Dam Watch International:
The Role of Community-Grounded Transnational Collaboration in Countering "Sustainable" Dam Development Around the World

By Rebecca Kingdon

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Department of Environment and Geography
University of Manitoba
Winnipeg, Manitoba

Abstract

Around the world, community members and their allies are advocating against the development of dams that degrade ecosystems and inflict serious social, cultural, and ecological damages. Despite extensive research on these impacts, construction has continued under the marketing of dams as “clean”, “green”, and “sustainable” solutions to achieve water and energy security in the context of climate change. This thesis is in part a response to these claims and reflects the experiences and knowledges of impacted community members, activists, and researchers from over 25 watersheds around the world that have begun to collaborate in a transnational advocacy network (TAN) to heal from, challenge, and even halt dam development. Over a two-year period (2019-2021), participatory action research methods were utilized – including semi-structured qualitative interviews, surveys, actions, and meetings – to capture the emergence of this network known as Dam Watch International (DWI). To illustrate the need for DWI, this thesis first explores the experiences of community members living with and fighting the injustices of dam development. It then shares the opportunities and challenges of creating a community-centred network for collaboration. Through this work, this thesis contributes further understandings of the damaging extent of dams, demonstrating that systemic and systematic injustices enable the continuation of this construction in multiple regions of the world. It also highlights that community members and allies are committed to finding justice through culturally relevant means that are centred in Indigenous and local knowledge. The insights shared here emphasize that opportunities exist for collaboration among those that continue to fight for sovereignty and justice.

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Chapter 1: Introduction

1.1 Introduction

"Since we consider the river as our lifeline and an indispensable part of our sacred landscape, we have been at the forefront of the struggle to prevent the destruction and desecration of our sacred river." (Lepcha et al., 2018)

There are over 12 million kilometres of rivers around the world, carrying critical nutrients and sediments, providing fresh water, and enabling biodiverse life (Grill et al., 2019). For this reason, rivers are widely considered the lifeblood of ecosystems (Lepcha et al., 2018). Rivers are interconnected with each other and other water bodies, ultimately tying together all regions of the world. For one, the Anishinaabek view these waters as carrying their own histories, connecting past and present generations together, and with them, the many lessons to be learned (McGregor, 2013). Movements are urging settler justice systems to recognize the rights of rivers, emphasizing that rivers themselves are critical organisms that are central to sustaining life (Barkham, 2021; Westerman, 2019). We are all connected through the rivers, but we have been separated by borders, politics, and dams. For some of us that do not feel the direct effects of dams, we have been granted facades of security, wealth, and privileges in a capitalist world, accepting the distant disruptions to the landscape as a necessary cost. Yet, in the meantime, forced fluctuating water levels erode landscapes, ecosystems, livelihoods, and traditions.

While the effects of dams are discussed in this thesis to make visible the significant damage on landscapes and lives, the larger goal is ultimately about repairing and (re)building connections. It is about understanding the actions and re-actions; the protection and defense; the collaboration and the strength. There are similar narratives of strength and resistance that others have captured in research (e.g. Thomas et al., 2015; Zanotti, 2015), but the stories and experiences told here provide additional perspectives that deserve recognition and compassion in their own right. While dams enslave rivers to harness the energy of the water, this work seeks to revitalize the flow and connection of knowledge, stories, and experiences. Through sharing this work here, I aim to help illustrate and ignite the processes of community-grounded transnational collaboration.

1.1.2 Dam-Affected in the 2020s: Climate Change and COVID-19

While this project is focused on neither climate change nor COVID-19, it would be remiss to not reflect the current state of the world within which this research is developing. Despite Indigenous and environmental groups sharing their concerns for decades, 2020 was

broadly set by scientists and governments as a critical year marking the need for serious action for mitigating the effects of climate change (Bel & Joseph, 2018). Yet, while global climate action and new political plans are emerging, as highlighted in the recent United Nations 26th Conference on Climate Change[1], hydro power is increasingly touted as a viable "green" energy source for "sustainable development", especially as it relates to climate change (Fitz, 2019). Indeed, dam development has experienced a remarkable and related resurgence of interest and support over the last couple of decades in large part because of this narrative (Baird & Green, 2020). Yet, as is further explored below, reality presents something dramatically different. The construction and operation of mega dams creates social and environmental impacts that far outweigh any greenhouse gas reductions – indeed, even this latter claim is widely disputed (Fearnside, 2015a; Rosenberg et al., 2005). Indigenous community members whom already face the impacts of resource development have serious concerns regarding climate change, yet are largely left out of the action plans and political discussions for a transition away from fossil fuels (Joshi et al., 2019; Whyte, 2014).

