Nations as noted in an earlier section (Agreements and Collaborations), others already had preexisting relationships, as detailed below.

<b>20+</b>	<b>PROJECTS SAID A PARTNERSHIP EXISTED, BUT THE EXACT NATURE WAS UNCLEAR</b>
<b>while 4</b>	<b>PROJECTS WERE INVOLVED IN A MEMORANDUM OF UNDERSTANDING (MOU)</b>
<b>2</b>	<b>PROJECTS WERE INVOLVED IN A MEMORANDUM OF AGREEMENT (MOA)</b>
<b>2</b>	<b>PARTNERSHIPS EXISTED WITH SPECIFIC PROTOCOLS</b>
<b>1</b>	<b>PROJECT PARTNERSHIP WAS STILL UNDER DEVELOPMENT</b>

Various types of partnerships were classified, however, it's worth noting that complete information about the specific type of agreement was not always available. There were many cases when a partnership was indicated, but the exact nature wasn't clear, however there were several MoUs and MoAs, as well as a few protocols for specific projects that were identified. Additionally, one relationship was currently under development, suggesting that the landscape of partnerships is dynamic, and new collaborations are continually being formed.



The database indicates ambiguity in classifying different types of partnerships or agreements within a given context. This complex landscape of partnerships exemplifies varying degrees of transparency, documentation, and formality. It highlights the importance of clear communication and documentation to enhance clarity and transparency in the future, and specifically the database requires improvement if we wish to understand agreements/protocols in the future. However, it should be noted that this colonial way of thinking and knowing values the written word\*, and this requirement should not be placed on the First Nation partner.

Additionally, it is crucial to recognize that Research Agreements serve as a mechanism to hold UBC accountable to community protocols, data sovereignty, and the principles outlined in the Declaration on the Rights of Indigenous Peoples Act (DRIPA), including the requirement for informed consent. These agreements play a vital role in ensuring ethical research practices and respecting the autonomy and rights of First Nations communities.



Regarding their own and institutional relationships with Indigenous Nations, **researchers were asked to share their insights** on various aspects of their collaborations. The following questions delve into specific areas, providing a nuanced understanding of their research focus, goals, scope, and the nature of partnerships.

**Researchers were asked:** *Do you formalize protocols or guidelines to maintain a respectful relationship? Have these been formally signed by institutional office (e.g. University-Industry Liaison Office) or at a faculty or school level?*

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Some interviewees suggested that there have been more **formal advancements** in this regard, including the use of a "confidentiality agreement" with the First Nation partner.

Others chose to acquaint themselves with **UBC's ethics guidelines and protocol tools** specifically designed for engaging with First Nations.

Nevertheless, a recurring theme in the interviews was the emphasis on the **interpersonal nature of these relationships**. Many interviewees stressed that these relationships were cultivated over time and required patience. They pointed out that these collaborations were context-specific and depended on the Nation involved. In some cases, First Nations may already have well-established protocols that they can share with researchers. This underscores the idea that these were "working relationships" built on "**open dialogue,**" "**active listening,**" and a **significant investment of time.**"

**Researchers were asked:** *What is your understanding of how UBC engages and collaborates with First Nations in British Columbia? Are there specific initiatives or programs that promote ethical and culturally safe collaboration and engagement between UBC and First Nations?*

Some departments emphasized cultural competency training, while others noted that their approach is guided by the UBC Indigenous Strategic Plan (ISP) and the work of the Indigenous Research Support Initiative (IRSI). It is important to highlight that some researchers noted a lack of commitment to these principles among their colleagues or in larger departments, where it seems to be more of a checkbox exercise than a meaningful endeavor.

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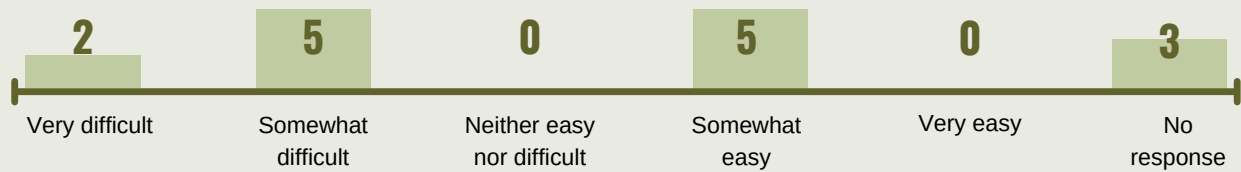
Many interviewees pointed out the **challenges of operating within a colonial institution**, citing issues like grant processes and ethics. In the words of one interviewee, "**It's almost like you need to complete ethics training to chat with your grandparents.**"

Repeatedly, interviewees underscored the critical importance of **positionality, personal acknowledgment**, and the **process of (un)learning** in this line of work.

Researchers called for UBC to establish a more formal engagement process with the First Nations Leadership Council to address the recurring issue of decentralized researchers repeatedly posing the same questions to First Nations. "**While researchers must handle these relationships with care, the ultimate responsibility lies with the institution.**"

This was stressed as central to UBC's commitment to decolonization, truth, and reconciliation.

**Researcher responses after being asked:** *How would you rate the ease of conducting climate change research in partnership with First Nations?*

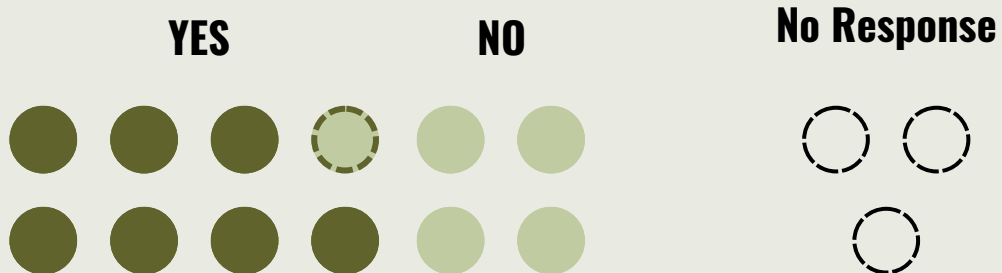


This balanced distribution of ratings suggests a complex landscape in terms of conducting climate change research in collaboration with First Nations. Several factors might contribute to this divided perspective.

