



Cover Image: The Land Back mural located in Pender Street of Vancouver, organized by Trey Helten (pictured), 2021. Source: Daily Hive.

Developing an inventory of UBC's climate research partnerships with Indigenous communities, collectives, and organizations in Vancouver's Downtown Eastside (DTES)

Prepared by: Meghna Chatterjee

Prepared for: Sam Filipenko, Research Program Manager and Lerato Chondoma, Associate Director
Indigenous Research Support Initiatives

UBC Sustainability Scholar's Program

August 2024.

Disclaimer

This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organisations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability and climate action across the region.

This project was conducted under the mentorship of UBC Indigenous Research Support Initiatives (IRSI) staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of IRSI or the University of British Columbia.



Table of Contents

Placing Myself	01
Project Context	02
Introduction and Background	04
Research Methodology	05
Key Findings	08
Reccomendations	14
Sources	16



Vancouver's City Centre Motor Hotel turned into an artist's lodge for Vancouver Mural Festival 2022.

Placing Myself

I am a Master's student at the University of British Columbia, a campus spread across four hundred hectares of unceded, ancestral territories of the ɬə́h̓qə́míə́m speaking Musqueam people. For two years now, I have been living in a city built on the lands and histories of xʷməθkʷə́yəm (Musqueam) Indian Band, and the Səlílwətaʔ (Tsleil-Waututh) and Skwxwú7mesh (Squamish) Nations of the Coast Salish peoples.

It wasn't until the summer of this year that I learnt that the land was called K'emk'emeláy —or, the place of many maple trees — before it was retitled Vancouver. Language loss, colonial redesigning, and cultural genocide are only some of the deep-seated effects of colonialism whose reverberations are felt to this day, and that we — as settlers, thinkers and people — must actively work to alleviate and undo.

As a settler in a settler nation, I'm grateful to the lands that have allowed me to live and work, feel joy and sorrow, stumble, make mistakes and learn from it. As an international student with little prior knowledge of Canada's colonial past and present as we know it today, I strive to continue learning and inculcate decolonial practices in my ways of deep listening, seeing, knowing and meaning making.

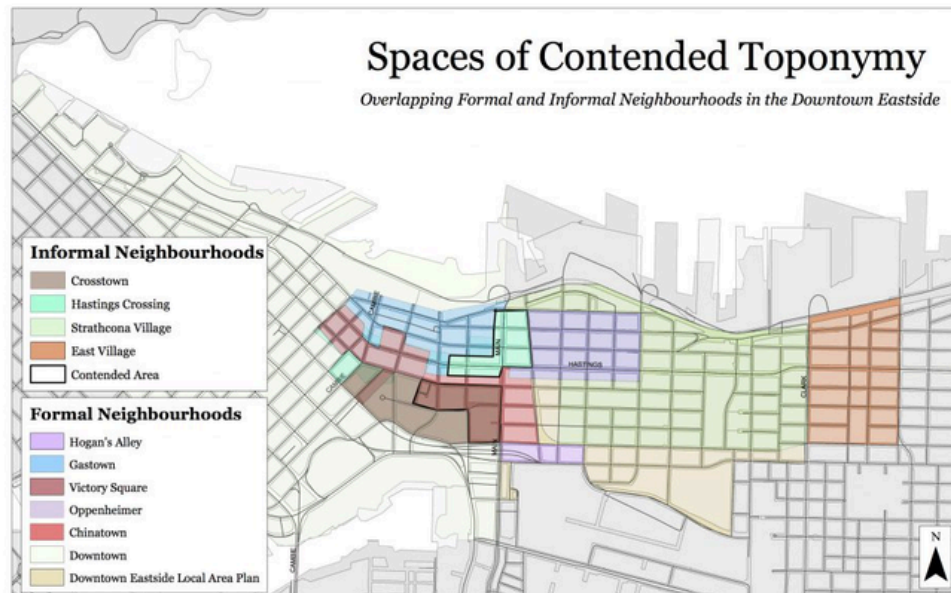
I use first-person reporting throughout this document. I chose to do this to place my subjectivity to the fore, and to remind myself and the reader that the author of this report is a non-Indigenous settler of colour, and is not value-free or neutral. Using the third-person pronoun often masks power relations and erases the fact that knowledge is actively being created, which I attempt to avoid.