To add further challenges to an already "heated" year, the COVID-19 pandemic, which coincided with the emergence of our network, has drastically challenged any sense of normalcy the world over. People have been forced to stay at home, resulting in further unequal access to employment, medical care, safety, education, and food (DLR Prerna, 2020). Yet, corporations and governments have taken advantage of this time of uncertainty and change to reduce environmental regulations and approve and expedite the expansion of resource extraction projects (Fiddler, 2020; Samuel et al., 2020). As communities affected by dams face these additional burdens and have often been cut off from outside support due to COVID-19, it has become ever more apparent that a transnational network around such issues could help coordinate efforts to support communities and ensure a continued demand for changes to capitalist and colonial systems, especially in the face of climate change and other global challenges.

Clearly, as with all forms of colonialism, there is something disjointed about this system of water, electricity, and social energy control and distribution. In our current globalized world,

[1] The annual conference of parties (COP) convenes politicians, industry leaders, and activists from around the world to discuss concerns and solutions for addressing climate change. Hydroelectric power has often been lauded and centred in the "solutions" discussions, with COP26 being no exception (Chynybaeva, 2021).

we can connect with and learn from one another in more ways than ever before, yet resistance efforts to resource development often occur in an isolated context. Increasing the capacity of these efforts requires improved coordination and collaboration to further learning, sharing of resources, and the amplification of community voices and action. While such alliances do exist around the world, the pressing issues of climate change and the recent emergence of a global pandemic indicate that there is further need for united efforts among networks.

1.2 Purpose and Objectives

This project uses an inclusive and action-oriented approach to explore and facilitate the emergence of a transnational network for responding to dam development. The research branches from the ongoing work of Waniskātān: An Alliance of Hydro-Impacted Communities, and is conducted in collaboration with many activists, advocates, academics, land defenders, and water protectors. It culminates in both pragmatic action and written contributions to scholarship.

The overall goal of this research is to better understand how a unified transnational network of Indigenous and non-Indigenous dam-affected communities and their allies can affect knowledge mobilization and resource sharing at regional, national, and international levels of organization. Specifically, this research aims to:

I. Examine the existing barriers that enable impacts of mega-dams on nearby communities;
II. Facilitate and document the evolution of a transnational network that revolves around and is ultimately shaped by the concerns and aspirations of these communities;
III. Evaluate the opportunities for fostering learning and resource-sharing among the different players, especially impacted communities; and
IV. Assess any barriers to collaboration and change and how these challenges could be better addressed.

1.3 Setting

1.3.1 A Network of Networks

Networks aimed at protecting communities and ecosystems from the impacts of dam development are present within most major, and many minor, river basins around the world. My work builds on these regional efforts and aims to bring them together under the concept of a ‘network of networks’.

1.3.1.1 Waniskātān: An Alliance of Hydro-Impacted Communities. This project emerges from the existing work of one regional alliance called Waniskātān: An Alliance of

Hydro-Impacted Communities, based in Winnipeg, Manitoba, Canada. This Alliance arose from the building of relationships between researchers, NGOs, and hydro-impacted Indigenous communities in northern Manitoba. After several community gatherings in 2014-2015, Waniskātān (meaning "rise up" or "wake up" in Cree) was formalized under and supported by a seven-year, 2.5-million-dollar Social Science and Humanities Research Council (SSHRC) Partnership Grant at the University of Manitoba. At present, the alliance is composed of 24 Cree (Ininew/Inniniwak), Anishinaabe, and Métis nations, several social justice and environmental non-governmental organizations, many researchers from universities across Canada and the United States, as well as multiple levels of government (Wa Ni Ska Tan, n.d.).

Over the years, Waniskātān has been successful in expanding research around the impacts of hydroelectric dam development across Manitoba and northwestern Ontario (Treaty 5 and Treaty 3 respectively); documenting stories through film, text, and audio; raising awareness through multiple campaigns; and hosting gatherings to promote further multi-way learning and sharing as well as action. The Alliance has raised serious questions about hydro-dam development, increased the visibility of community impacts to allies and decision makers, and become an important advocate for change during this time. New research and activism projects continue to emerge regionally, yet there is also recognition that these efforts are largely occurring in isolation of alliances in other regions, all of which share similar aspirations and needs for resources. Therefore, Waniskātān's most recent 2019 gathering brought together other such alliances, members of impacted communities, and allies from across Canada and around the world in the hopes of sharing resources and working collaboratively for change.