First, the "somewhat easy" ratings could indicate positive experiences or successful partnerships, where researchers and First Nation communities have effectively aligned their objectives and methodologies. This may be attributed to effective communication, mutual trust, and shared goals, making the research process relatively smooth. [16] On the other hand, the "somewhat difficult" and "very difficult" ratings suggest challenges within certain partnerships, perhaps stemming from various factors, such as differences in research priorities, limited resources, or historical contexts that may affect trust. [16,17]



**More specifically:** *As researchers at UBC, do you find it challenging (yes or no) to collaborate with First Nations? If yes, what are some contributing factors?*



Out of the respondents, 7 answered "Yes," 3 answered "No," and one interviewee expressed both "Yes" and "No." Evident through previous interview responses, collaborating with First Nation partners at UBC presents a complex and time-intensive endeavor, and is often accompanied by various challenges. A few interviewees elaborated on this.

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Many interviewees stressed the **difficulty of aligning institutional processes with community interests**.

- Regarding the varying timeframes and priorities, one interviewee recognized that **community members rightly prioritize urgent responsibilities related to infrastructure, water systems, and housing over research endeavors**. According to one interviewee, "The commitment to engage with Musqueam is evident among UBC members, but despite multiple attempts to contact them, there has been limited response. ... This situation creates a challenge as it feels like trying to communicate with an unresponsive party." Another interviewee echoed this sentiment; however they did note the numerous priorities and heavy workload that Musqueam likely faces.
- With the timelines for **community-engaged work also frequently in conflict with research publication demands**, there arise challenges in aligning timelines, research priorities, and the bureaucratic processes at UBC with the interests and needs of Indigenous communities. Despite these challenges, an interviewee highlighted, "There is an eagerness within many First Nations communities to collaborate and build trust, making the work both challenging and important simultaneously."

One interviewee even reframed the question to **“Do you find it challenging to decolonize your current institution?”** In response, the interviewee affirms the challenges of forging relationships and connections, underscoring their significance. They also admit to past mistakes in relationships while emphasizing the value of maintaining strong connections.

**Building trust** faces challenges rooted in UBC's colonial history on unceded land and historical interactions with certain communities, marked by instances that have eroded trust. This history, defined by broken promises and strained relationships, adds to the difficulties many face in collaborating with First Nations at UBC.

Other common themes emerging from the interviews include the need for **better communication, alignment of priorities, and recognition of the historical context** when working with First Nations communities at UBC.

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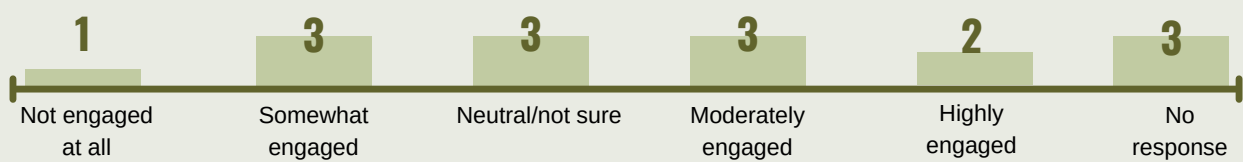
However, two distinct rationales were provided by interviewees who did not find it challenging to collaborate with First Nations.

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One interviewee mentioned that researchers tend to **rely on pre-existing personal relationships and connections**, favoring their existing network for research collaborations over seeking new opportunities. However, they did stress the importance of clarifying which office handles specific tasks to address potential confusion and inefficiency in the current system at UBC. They **advocated for making these relations more institutional** by strengthening the role of IRSI to formalize research partnerships.

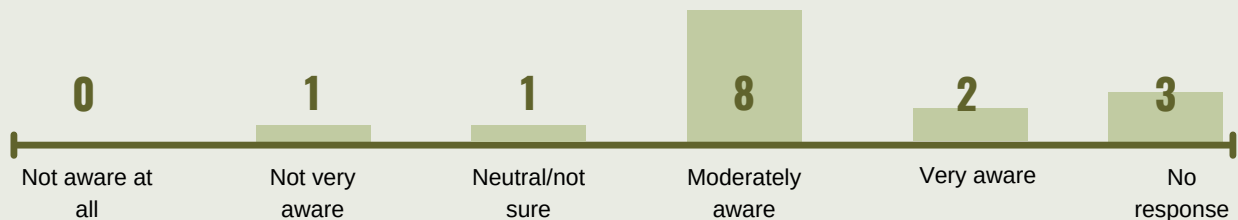
Another provided reason was unique to the interviewee's status as a tenured faculty member, acknowledging that their position afforded them certain advantages and that they did not encounter significant challenges in their community-based research projects. Within this work, they did highlight the significance of securing multi-year funding, **since community-based projects operate differently from conventional academic schedules and depend on ongoing financial support to sustain trust, progress, and community engagement.**

**Researcher responses after being asked:** *How would you describe the level of engagement that your faculty or school has with First Nations as they conduct climate change research?*



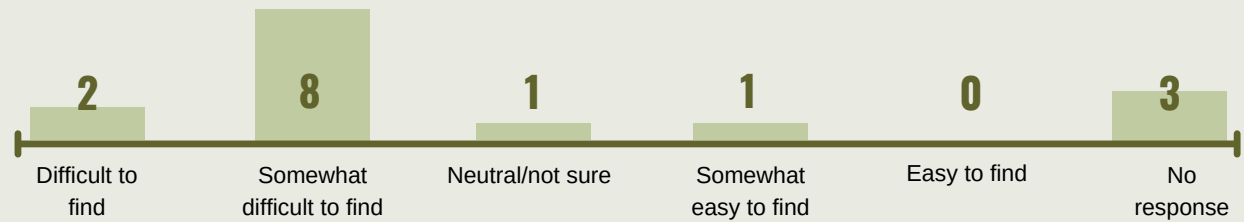
The variety in responses suggests a lack of uniformity in engagement across different faculties or schools, which may be reflective of differences in departmental priorities, resources, or historical relationships with First Nations.