I am grateful to Sam Filipenko, Research Program Manager, and Lerato Chondoma, Associate Director at IRSI for their guidance and support throughout these four months.

To respect the strong currents of 'activism' in the area, and in an attempt to move away from the damage-centric lens that Vancouver's Downtown Eastside is looked at with, I have chosen to include images of murals and graffiti around the neighbourhood throughout the report. Pictures are taken by me unless credited otherwise.

Project Context

I. Vancouver's Downtown Eastside



Map of formal and informal neighborhoods in DTES. Source: Tessa Owens.

One of Vancouver's oldest neighborhoods, the Downtown Eastside is home to a heterogeneous community of working-class, Indigenous, and racialized communities. It is also home to the largest population of off-reserve Indigenous peoples in Vancouver (Fang et al. 6). Today, the DTES area is understood to include the Strathcona neighbourhood, Hogan's Alley, Kiwassa, Oppenheimer Park, Gastown, Chinatown and the Victory Square area. The community, in contrast to the city's opulent Downtown Westside and North, has been at the crux of the city's growing socioeconomic crisis, the symptoms of which are most profoundly felt in poverty, housing crisis, toxic drug supply, and health issues.

Murals adorn many walls in the DTES, transforming alleys into galleries of public art, and despite its challenges, the community is rich with a history of activism and mutual aid, where residents and local organizations continually strive for better living conditions and social justice. Efforts to revitalize the area often clash with concerns about gentrification and the displacement of vulnerable residents ("Final Project"), underscoring the complex dynamics at play in urban redevelopment. UBC's research endeavors in DTES have often been extractive, where the pursuit of academic knowledge has overshadowed the wellbeing and autonomy of the community. This area, rich with resilience and culture, has too frequently been treated as a mere source of data rather than a vibrant, living community deserving of respect and reciprocity (Linden 599). Scholars and activists have decried the imbalance of power, where researchers extract invaluable insights without ensuring commensurate benefits or fostering genuine collaborative relationships. This dynamic not only perpetuates feelings of exploitation and mistrust but also undermines the potential for transformative, community-led change.



Musqueam's two-headed serpent pole on UBC Campus. Source: IRSI.

II. Research at the University

Standing on Musqueam grounds, the University of British Columbia has historically been complicit in anti-Indigenous research practices. Deeply colonial tendencies of reducing Indigenous peoples and communities to mere data points has led to a significant body of racist and anti-Indigenous scholarship produced by non-Indigenous settlers. Embedded within these practices is the act of privileging Eurocentric worldviews over Indigenous ones, leading to an unequal power-dynamic between the University and Indigenous communities.

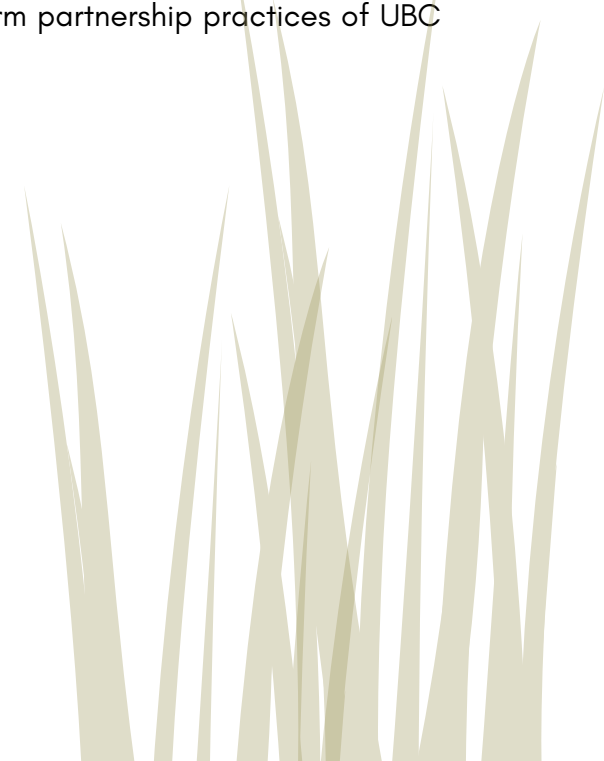
These inequalities are not just historical but have seeped into contemporary practices as well. The persistence of colonial methodologies continues to marginalize Indigenous voices and perspectives, reinforcing systemic biases and perpetuating distrust. To address these issues, it is crucial to prioritize the co-development of research projects with Indigenous communities. This involves ensuring that Indigenous peoples are active partners in all stages of the research process, from defining research questions to data collection and analysis, to dissemination of findings. More than just include Indigenous peoples into research, however, there is a need for research in the University to adhere to community-specific decision making and approval processes, timelines and knowledge-production protocols.