1.3.1.2 The Kitaskīnāw Gathering and Outcomes. The over 200 Indigenous and non-Indigenous community members, researchers, and community activists that attended the *Kitaskīnāw: Our Land* conference in November 2019 came from watersheds across Argentina, Brazil, Canada, Colombia, Germany, Guatemala, India, Iran, Mexico, Nepal, Panama, Spain, Sweden, and the United States. Over the course of three days, stories were told, knowledge was exchanged, and connections were made. As reflected by the breakout sessions and evaluation surveys, participants affirmed the need for an international alliance that would enable further knowledge sharing, access to funding, public awareness, and resistance to mega dams regardless of location.

It became quite apparent that while there is no lack of energy for this work, communities cannot compete independently against corporations that use networks and collaboration in developing projects. Furthermore, while each region has its own unique sets of needs, the resources required to oppose development are generally the same regardless of location. For example, it was widely expressed at the conference that groups need:

I. Access to reports or statistics that they can use to articulate their counter narrative against the ideas that hydropower is clean and green. (Communities have experienced the impacts firsthand, yet Indigenous Knowledge is overlooked while Western science is idealized as the only acceptable case to make);
II. Funds to host gatherings, create campaigns, disperse information, employ individuals, or provide basic necessities through programs; and
III. Connections to help carry the messages, rally people, and get those in power to listen.

In the two years following the Kitaskīnāw gathering, I have helped facilitate the emergence of a transnational network, known as Dam Watch International (DWI) as a critical part of my Master's project. The data chapters included in this thesis provide insights into the efforts and knowledge that emerged from this work.

1.3.1.3 Dam Watch International. DWI includes participants living and working in different watersheds around the world, including those that transcend the borders of Bangladesh, India, Nepal, China, Cambodia, Laos, Thailand, Argentina, Brazil, Colombia, Costa Rica, Guatemala, Mexico, Panama, Germany, Spain, Canada, and the United States. Presently, there are over 70 active participants in DWI, all who contribute to the alliance with their diverse backgrounds of traditional, local, Indigenous, and Western knowledge on the injustices of dams on communities and the environment. While the network operates around the world through the participants and their connections, its current coordinators are based at the University of Manitoba in Treaty 1 territory[2] (Winnipeg, Manitoba, Canada).

[2] Treaty 1 was signed in 1871 between the Crown of Great Britain and Ireland and the Anishinabe and Swampy Cree nations, for peace and friendship (Treaties 1 and 2 between Her Majesty the Queen and the Chippewa and Cree Indians of Manitoba and Country Adjacent with Adhesions, 1871). Today, the area is recognized as a part of the traditional lands of the Anishinaabeg, Ininew, Anishininew, Dene, and Dakota peoples, and the homeland of the Métis nation.

1.3.2 Researcher Background

I cannot help but feel that I should have known about the implications of mega dams before I did. While I had been educated in topics related to development and its colonial implications for Indigenous communities around the world, the destructive nature of dam development in particular was a topic that I was ignorant of throughout my undergraduate degree and time working in climate change education. During my International Development and Sustainability studies at Dalhousie University, the concepts of sustainable development were the largest fixtures of my education. At that time, I saw myself as someone that cared deeply about people and the environment, and I believed sustainable development was a field that would provide meaningful and tangible action to help fight climate change and the capitalist forces exacerbating it. However, the deeper I dove into the world of "green" alternatives, the more uneasy I became with the generic terms of "sustainability" and "development". There were key voices and perspectives that were not being featured in either of these areas, and my best efforts at improving the world were only feeding into the systemic injustices. Finally, when I learned of Waniskātān, I realized I needed a re-education.

At the time, I was working for a local environmental organization creating educational resources and presenting on climate change to children and professionals alike. I spent most days doing minor research that could help bolster the website and presentations and even influence local decision makers or policy. Our team's goal for achieving more "climate resilient" communities was to ensure that food, transportation, housing, and energy needs could be fulfilled locally. While I spent many hours researching the former topics, I was quite frankly remiss of the "energy" concerns, happily and naively accepting the narratives that hydropower was "clean" and that Manitoba was doing well in this regard. However, I distinctly remember joining a meeting with other local environmentalists and being struck in awe and dismay as a colleague steadfastly countered these greenwashing claims, shattering my sense of security and leaving me with the realization that I could not continue educating on climate change without first understanding the reality I had been ignoring.