**Researcher responses after being asked:** *How aware were you of other First Nations partnered climate change research that is happening at UBC?*



The responses not only provide insights into the awareness levels regarding other climate change research partnerships with First Nations at UBC but also serve as a potential measure of the comprehensiveness of our database. The majority of the interviewees demonstrated at least a moderate level of awareness of other First Nations-partnered climate change research at UBC. This serves as a measure of confidence in the comprehensiveness of our database, particularly, our use of snowball sampling which is indicative of engagement with individuals closely connected to these initiatives. This reinforces the reliability of our data, providing assurance that our database captured a substantial number of total partnerships. However, the presence of a few varied awareness levels also highlights the importance of information-sharing mechanisms and increased visibility of ongoing research initiatives to ensure more comprehensive understanding of such partnerships.

**Researcher responses after being asked: how easy is it to find information regarding partnerships between UBC and First Nations?**



The responses reflect a challenge in finding information about partnerships between UBC and First Nations, which may be attributed to the complex nature of these partnerships (if involving various faculties, consolidating cohesive information can be a challenge), and/or a lack of a centralized and accessible information platform within UBC. Moreover, sensitivity of specific information can constrain its public disclosure, particularly in alignment with the principles of Indigenous data sovereignty. [17] While research serves communities and should rightfully belong to them, this may pose challenges for individual researchers seeking access.

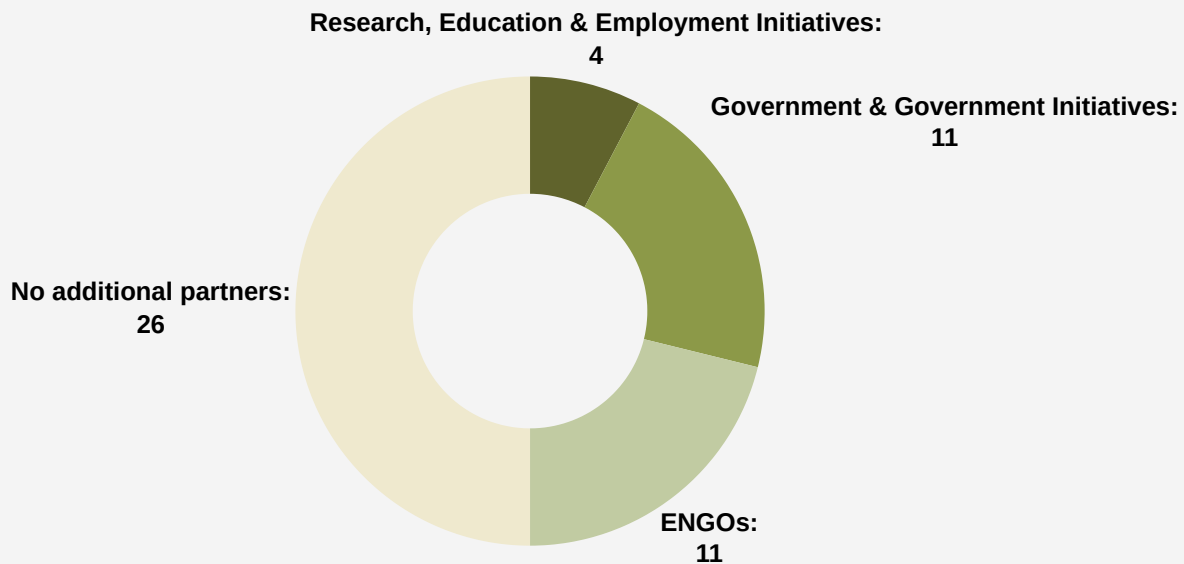


Collaborating with First Nations at UBC underscores a complex landscape, marked by challenges rooted in a fundamental disconnect between the institution and Indigenous communities. This disconnect highlights a broader issue ingrained in colonial institutions, requiring not just individual adjustments but systemic and institutional changes. Establishing genuine connections becomes pivotal for fostering transparency and equitable research relationships with Indigenous communities at UBC. This process calls for a comprehensive shift in policies, practices, and attitudes, emphasizing the need for collective and institutional commitment to ensure a more inclusive and respectful approach to collaboration with Indigenous partners.



## Who are the non-UBC, non-Indigenous partners, which may include industry and government entities, involved in the projects and initiatives documented in the database?

Non-UBC, non-Indigenous partners were categorized into three categories: ENGO's (Environmental Non-Governmental Organizations), Government and Government Agencies, and Research, Education & Employment Initiatives (represented by bracketed numbers). For a full list of partners in their respective categories, refer to Appendix A.



**Figure 2.** Broadly categorized non-UBC, non-Indigenous partners of these projects.

Non-UBC and non-Indigenous partners in this collaborative effort are mainly divided into two categories: ENGOs and provincial government agencies. There are a select few research, education and employment initiatives that also support this work.

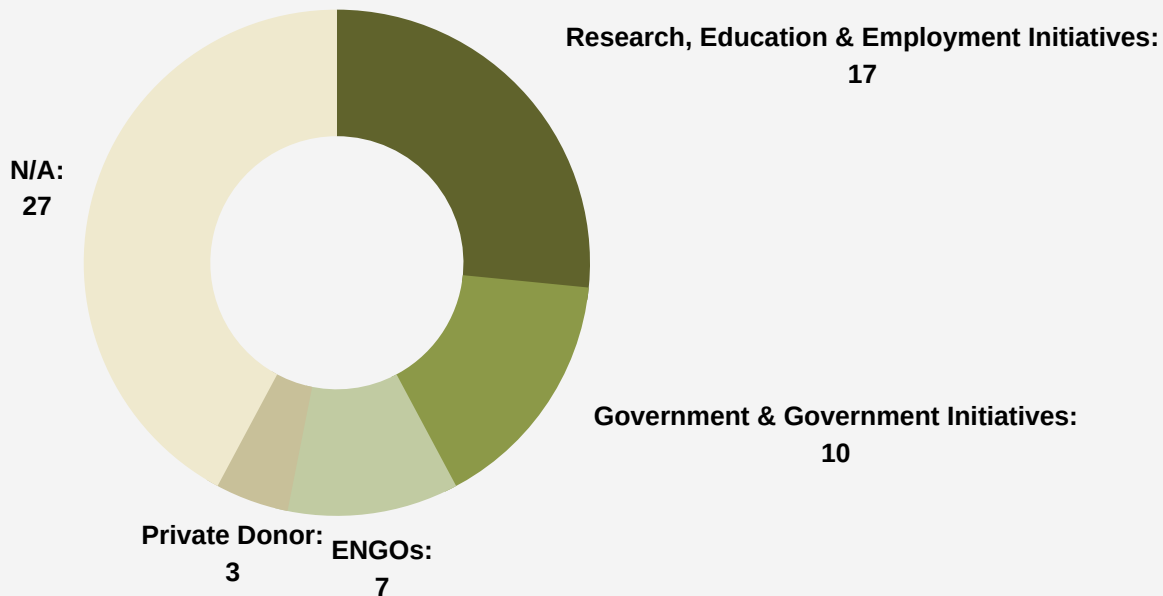
Further, there were 27 projects within the database that exclusively relied on the partnership between UBC and First Nation partners, without the inclusion of any external collaborators. Among these 27 projects, it's interesting to note that 16 of them lacked any readily accessible information pertaining to their sources of funding. This information gap underscores the need for more comprehensive record-keeping and transparency within these initiatives.