Project History and Background

The UBC Sustainability Hub and the UBC Learning Exchange are working with 4 community organizations EMBERS Eastside Works, Working Gear, Union Gospel Mission, and Recycling Alternative on a collective project titled CLEAR (CLimate Equity Activation and Resilience)-Climate Justice for Vancouver's DTES to make climate change research accessible to residents of Vancouver's (DTES).

As part of this work, the UBC Sustainability Hub has invited the UBC Indigenous Research Support Initiative to collaborate on the development of a database that provides an understanding of how UBC partners with Indigenous community members, collectives, and organizations in Vancouver's DTES around climate change-related research. This project aims to ensure institutional accountability and transparency to urban Indigenous people and supports the implementation of the Indigenous Strategic Plan (ISP), Action 31 to: "Develop a research information repository and communication portal that assists students, faculty, staff, communities, and researchers at large to access resources, information, publications and reports about Indigenous issues and knowledge.

The primary goal of the project is to develop a database comprising of all existing climate research partnerships between the University and DTES Indigenous partners. This will be populated through a desktop review and semi-structured interviews. The secondary goal is to explore the successes of, and barriers to, conducting collaborative climate research with DTES Indigenous partners, and we aim to use this information to inform partnership practices of UBC researchers in the future.



Research Methodology

I used a mixed-methods approach to meet the two goals of this project. First, I conducted a desktop review to identify any existing climate research partnerships between UBC and Indigenous Communities, Collectives, and Organizations (ICCOs) in the DTES. Then I conducted semi-structured interviews and did a qualitative analysis of these recorded interviews.

I. Desktop Review

A desktop review was conducted to document and collate all climate research partnerships between DTES ICCOs and UBC.

Sources Searched

- **Funding Initiatives:** Existing online repositories of funding award recipients, particularly community-university engagement funding initiatives, were explored to identify relevant awardees in the recent past. Grant archives such as CUES grant, SHHRC funding and PRE-initiatives were searched.
- **Portals and Repositories:** Online portals and repositories documenting research were also combed. The Downtown Eastside Research Access Portal, UBC Open Collections, IRSI Research Partnerships Repository.
- **Faculty and Research Group Websites:** I gathered from preliminary searches and interviews that certain schools, departments and Faculty have worked extensively with the DTES. The following faculty and research group websites were searched with special emphasis: School of Community and Regional Planning (SCARP), Faculty of Forestry, Faculty of Medicine, Faculty of Land and Food Systems, Centre for Climate Justice.

Keywords Used

- Primary Keywords: "Downtown Eastside", "DTES", "Chinatown", "Gastown", "Oppenheimer", "Downtown South", "partnerships", "Indigenous", "First Nations", "Métis", "Inuit"
- Secondary Keywords: "climate", "climate change", "environment", "weather", "housing", "precarity", "transportation", "land use", "sovereignty", "food justice"

Search Method

The search method involved using primary keywords in conjunction with secondary keywords. To broaden the search scope, I occasionally adjusted the criteria to display only Indigenous partnerships in the DTES region, excluding the secondary keywords. Each project was then individually examined to determine if it fits into the project's scope, directly or indirectly. Location-enabled search was used where possible.

Database Design

The key focus of the database was to map the scope of climate research partnerships between ICCOs in the Downtown Eastside and UBC. An information-capturing tool was developed as follows:

1. The database captures the following categories related to the partnerships: Project Name, Keyword, ICCOs involved, UBC contributors or groups involved, project type, Project Summary, Project Dates, Funding Source and hyperlink to the project.
2. All projects were categorized by their principal areas of concern within climate research, segregated into categories like Climate, Food Sovereignty, Community Planning and Land Use.
3. Some of these projects are not explicitly done in partnership with ICCOs, but were participatory action research projects with significant collaboration, participation and guidance from ICCOs and Indigenous community members. In this case, the database reflects N/A under the categories marked "Indigenous Community Partner, Organization, Contributors"
4. While creating this database, I identified many climate research projects undertaken by UBC in the DTES that were not in partnership with ICCOs. These projects often focus on technical aspects of climate science, urban planning, and environmental engineering. Conversely, several ICCOs have initiated climate resilience and environmental justice projects independently or in collaboration with non-academic partners, highlighting a potential gap in UBC's engagement with these community-driven efforts.