A few months later, in the Fall of 2019, I officially began my Master's on a topic I knew would challenge my thinking and doing. While I spent the first couple months poking around literature on dam impacts, my real education began at the Kitaskīnāw international gathering in November 2019. Surrounded by over 200 Indigenous and allied community members, activists,

advocates, and scholars, I was in total awe. The atmosphere represented an incredible mix of emotions, the energy was contagious, and the stories were powerful. From that weekend, I realized the magnitude of my ignorance and how much I needed to do moving forward.

As a female, middle class, white ally of settler descent, this work is about listening, learning, unlearning, reflecting, and supporting. Yet, it is through privilege that I can "study" the devastating impacts of dam development on generations of people and ecosystems in close discussion and collaboration with many individuals that are impacted by dams around the world. This is not a "project" to those who face the reality of dam development in their community. The fight against dams and development has involved lifetimes of resistance efforts, land and water protection, and endless strength to defend sacred environments and cultures. I am still new to this work but have been incredibly humbled to be a part of the process of co-creating the transnational network to amplify voices, share resources, and strengthen the fight against dam development.

1.3.3 A Note on Terminology

It is important to me to define some of the words I use throughout this thesis, to better articulate my intentions.

Communities that have been impacted by dams cannot be simply defined, as each is unique in its culture, ways of life, history, and connections to the land and rivers. Many communities that have been made marginalized by dams are Indigenous; yet others are not, but still have important cultural and socioeconomic connections to the rivers. I make specific reference to Indigenous methodologies (e.g. Indigenous environmental justice) on the basis that the fundamental tenets of these ideologies (e.g. sovereignty[3]) can apply to a diverse range of communities that are facing the impacts and systemic injustices associated with dams.

I use the word *impacts* to align with the terminology used within the academic scholarship. This term is an attempt to summarize the insurmountable: the harm that cannot be contained. I aim to describe impacts that have been experienced by rivers, landscapes, and humans in all manners of life; impacts that have been codified, categorized, and classified into

[3] Sovereignty here is understood as communities' ability and right to govern themselves and make their own decisions, particularly in the context of facing dam development. It applies to Indigenous communities as well as those that have been made marginalized in this context.

academic outputs – important to furthering dialogue, but restrictive in depicting the breadth of its inflictions on beings.

Dams refer to any impoundment on rivers that community members have identified as interfering with their livelihoods, traditions, or cultures. For the most part, the dams that were referred to by participants in this work were established for processes associated with hydroelectricity generation, but community members and allies also referred to those associated with irrigation, flood control, logging, or other resource extraction. These dams also range in size, with some individuals referring to mega dams (those taller than 15 metres), such as the world's second largest dam, Itaipú, in Brazil. Other dams are smaller and associated with localized operations. These have all been identified as creating impacts.

Development – defined in the English dictionary as "refinement", "growth", or "progress" – is not viewed here as a friendly term. It is instead recognized as perpetuating colonial narratives that ecosystems and people need to conform to the political and economic benefit of the capitalist or colonial agents (Whyte, 2020). Pairing "development" with "dams" speaks to the colonial implications of dams as tools that perpetuate this harm.

Research is another loaded term for multiple reasons. It implies that something has yet to be discovered, and as such holds those that do it in high regard, granting status to concepts and knowledge that have sometimes long been utilized by someone else in a position of less privilege. In the context of dam development, political and social gain from documenting others' challenges is further unjust (Smith, 1999; Tuck & Yang, 2014). Therefore, I feel it is necessary to acknowledge that, while these threading words and thoughts are mine, the knowledge and experiences belong to others, which in turn give rise to my own ideas presented here. It is through their hopes for change that they have allowed me the space to share these thoughts.