For those with listed external partners, a significant portion of the partners also function as key financial contributors to the project. While it is highly probable that their primary role lies in providing financial support. As noted in the next section, the available database doesn't offer comprehensive confirmation regarding the precise nature of their involvement.



## How are these projects being funded?

Most often, project financing was unavailable, therefore only the funding entity was provided. These entities were broadly categorized into Research, Education & Employment Initiatives, Government and Government Agencies, ENGOs (Environmental Non-Governmental Organizations), and Private Donors. For a full list of funding entities in their respective categories, refer to Appendix A.



**Figure 3.** Broadly categorized funding entities of projects.

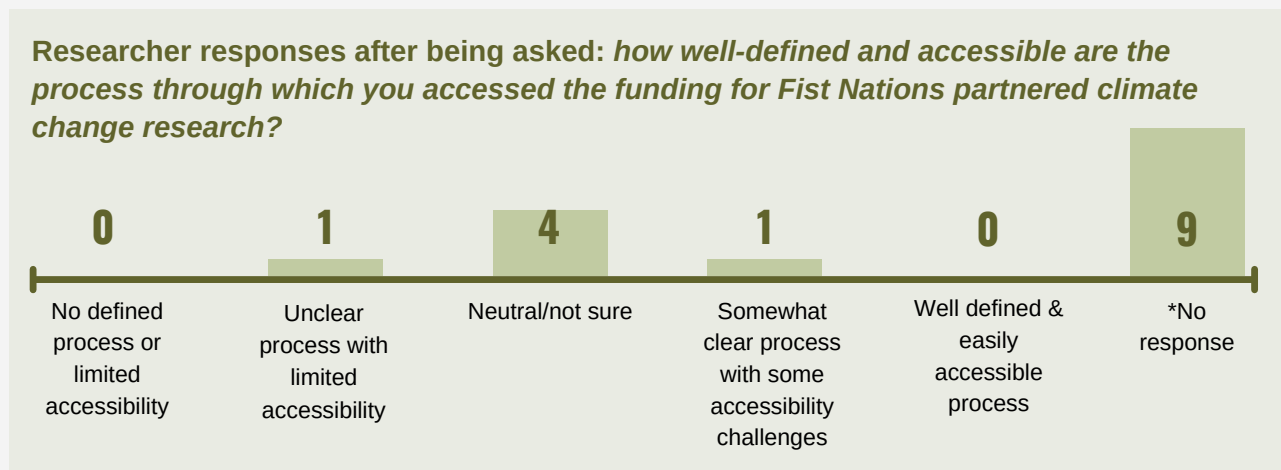
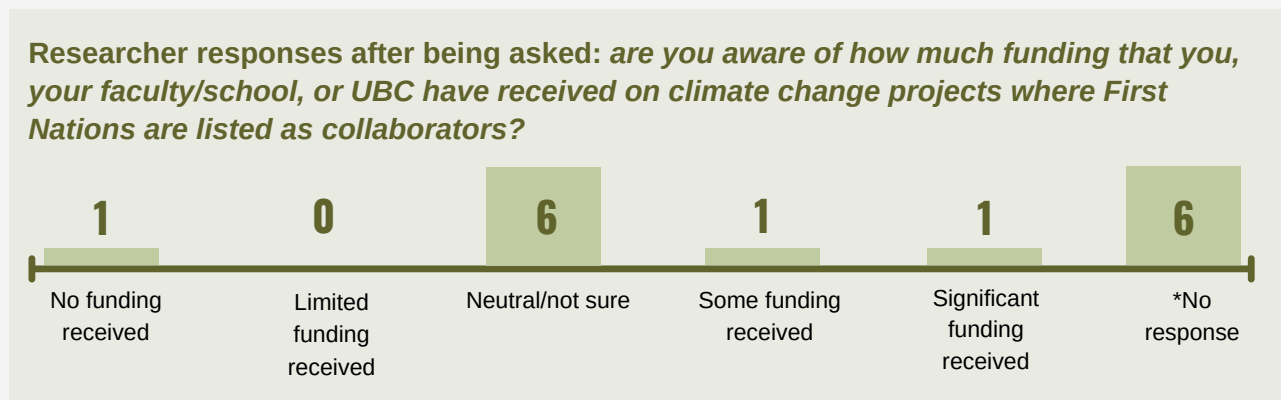
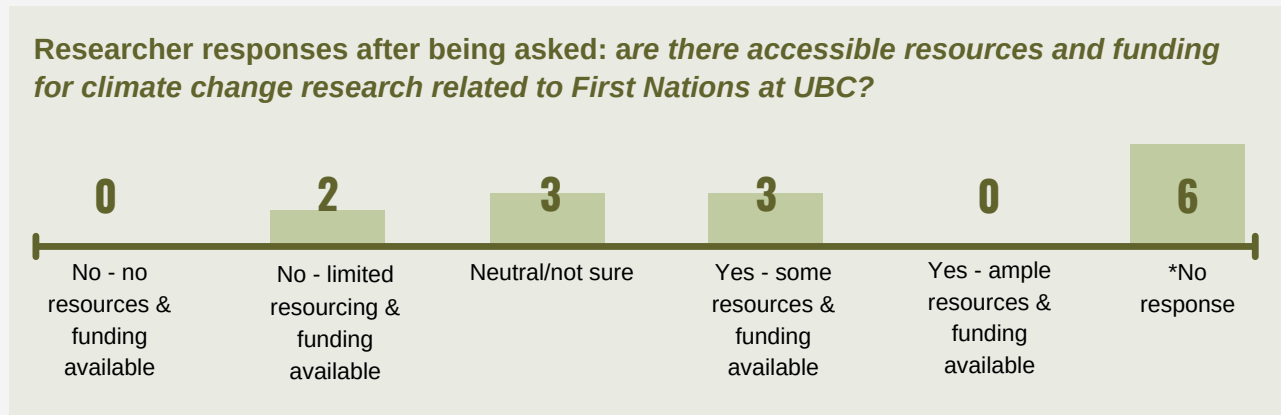
While the preliminary investigation into funding sources revealed a predominant reliance on UBC grants and government funding for projects related to First Nations and climate change, the lack of available information poses a significant challenge. Over a third of the projects yielded no details on their funding, and attempts to gather more insights through desk research proved unfruitful. The absence of transparency regarding the specific priorities of funders, such as their focus on partnerships with Indigenous communities or commitment to climate and sustainability, remained a critical gap.