II. Semi-Structured Interviews

The semi-structure interview was designed with two goals- first, researchers and organizations were asked if they knew of anyone conducting climate research in the DTES. The individuals referred to were then contacted for interviews to capture the scope of partnerships between UBC researchers and external organizations. The second goal of these interviews was to understand the challenges and strengths of partnerships that already exist. Where participants weren't a part of specifically DTES ICCO-UBC climate partnerships, they were encouraged to respond to the best of their knowledge regarding other adjacently related external partnerships they may have held, especially in the DTES community.

Two distinct sets of interviews and consent forms were crafted to gather insights from two target groups: UBC researchers and faculty units, and community organizations working in the DTES. The interviews aimed to uncover the number and nature of existing partnerships, alongside their respective strengths and challenges. Additionally, the community organizations were asked about their specific climate research needs. Through targeted outreach, I conducted 9 interviews -- I spoke to **seven** researchers and staff members from UBC; **two** representatives from organizations involved in the CLEAR project; and **one** DTES ICCO. Participants were also asked to recommend additional contacts who may know of further applicable research partnerships, thereby snowballing our participant pool into a robust sample. However, considering who I spoke with, I acknowledge that a lot of the recommendations in this document reflect the researcher and staff's perspective in a more fulsome manner than Indigenous organizations in the DTES.

Informed Consent Procedure

A consent form will be emailed to participants before the interview for a digital signature. If the interviewee is not able to go through the form in their own time, ten minutes of interview time will be dedicated to go through the form together, and the interview will be truncated.

Verbal confirmation that sound recording equipment is turned on:

Identify the date, location, time, and the participants active in the interview. Confirm on the recording that informed consent has been received.

Guiding Questions:

Introduction:

- Please tell us a bit about your organization and your role in it. - strength/challenges to these partnerships flourishing. Areas of research related to climate that possible partnerships could address. What are some university resources or capacities that could be harnessed to support these partnerships.
- Has your organization been involved in any climate research projects with UBC?
- "preparedness"

IF YES:

- Can you describe the nature of your partnership(s) with the university and the goals/objectives it aims to achieve?
- In your opinion, what are the strengths of this/these partnership(s) that have contributed to its success thus far?
- What are the specific community needs in DTES that the University can address better in their research protocols?
- Have there been any challenges or obstacles encountered during this partnership? If so, how were they addressed, and what lessons were learned from these experiences?
- Are there any areas for improvement or future opportunities that should be explored?

IF NO:

- Are you aware of any other DTES Indigenous organizations that have had climate research partnerships with UBC?

- Would you envision ever having a climate research partnership with UBC? Why, or why not?
- What are some things the University can provide community-based organizations to facilitate a successful research partnership?
- We know that DTES is an over-researched community where research is often conducted and withheld. Are you aware of some research guidelines or protocols that the University should be aware of when establishing or maintaining a research partnership?
- What are some possibly challenges that you're wary of that could emerge between UBC and your organization?

For EVERYONE:

- Are you aware of any Indigenous organizations/DTES organizations that are presently in a climate research partnership with UBC?
- Are there any specific areas of climate research that the University could help launch?
- One of IRSI's main objectives is to connect researchers with community organizations with specific needs. Would you be interested in entering a possible research partnership through IRSI?

Knowledge Sharing:

- How do you envision these learnings to be applied in the future?
- We hope to use these findings to inform processes at UBC and/or create a resource tool for future climate research projects with Indigenous partners in the DTES as well as documenting climate research areas that partners identify as most relevant for their organizations. Would you be open to attending an event where the conclusions from these conversations are presented?