1.4 Research Design

1.4.1 Methodology

1.4.1.1 Participatory Action Research. Participatory Action Research (PAR) was selected as the methodology for this project, because it is an inclusive and action-focused approach to research in which the colonial power structure of "researcher" and "subject" is challenged, while on-the ground activities with high-impact and tangible outcomes are delivered (Reason & Bradbury, 2007). With PAR, my role as the academic became one of a facilitator and enabler. We also operated under the view that "'ordinary' people also produce knowledge that is

useful in struggles for change, and [that] the research process itself could be an important arena for making change" (Dyrness, 2011, p. 203). Participants played active roles as co-researchers and were involved throughout the research, allowing them to guide the project. Through this co-led process, there were ongoing processes of knowing and doing, followed by reflection and more action (Reason and Bradbury, 2007). This study was in part informed by Anderson and McLachlan's (2016) conceptualization of PAR as involving cyclical processes of 1. *Planning* actionable items to address an identified problem; 2. *Acting* on the plan; 3. *Observing* the consequences of the actions; and 4. *Reflecting* on the meaning of the observations to inform the next cycle. This methodology allowed the participants and I to achieve pragmatic community-centric outcomes and contributions to scholarship that are meaningful beyond the academy.

While the impacts of dams were studied, this methodology allowed us to highlight personalized accounts and comments arising from the participants themselves, rather than creating yet another study that is void of community voices. It also placed more emphasis on the resistance efforts than the impacts, further reducing the colonial victimization that is predominant in scholarship (Tuck & Yang, 2014; Zavala, 2013). Furthermore, by focusing on action, the attention is on the sociopolitical reasons for the impacts, thereby reducing the objectification of the communities and relieving them of further colonial gaze (Tuck and Yang, 2014). Finally, by taking a step back from leading, the research provided the space for Indigenous and non-Indigenous community voices to be amplified, a process which at least some Indigenous scholars argue is more powerful than an actual method itself (Zavala, 2013).

1.4.2 Methods

This work has involved the use of four key PAR methods that have enabled members of the network to inform the direction of the work, as well as influence the outcomes of this written contribution. These methods evolved over time, allowing time and space for planning, acting, observing, and most of all, reflecting.

1.4.2.1 Content Analysis. Following the Kitaskīnāw gathering in November 2019, I organized and analyzed content from the brainstorm session that had occurred on the final day with most of the conference participants. Under the topics of *governance and decision making*, *communication and networking*, *actions and goals*, and *statement of unity*, individuals from diverse regions had self-selected groups and discussed what they would like to see occur transnationally. The ideas were then presented and shared with the larger group. From the

handwritten notes and recordings of this session, I created a summary that acted as an initial direction for the Advisory Council that formed in early 2020. I frequently revisited the notes throughout my Master's to understand if the visions had changed and to further reflect on whether DWI was emerging in line with the initial hopes.

1.4.2.2 Qualitative Interviews. To understand the impacts communities face from dam development and the potential role a transnational network could play, semi-structured qualitative interviews were conducted. This research method was selected for its flexibility in allowing the interviewee to add their own experiences that may not otherwise fit into prescriptive questions (Kovach, 2010). Each interview included six open-ended questions (included in Appendix A) and ranged in length from 40-90 minutes, as guided by each participant. The questions aimed to elicit general thoughts on the emerging transnational network, hopes for its direction, concerns to be aware of, and next steps that the participants were hoping for.

There were also two questions related to COVID-19 and the challenges that communities or organizations had experienced during this time, as a means of better understanding the impacts of COVID-19 on communities already affected by dams and whether the network could help mitigate any of these concerns at the time or in the future. These COVID-19 questions were incredibly important, but the sheer depth of these experiences unfortunately could not be included in the scope of this thesis. Critical work in this field is being conducted by other colleagues, so there are opportunities beyond this Master's project to contribute further insights around the pandemic.

A total of 12 interviews were conducted with 16 participants, including community members and allies connected to watersheds within and beyond the borders of Canada, the United States, Laos, Thailand, Cambodia, Panama, Brazil, Guatemala, India, Nepal, and Bangladesh. Individuals were initially recruited through the conference attendees list, followed up with snowball sampling to schedule the remaining interviews. In the end, it was a six-month process of securing and conducting these interviews, as I began to build relationships with members of the Alliance. I was conscious of the uncertainty around the colonial connotation of "research" (Smith, 1999), so was clear about my intentions for the interviews to be an opportunity for everyone to share their hopes for the network, which then helped provide direction. I also offered one-on-one and group conversations alongside these interviews to provide further opportunities to share, without the expectation of it being a part of the research.

Once completed, the audio-recordings were transcribed in their entirety and first inductively coded for any general themes that had emerged from the conversations, and subsequently was deductively coded for specific understandings of the need for a transnational network. Particular attention was given to how this coding was completed, to minimize perpetuating a colonial narrative (Tuck & Yang, 2014). Wherever possible, and with their approval, I used participants' original quotes to amplify these voices.