As previously mentioned, collaborating with Indigenous communities as part of broader reconciliation efforts often skews benefits to institutions, especially in terms of funding. With Indigenous communities likely playing a significant role in securing funds, allocation and transparency of funding should not only be viewed as a matter of transparency but also as an accountability mechanism for the institution. This ensures

that formal partnerships with Indigenous partners go beyond being transactional exchanges, evolving into meaningful collaborations where benefits are visible and impactful for the well-being of Indigenous communities. These type of collaborations meaningfully contribute to genuine reconciliation, particularly in the realm of economic reconciliation. [18]

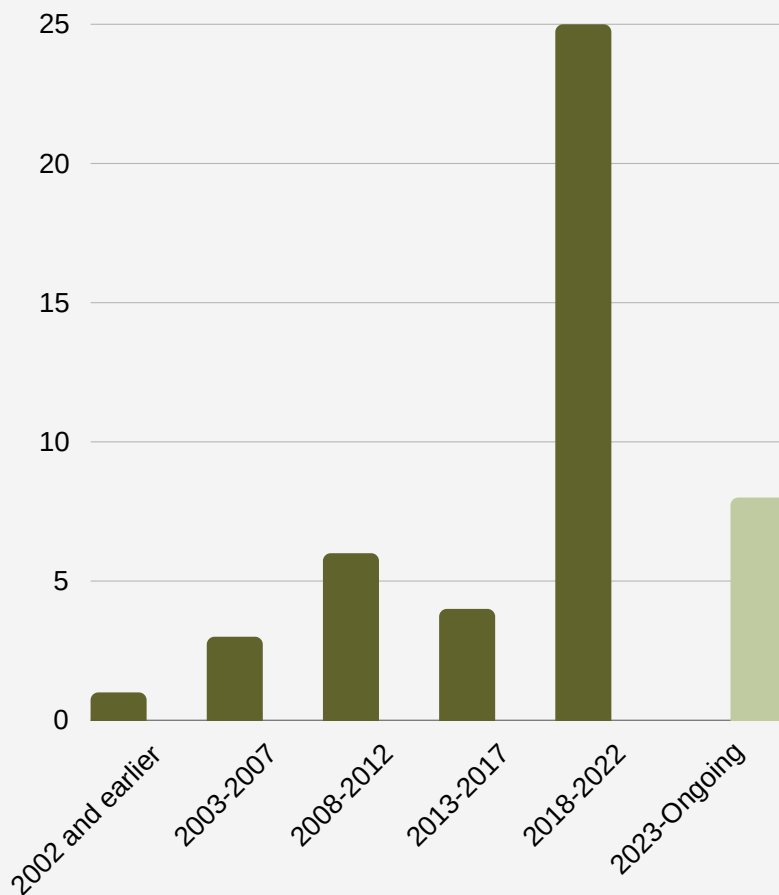
In light of these challenges, UBC researchers provided firsthand insights into the complexities of funding in their research. Here are a few of the primary inquiries posed to them.



The accessibility of resources and funding for climate change research related to First Nations at UBC varies among respondents, but could reflect a potential lack of clarity or awareness regarding the existing resources and funding opportunities for such research at UBC. As indicated throughout the interviews, there is ambiguity, and potential transparency issues regarding the funding associated with such projects at UBC. However, due to the lower response rate in this area, drawing conclusive insights is challenging.

## Has there been an uptake in this type of research over the past few decades?

With the recent implementation of UNDRIP, DRIPA, UBC's Indigenous Strategic Plan, the Climate Emergency Action Plan and other relevant policies, we would expect there to be a growing interest in research that supports Indigenous communities and their intersection with environmental and climate health. Therefore, we aimed to analyze the data from the starting year to discern any discernible upward trends in our database. The starting year refers to the year the project began, which might differ from the publication or delivery year.



**Figure 4.** Project starting year, sorted into 5-year intervals, excluding ongoing projects that are represented by a 1-year interval, 2023.

It is evident that there has been a noticeable uptick in project initiations within the last five years, with a significant portion commencing in early 2023. Even with the 8 projects excluded here for missing the starting date, their year of publication aligns with this trend (6 have been published within the past 5 years). This increase may be a result of the heightened emphasis on Indigenous rights and collaborative research as a result of the pertinent policies mentioned earlier. Furthermore, climate change has garnered increased attention, highlighted by UBC's declaration of a climate emergency in 2019. [2] Alternatively, it could also be attributed to the increased accessibility of projects documented in recent years.

## What challenges arise in these partnerships?

Researcher responses after being asked: *have you encountered any challenges or obstacles while working in partnership between UBC and First Nations?*



“ Interviewees noted that **funding constraints and administrative burdens in some First Nations communities** presented challenges. Certain communities, like Musqueam (with a relatively small population of 1,300 members), face limitations due to their size, making it impossible to accommodate all research requests. [19] They also pointed out that **UBC's finance department lacked knowledge** in working with First Nations, which has led to restrictions in financing and accommodations for Indigenous partners.

Another interviewee discussed challenges arising from a **savior mentality** when non-Indigenous individuals introduced research ideas disconnected from community interests.