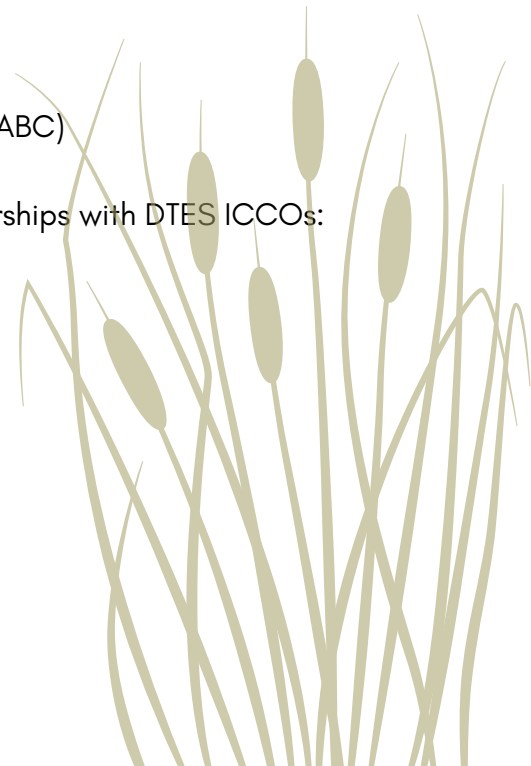
An excerpt from the interview designed for ICCOs.

Key Findings

I. Findings from Database

I acknowledge that due to the diffuse nature of information on academic research, this database may not describe the full scope of climate research partnerships between DTES ICCOs and UBC. Additionally, research partnership databases require ongoing nourishment to maintain accuracy and relevance. However, in its current form, there are several key findings to be drawn from the database:

1. **Six** projects were listed under a wider ambit of climate research between Indigenous organizations and UBC researchers. All of these organizations have wider operational jurisdiction than just the Downtown Eastside, although the projects listed are in the area. These projects include Community-Based Research projects, Feasibility Studies, Dissertations, and Journal Articles. They include student—and faculty-led projects.
2. A preliminary analysis reveals a notable scarcity of climate research partnerships between DTES ICCOs and UBC researchers. Most of the ICCO's listed have a BC-wide or a Nation-wide operational mandate and are not DTES-specific.
3. Projects in the database cover a wide range of climate concerns and climate justice themes; certain projects, like Alexandra Thomas' "Homegrown Climate Justice: Building Climate Resiliency Through Community" activates Indigenous knowledge systems to mitigate heat effects in DTES. Concerns around food justice are manifest in a feasibility study of the DTES Food Sovereignty collaborative, as well as participatory research projects around the Vancouver Native Health Society's The Garden Project. Other demonstrated concerns include creating inclusive community spaces for urban Indigenous populations, assessing the therapeutic landscape of DTES to understand environmental injustices, and decolonizing health promotion.
4. The Indigenous partners, DTES-based and otherwise, include:
 - Musqueam Indian Band
 - Coast Salish First Nations
 - Native Courtworker and Counseling Association of BC (NCCABC)
 - DTES Food Sovereignty Collaborative
5. The following departments were identified to have held partnerships with DTES ICCOs:
 - Faculty of Forestry
 - Faculty of Medicine
 - Department of Geography
 - School of Population and Public Health
 - School of Community and Regional Planning



6. Five out of the six projects listed were student-led projects done under faculty supervision:
- "Homegrown Climate Justice: Building Climate Resiliency Through Community" by Alexandra Thomas
 - "Overcoming policy barriers to Indigenous food sovereignty in Vancouver's Downtown Eastside : A feasibility study for the DTES Food Sovereignty Collaborative" by Shawn Fang, Shadow Feng, and Desiree Gabriel
 - From ceremony up : Indigenous community planning as a resurgent practice on contested lands in British Columbia" by Lyana Marie Patrick
 - "Story gathering with the Urban Aboriginal Community Kitchen Garden Project" by Erika Mundel
 - "A decolonizing approach to health promotion in Canada: the case of the Urban Aboriginal Community Kitchen Garden Project" by Erika Mundel and Gwen E. Chapman



II. Findings from Participant Interviews

Both UBC representatives and community organizations identified key areas of concern to enhance partnership models between DTES ICCOs and the University. The quotations that follow have been lifted verbatim from recorded transcripts with minor grammatical changes:

Secure and adequate funding: Adequate funding is identified as a critical factor in fostering effective partnerships between universities and community organizations. This funding is essential not only to support the research itself but also to facilitate the time required to establish meaningful and reciprocal relationships. Sufficient financial resources enable researchers to engage with the community throughout the research process, ensuring that findings are shared post-research in a manner that benefits all parties involved. Additionally, capacity-building resources such as honoraria for community participants, adequate staffing to support the research efforts, and events to disseminate findings and encourage dialogue were highlighted as necessary components. Such resources ensure that the community is adequately compensated for their contributions and that the partnership can thrive sustainably.