Another interviewee pointed out that **short project timelines often left inadequate time for relationship-building** and the establishment of specific protocols. This was echoed by others, and highlighted the discord between the values and timelines of the institution and Indigenous communities. The institution prioritized speed and clear outcomes, while Indigenous communities stressed the importance of the process itself, often referred to as the **"Speed of Trust,"** necessary to avoid re-traumatizing and perpetuating colonization.

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As researchers navigate these intricate challenges and reflect on the dynamics of partnerships between UBC and First Nations in addressing climate change, a common thread emerges—a **shared belief in the invaluable importance and impact of this work by and for community**. Despite the hurdles, interviewees recognize the dual nature of the endeavor, acknowledging both its challenges and rewards. In moving forward, their reflections offer tangible next steps: a commitment to recognizing and supporting the existing work within First Nations, engaging in a continuous process of (un)learning the culture, ethics, and behavior of Indigenous communities, and building toward the integration of epistemologies—a profound merging of knowledge systems, albeit a long-term and transformative process. These reflections underscore the resilient spirit of collaborative efforts, emphasizing their enduring significance in fostering understanding, respect, and positive impact within and beyond the academic realm.

# Recommendations

During the semi-structured interviews, researchers were prompted to articulate their visions for current and future collaborations between UBC and First Nations in the realm of climate change research. From these discussions, a diverse array of insights and aspirations emerged, forming the foundation for several recommendations outlined below. Originating from the perspectives articulated during the interviews and initially compiled by the scholar who conducted them, recommendations were subsequently refined through my supplementary analysis. The referenced scholar explicitly acknowledged the Western orientation of their viewpoint, reflected in the research methodology, database structure, and proposed recommendations—all aligned with Western academic norms. [10] This orientation inevitably influences the recommendations. Simultaneously, it is crucial to recognize that my own positionality is an inherent factor in this iterative process.

Many of these recommendations are specifically addressed to UBC as a research institution; however, they can be broadly applicable to anyone engaging in climate change research in collaboration with Indigenous partners.

Common themes emphasize the importance of building strong relationships, providing support, delivering practical outcomes, embracing interdisciplinary work, and advancing Indigenous representation within UBC in climate change research partnerships. However, it should be noted that addressing any of these requires a broader institutional shift and involves dismantling the colonial knots deeply embedded in the foundation of the majority of the work conducted at UBC. [20]



# RECOMMENDATIONS

- 1.** To address the ambiguity in the database, **UBC, in addition to some partner organizations, should enhance transparency** by providing clear and detailed information, particularly regarding funding and specific partnerships, to contribute to a more open and informed collaborative environment.
- 2.** Recognizing that personal relationships between researchers and First Nations are identified as cornerstones of this collaborative work, it is **imperative for UBC to extend support not only to specific projects but also to individuals** actively engaged in this collaborative effort. The emphasis should be on fostering personal development and growth within these partnerships, reflecting the value placed on the holistic well-being of those involved.
- 3.** **Reevaluate UBC's connection with the land and location**, considering innovative actions to address reparations and recognize its host Nation(s). This comprehensive commitment to acknowledging historical considerations and fostering meaningful partnerships underscores UBC's responsibility in the process of learning and unlearning. Such dedication is crucial for facilitating robust relationships and building institutional trust.
- 4.** Researchers, departments, and UBC as an institution, need to recognize that many, if not all, First Nations, face limitations in terms of time and resources. In light of this, **UBC should actively shoulder the associated burdens of research requests**, while aligning research agendas with community wants and priorities.  
  
To actively acknowledge this burden placed on communities, a sabbatical program for First Nation leaders, financially supported by UBC, allowing a dedicated 3–6-month period for research, reflection, and relationship building, was a recommended actionable solution.
- 5.** **UBC needs to acknowledge and accommodate that community-engaged work frequently conflicts with conventional academic schedules**, as the bureaucratic processes at UBC often differ from the interests and priorities of Indigenous communities.
- 6.** Uphold values of **transparency and accountability to First Nation partners**, as appropriate in reciprocal relationships. This ensures a respectful and mutually beneficial collaboration that aligns with the future visions expressed by researchers.
- 7.** **Establish funding opportunities for long-term projects**, recognizing the need for sustained support in community-led initiatives that require time and patience for relationship-building.

**8. Establish effective communication channels between Indigenous communities and the university** to address challenges from personnel transitions and repeated questions by decentralized researchers.

Several individuals interviewed expressed a consensus that IRSI could hold that role. They recommended IRSI as the primary bridge of communication or liaison between the university, researcher, and Indigenous partners, leveraging its strong reputation for relationships, supporting work processes, research, and community building. This necessitates dedicated resources, funding, and team capacity building for the development and growth of IRSI, with support from faculties, schools, and departments.

**9.** To enhance interdisciplinary collaboration and streamline processes and protocols, researchers **advocate for regular and interconnected dialogue between UBC Vancouver and UBC Okanagan**. This facilitates the seamless sharing of information, networks, relationships, discoveries, and common areas of work.

**10.** Enhance collaborative efforts by **cultivating a "third collaborative space" through co-created projects between UBC and Indigenous partners**. This involves building and maintaining trust through a focus on culturally appropriate, well-compensated, and mutually beneficial learning experiences that extend beyond UBC campuses (potentially taking place on the land).

**11.** **Prioritize youth engagement** in addressing climate change challenges through resistance and change processes, involving both Indigenous and non-Indigenous youth, to nurture relationships and connections within the community.

**12.** **Prioritize hiring Indigenous personnel**, acknowledging that climate solutions reside within Indigenous knowledges. This requires navigating the complexities of recruitment and retention within a colonial institution, and emphasizes the need to establish culturally safe spaces and support services for Indigenous peoples.

# Reflections & Future Directions

## LIMITATIONS

In addition to the insights provided, it's crucial to acknowledge specific limitations inherent in the data collection and analysis processes.

Firstly, the database's scope is confined to specific climate change research collaborations between UBC and First Nations in BC, relying on a combination of online sources and interviews. Recognizing the constraints of time and reliance on publicly available information, there is an inherent limitation in capturing the entirety of such complex partnerships. Certain nuances may be missing due to the constraints of the available data.

Furthermore, the semi-structured interviews, a key component of the analysis, were conducted within a condensed timeframe. Consequently, not all interviews were fully administered, with some questions prioritized over others. Specifically, questions related to partnerships and project objectives took precedence over funding-related inquiries and perceptions around UBC's processes. This prioritization could potentially result in an underrepresentation of certain perspectives and aspects of the collaborations.

Additionally, the temporal aspect of some identified partnerships poses a challenge. Some collaborations highlighted in the interviews were very recent or still under development, making it difficult to provide comprehensive information. This limitation adds a temporal constraint to the database,

impacting the depth of insight into these evolving partnerships.

Furthermore, the analysis is notably constrained by its predominant focus on perspectives within the Western academic institution. All interviewees, exclusively researchers, contribute to a lack of diversity in responses. Only three of these individuals identify as Indigenous, revealing a significant underrepresentation of Indigenous voices. The absence of direct input from our First Nation partners further exacerbates this limitation, creating a critical gap in understanding collaborative research dynamics. Given these constraints, the study's scope may not fully encapsulate the intricacies of collaborative research, potentially resulting in an incomplete portrayal of the challenges and opportunities at hand. The proposed recommendations, therefore, face potential implementation challenges due to the varied capacities and priorities of stakeholders not adequately represented in our analysis. This limitation underscores the need for future research efforts to prioritize inclusivity and actively seek the perspectives of all stakeholders involved in collaborative endeavors.

Lastly, the analysis does not delve deeply into the specific cultural nuances of each Indigenous community, which play a crucial role in shaping collaboration dynamics. The broad strokes used in the recommendations need to be considered in specific contexts.

It is essential to approach these findings with an awareness of these limitations and to



engage in ongoing dialogue and collaboration with Indigenous communities to refine and contextualize the recommendations for specific contexts.

## CONCLUSION

The examination of UBC's collaborative efforts with First Nations extends beyond the mere creation of a database; it serves as a critical reflection on the intricacies inherent in these partnerships. The current state of the database mirrors the dynamic, ongoing, and somewhat divergent narrative of collaborations between First Nations and UBC in climate change research. This reflection underscores a commitment to addressing challenges, learning from limitations, and actively adapting to better meet the needs and aspirations of Indigenous communities.

Insights gleaned from the database illuminate essential facets of UBC-First Nation relationships, emphasizing the paramount importance of fostering trust and understanding over time. Acknowledging the challenges faced by First Nation communities inundated with research partnership requests, institutions are called upon to actively support community initiatives. Transparency in funding allocation emerges as a crucial pillar of accountability, ensuring that resources are directed to genuinely benefit Indigenous communities. Moreover, the database underscores the significance of intentionality when naming community partners, promoting partnerships founded on the right intentions. This insight intensifies the call for systemic change within the institution, urging a departure from the traditionally extractive nature of research towards a more equitable and community-centered approach.

In summary, the database not only reflects the evolving narrative of UBC-First Nations collaborations in climate change research but also offers an approach to an ongoing journey toward more meaningful, reciprocal, and impactful partnerships. These insights align closely with both UBC's Indigenous Strategic Plan and the Climate Emergency Task Force progress report, as well as the BC First Nations Climate Strategy and Action Plan, all serving as pivotal supporters of this initiative. [2,7,9] Importantly, the proposed recommendations are not groundbreaking concepts; they are already embedded in other frameworks and have long been advocated for by numerous Indigenous communities. This recognition underscores the importance of acknowledging that Indigenous communities bear the weight of both climate change impacts and mitigation strategies. Consequently, researchers and UBC, as a research institution, can redirect their support to alleviate this burden and dedicate their efforts to Indigenous well-being and sustainability.

The advocacy for collaboration rooted in reciprocity, respect, relevance, and responsibility is crucial not only for the effectiveness of UBC's engagements with First Nations but also for fostering a more inclusive, just, and environmentally conscious future. This integrated approach, aligning with the Indigenous Strategic Plan, IRSI initiatives, and climate justice, underscores UBC's commitment to transformative change in both academic research and community engagement. As UBC progresses on its path toward reconciliation and environmental stewardship, these recommendations, devoid of performative gestures, present a strategic and actionable pathway forward.

# STEPS FORWARD

The creation of this database signifies a notable advancement in understanding UBC's engagement at the intersection of Indigenous knowledge, climate change, and “good research.” [5,17] While this initiative has an immediate impact on research, there is a crucial need to expand its scope. Specifically, the next steps should prioritize engaging directly with our First Nation partners, ensuring their perspectives are central to the database's development.

Furthermore, recognizing the interconnected dynamics between climate research and health, an essential avenue for exploration is the expansion or replication of the database for health-related research. This strategic move acknowledges the intricate relationships between climate change and health outcomes, but also reflects a commitment to addressing the multidimensional aspects of Indigenous well-being in the face of climate change.

Importantly, these next steps aligns with IRSI's Principles of Engagement for Indigenous Community-based Research, reinforcing the idea that Indigenous communities deserve transparency and control over the research in which they are involved. [6] This aligns with the broader goals of the initiative, emphasizing accountability and responsibility on the part of the university. By replicating or expanding the database structure for other research disciplines, we provide a mechanism through which Indigenous partners can actively participate in, and be informed about, research initiatives that impact their communities. This initiative becomes a pivotal step in rebuilding trust, acknowledging past breaches, and

demonstrating the institution's commitment to respecting Indigenous principles and fostering genuine collaboration.

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# Appendix A

## Full Descriptive Statistics from Database

### Full list of disclosed First Nation partners:

\*Disclaimer: The scope of these named partnerships is not transparent and varies. While we credit the ICCO's involved as partners, we caution judgment when assessing the information provided, considering potential performance implications in research collaborations.