"I think it's important to have the right amount of funding, you can compensate people for their time. And not only that, but even paying for travel. Honoraria, paying for equipment and capital that you may end up creatively figuring out how to give to people."

"I think when the university can find a grant or funds to help support the community partners engagement, that's a huge strength. If the university doesn't just look for money for its own research but finds ways to honor and contribute to the organizational contribution."

Research in good faith: Research in good faith means more than just having ethical reviews, it means arriving from a place of humility, revering lived experience, and sitting with discomfort. Conducting research in good faith requires a commitment to ethical principles and respect for the community's autonomy and dignity. Researchers must approach their work with honesty, transparency, and a genuine desire to contribute positively to the community. This involves being open about the research goals, methods, and potential impacts, and seeking informed consent from all participants. Good faith research also entails being responsive to community feedback and willing to make changes based on that feedback.

"Respect and care. These are some of the values that come to mind. "Generosity" as well. And the understanding that research can be intrusive. Having a sense of how to pose questions — in ways that are respectful. So, it talks about, again, respect and reciprocity related to what we as academics do. How do we give back to those communities that are contributing to our work as researchers? Something that is valuable to them in a way."

Research team and administrative support: Both UBC staff and community organizations emphasized the need for a dedicated support team to assist with research, thereby alleviating the strain on the community and University investigators' time and capacity. Students or staff members would handle administrative tasks, such as coordinating meetings, managing data, and overseeing logistics, which are often time-consuming and detract from the core research activities. For community organizations, this may simply mean hiring student help to support the project. Moreover, dedicated support personnel can help maintain long-term relationships amid leadership changes within community organizations and UBC research projects, ensuring continuity and stability in partnerships.

“Having a strong core team is helpful. And again, the size of that team will vary depending on the scale of the research project. But having that core team is important for the project's longevity.”

“What I've sometimes noticed is that the way the academy works is that people are very skilled at focusing on something and working on it for a long time. And they're used to doing that on their own. And then when they collaborate with a community partner, it might stretch them. I think some of the best researchers are highly collaborative. And then some are just like, not really used to collaboration, they think they're collaborating, but they're not. They're just kind of following their own agenda. And it may be hard for them to even notice, because of their blind spots, the way the academy trains people to be soloists, we're kind of always on the lookout for that.”

Co-development: Co-development should be central to any research partnership between the university and community organizations. This entails collaboration in developing research questions, practices, methods, and the research's actual conduct. It also means adhering to community-specific timelines, protocols, and knowledge production methods, if any. By involving community members from the outset, researchers can ensure that the research addresses issues that are relevant and important to the community. This collaborative approach also allows for the incorporation of local knowledge and perspectives, enriching the research process and outcomes.

Sharing and feedback: Both UBC members and community organizations stressed the importance of a simplified research share-back event, where findings are communicated to the community in an accessible and engaging manner. Sharing findings alone is insufficient; communities also need to see how these findings translate into policy or advocacy work. Researchers should work with community organizations to develop strategies for translating research findings into practical applications that address community needs and priorities. This may include policy recommendations, advocacy initiatives, or community programs. Providing feedback on how the research is being used and its impact can help to build trust and demonstrate the value of the research partnership.

“Working with universities and research projects, they tend to fail habitually in a realm where they should be exceeding. They have all these young people who really have these really good skills to gather, collate, and then and kick information back out, but they tend to be extractive, and they use it internally. And the whole goal is to put your own name on it and put it out into academia. But then you could also, if a spirit of co-development was really taken in these types of research projects, you could gather and collate this information and reproduce it in a digestible manner that is valuable to Indigenous groups and governments. Or just a small presentation, so that you can bring it back to our leadership and be able to say: “this is the work we did in this, this is what we heard.”... And I think that researchers from academia, I often see that heavy lifting work as their work and they don't co develop that work with indigenous organizations, and they don't share the outcomes of that work in a way that's meaningful.”





Murals at Cathedral Square as part of Blanketing the City initiative, done by Debra Sparrow, Chief Janice George, and Angela George.

III. Potential Research Areas

DTES organizations and individuals were specifically asked if there were any community-identified needs that required research attention. Answers included: food sovereignty, food security, emergency management, employment around urban greening, and intersections between climate justice and decolonial work in an urban context. One speaker particularly emphasized the need for tangible outcomes through research – such as cooling stations during extreme heat events. Another speaker mentioned that the needs of DTES community members are specific and cannot be transposed with research done in other neighborhoods.

“The community, I think, needs less research and more understanding of what is being done with research. You can do all kinds of surveys, you can do it through informed consent. And you can be checking in with people like all the time letting them know how things are going and what their stories are being used for...There’s 30 years of research on this community, I think it’s time to start showing them how it’s been implemented and how the researchers are not just researching, but they’re taking their research and using it as advocacy, and making being very loud to the people who make policy to be like, Look, this is, this is what it says you need to be doing.”

Recommendations (next steps):

Establish partnerships: One of the primary findings is the insufficient representation of DTES ICCOs in climate research. This underrepresentation highlights a critical gap in the current landscape of climate research. There is a pressing need for more intentional and collaborative climate research initiatives that directly involve DTES ICCOs. Such partnerships could leverage the unique local knowledge and priorities of Indigenous communities, ensuring that climate solutions are culturally appropriate and community-specific.

Increase time for exploration: As one speaker puts it: “the pace of the university and the pace of the community are out of sync.” While the research criterion – documenting climate research partnerships between UBC and DTES ICCOs and understanding their quality – is urgent and important, it is also specialized enough to warrant a more in-depth approach than what can be achieved within a four-month timeframe. This includes time dedicated to building relationships with DTES ICCOs or exploring existing channels that can support the building of these relationships. Respecting community and organizational timelines and strong foundational relationships with DTES ICCOs, even if the project is exploratory and not strictly research-based in nature. If a more thorough approach is to be conducted, showing up at the community organizations and interacting with community members should also be considered.



Widen scope of research documented: Several interviewees highlighted that the lived realities in the DTES resist simplistic definitions of climate change assessment. Climate change effects and climate justice efforts in this context are deeply intertwined with broader issues such as health, drug use, safety, land use, and urban planning. This complexity underscores the need for a more expansive and nuanced approach in future research to accurately capture the multifaceted nature of climate-related challenges in the DTES. In light of this, a more comprehensive and useful database can be created by collating research partnerships between UBC and DTES ICCOs that fall within and outside the climate research category. Currently, no such databases exist. Such a database would fit more holistically into Action 31 of UBC's Indigenous Strategic Plan to: "Develop a research information repository and communication portal that assists students, faculty, staff, communities, and researchers at large to access resources, information, publications and reports about Indigenous issues and knowledge." Moreover, keywords can be used to tag climate-related projects, thus ensuring that the initial goal of this particular project is also met.

Explore other relationship-building strategies: While point (1) addresses the long-term goal of establishing more research partnerships between the university and Indigenous partners in the DTES community, the existing partnerships can be better understood by exploring other methods of knowledge-sharing. If a second iteration of this project is to be conducted, the process of expanding networks and snowballing between community and university researchers— that is, one of the intended aims of the semi-structured interviews—can be initiated through focus groups or roundtable conversations at the beginning of the project. Conducting these exercises at the outset, in smaller clusters (of multiple researchers belonging to the same unit, group, department, or even organizations with existing ties), as well as in larger groups, can save time by efficiently creating a wider net. On the other hand, when attempting to understand the effectiveness of partnerships, bringing together individuals from diverse research interests, groups, and community organizations can spark new ideas, conversations, and avenues, thereby revealing new points of exploration.



Sources:

Fang, Shawn, et al. *Overcoming Policy Barriers to Indigenous Food Sovereignty in Vancouver's Downtown Eastside*. 27 Apr. 2021.

Linden, Isabelle Aube et al. "Research on a vulnerable neighborhood—the vancouver downtown eastside from 2001 to 2011." *Journal of urban health : bulletin of the New York Academy of Medicine* vol. 90,3 (2013): 559-73.

Métis Nation Council. *Métis Nation Climate Change Strategy 2*. 2024.

Owens, Tessa. "Final Project: Identifying Vulnerable Spaces in Vancouver's Gentrifying Downtown Eastside." Academic Portfolio, 16 Apr. 2017, blogs.ubc.ca/tessaowens/2017/04/16/final-project-identifying-vulnerable-spaces-in-vancouver-s-gentrifying-downtown-eastside/.