Aboriginal Housing Management Association: 1	Katzie First Nation: 2	Qayqayt First Nation: 1	Tl'azt'en Nation: 1
?Aq'am/St. Mary's Indian Band: 2	Kitselas First Nation: 2	Penticton Indian Band: 1	Treaty 8 Tribal Association: 1
Binche Whut' First Nation: 1	Kitasoo Xai'Xais Nation: 1	Prophet River First Nation: 1	Tr'ondek Hwech'in First Nation (Yukon): 1
Blue Mountain First Nations: 1	Klahoose First Nation: 1	Quw'utsun Tribes: 1	Tsawout First Nation: 1
British Columbia Assembly of First Nations (BCAFN): 1	Ktunaxa Nation: 2	Saulteau First Nation: 1	Tsawwassen First Nation: 1
Carrier Sekani Tribal Council: 1	Kwantlen First Nation: 1	Secwepemc First Nation: 1	Tseycum First Nation: 1
Chawathil First Nations: 1	Kwikwetlem First Nation: 1	Semiahmoo First Nation: 1	T̓silhqot'in Nation: 1
Coastal First Nations (Great Bear Initiative): 7	Lake Babine Nation: 1	Shackan Indian Band: 1	Tsleil-Waututh Nation: 3
Coastal Salish First Nations: 4	Lhoosk'uz Dené Nations: 1	Skidegate Band Council: 1	Tulalip Tribes (USA): 1
Da'naxda'xw First Nation: 1	Lílwat Nation: 3	Squamish Nation: 6	Union of BC Indian Chiefs (UBCIC): 1
Doig River First Nation: 1	Lower Similkameen Indian Band: 1	St'at'imc First Nation: 1	Upper Nicola Band: 1
Esketemc First Nation: 1	Lytton First Nation: 1	Sto'lo Nation: 2	Wei Wai Kum First Nation: 1
Fort Nelson First Nation: 1	Maiyoo Keyohs: 1	Stk'emlupsemc Te Secwepemc Nation: 1	Westbank First Nation: 1
Gwaii Trust Society: 1	McLeod Lake Indian Band: 1	Stswecem'c Xgat'tem First Nation: 1	West Moberly First Nations: 2

Gwa'sala-'Nakwaxda'xw First Nations: 1	Metis Nation (BC only): 1	Stz'uminus First Nation: 1	Williams Lake Indian Band: 1
Haida Gwaii First Nation: 1	Mikisew Cree First Nation (Alberta): 1	Syilx Okanagan Nation: 3	W̱SÁNEĆ First Nations: 1
Halfway River First Nation: 1	Musqueam Indian Band: 11	Taan Forest Resources: 1	Xat'súll First Nation: 1
Heiltsuk Nation: 2	Nawakolas Council: 1	Teslin Tlingit Council: 1	Xeni Gwet'in First Nation: 1
Homalco First Nation: 1	Nisga'a First Nation: 3	T'it'q'et Administration: 1	Yunesit'in Government: 1
Huu-ay-aht First Nations: 1	Nuxalk Nation: 2	Tla' amin Nation: 1	

## Full list of non-UBC, non-Indigenous partners:

### ENGOS (Environmental Non-Governmental Organizations): 11

1. Coast Opportunity Funds (1)
2. Coastal Douglas-Fir & Associated Ecosystems Conservation Partnership (2)
3. Sierra Club of British Columbia Foundation (2)
4. Sitka Foundation (2)
5. WWF Canada (1)
6. Fraser Basin Council (1)
7. Canada Foundation for Innovation (1)
8. Resilient Waters Project (Solutions for Flood, Fish, and Farms for the Lower Fraser) (1)

### Government and Government Agencies: 11

9. BC Housing (1)
10. BC Hydro (5)
11. BC Ministry of Energy, Mines and Low Carbon Innovation (2)
12. BC Knowledge Development Fund (1)
13. Clean BC Remote Community Energy Strategy (RCES) (1)
14. The Energy and Environmental Sustainability (Lower Mainland Health) (1)

### Research, Education & Employment Initiatives: 4

15. Fraser Estuary Research Collaborative (FERC) (1)
16. Pacific Institute for Climate Solutions (1)
17. Simon Fraser University (1)
18. Mitacs Accelerate Program (1)

### Projects with no additional partners: 26

## Full list of funding entities:

### **ENGOS (Environmental Non-Governmental Organizations): 7**

1. Coast Opportunity Funds: 1
2. Great Bear Initiative: 1
3. Sitka Foundation: 2
4. WWF Canada: 1
5. Fraser Basin Council: 1
6. The Watershed Enhancement Fund: 1

### **Government and Government Agencies: 10**

7. BC Housing: 1
8. BC Hydro: 4
9. BC Ministry of Energy, Mines and Low Carbon Innovation: 2
10. BC Knowledge Development Fund: 1
11. The Energy and Environmental Sustainability (Lower Mainland Health): 1
12. Provincial Government: 1

### **Research, Education & Employment Initiatives: 17**

13. UBC (inclusive of various grants and funds, including ISI [1] Fund): 13
14. Fraser Estuary Research Collaborative (FERC): 1
15. Gwaii Trust Society: 1
16. SSHRC: 2

### **Private Donor: 3**

**N/A: 22**

# Appendix B

## Continued Qualitative Analysis of Semi-structured Interviews

**Researcher responses after being asked:** *what positive impacts have resulted from your First Nations partnered research?*

Positive impacts resulting from First Nations partnered research at UBC encompass a range of outcomes. Collaborative efforts have enabled substantial support for First Nations communities and contributed to non-Indigenous community education, fostering awareness and understanding. These partnerships have also led to an increased capacity for intercultural dialogue and advocacy, benefiting both UBC and First Nations partners by strengthening movements and securing vital funding for community priorities.

“ Interviewees emphasized the transformative impact of engagement, which has provided fresh insights into the landscape, introduced innovative approaches to research and academic disciplines, and cultivated a stronger connection to the environment. These individuals also expressed the hope that their work would **raise awareness of the expertise of Indigenous knowledge holders** and promote a more harmonious relationship between academia and Indigenous communities.

The **hands-on, local engagement was recognized as highly meaningful in their work**, fostering a sense of connection and impact. Through these partnerships, researchers feel that Indigenous voices have been effectively incorporated into broader networks, emphasizing the importance of diverse perspectives and collaboration in research efforts.

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**Researcher responses after being asked:** *how have these partnerships benefited the First Nations involved?*

While specific benefits were not detailed, the partnerships have generally fostered positive sentiments. These benefits are often assumed based on the relationships established through the collaborative efforts.

**Researcher responses after being asked:** *how do you measure/evaluate benefits so others (ie. Province) understand them?*

Interviewees suggested that benefits are assessed through the **measurement of trust levels and the collection of positive feedback from the community**. It was noted that measuring the impact can be challenging however, as established standards or metrics are generally decontextualized Western approaches that do not align with many research/evaluation frameworks that center Nation-specific protocols and values. [21]