1.4.2.3 Facilitating and Documenting Meetings. Following the November 2019 gathering, an advisory council was established to help guide the emerging network. As of October 2021, there are 15 Indigenous and non-Indigenous community members, activists, and researchers. As informed by the conference evaluations and ongoing discussions, five committees have formed to engage in knowledge sharing and action among individuals and groups from different regions of the world. These groups include the: Action and Education Subcommittee, Latin America and Caribbean Subcommittee, Policy Subcommittee, Research and Funding Subcommittee, and Greenwashing Ad Hoc Committee. To date, my role has been to participate in most of the meetings to help facilitate and document the proceedings. In line with PAR, the discussions and reflection within these spaces informed the direction of DWI, which in turn guided my own understanding of activism and networks. The notes and recordings gathered from these spaces were frequently reviewed for deeper knowledge and as a guide from which to further seek understandings of dam impacts and resistance efforts. As further explained in Chapter 4, the records from the meetings were analyzed not just for content, but also for greater understanding of how and to what degree people were participating.

1.4.2.4 Surveys. Several different surveys were used throughout this research. In November 2019, I helped design and distribute the Kitaskīnāw conference evaluation surveys, from which I collected and analyzed the data. The insights from the returned evaluations (n=89) were central in determining an initial direction of the transnational network. In December 2020, a check-in survey was sent to the Advisory Council members (n= 15) of DWI to facilitate a discussion on how the network was emerging, and what next steps were required. In January 2021, a follow-up survey was sent to all the interview participants (n=16) to gain further insights into their experiences with dam development. In July 2021, under the guidance and feedback of the Greenwashing Ad Hoc Committee, I created a survey titled "Countering greenwashing in the dam industry: How can we help?". It was distributed via email e-newsletters, social media, and

throughout the network, and elicited 15 responses from community members, researchers, advocates, and activists facing dam development in Brazil, Canada, China, India, Sweden, the United States, and Vietnam. All these surveys were mixed methods in approach and consisted of both close-ended ranked questions and open-ended questions.

1.5 Thesis Timeline and Structure

The evolution of this thesis closely follows the emergence of DWI itself (Table 1). Building relationships was critical throughout the project, as these connections influenced how I understood experiences, received knowledge, and helped facilitate the network. The aforementioned methods (content analysis, qualitative interviews, facilitation and documentation of meetings, and surveys) helped influence periods of planning, acting, observing, and reflecting that evolved DWI, while also providing insights that I later used in the writing of this thesis.

Table 1

Timeline of this Research Project in Relation to the Evolution of Dam Watch International

	Sept.-Dec. 2019	Jan.-Apr. 2020	May-Aug. 2020	Sept.-Dec. 2020	Jan.-Apr. 2021	May-Aug. 2021	Sept.-Dec. 2021
Building Relationships	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Conducting Interviews	----	---X	XXXX	X---	----	----	----
Facilitating & Documenting Meetings	----	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Creating & Distributing Surveys	--X-	----	----	---X	XX--	--XX	----
Writing the Thesis	----	----	----	----	--- X	XXXX	XXX
DWI Timeline:	Waniskātān Hosts Kitaskīnāw	Advisory Council Forms	Sub-Committees Emerge	Sub-Committees Evolve	Reflection Period	New Planning	Actions Unfold

The thesis writing occurred throughout 2021, with its direction continuing to be influenced by my ongoing involvement in the meetings and actions of DWI. Chapter 3 was most heavily influenced by the interviews and follow-up surveys conducted in late 2020 and early 2021 respectively. However, the ongoing conversations furthered my understanding and changed

how I chose to approach the sharing of community experiences with dam impacts, ongoing barriers, and resistance efforts. Chapter 4 was instead influenced most by the ongoing meetings and their outcomes as knowledge sharing and action planning intensified throughout the two years.

Chapter 2: Literature Review

2.1 Introduction

The development of dams is a contentious issue. Dating back to ancient times, dams have been exalted as powerful engineering feats that have evolved and enabled irrigation management, flood protection, and electricity generation (McCully, 2001). However, disrupting the natural flows of rivers has serious consequences; impacts that are well documented by extensive experiences and research around the world, ones that are often downplayed by dam industry players. The literature has also captured the subsequent responses of communities and allies that source opportunities to vocalize and amplify experiences as a means of advocating for themselves and the ecosystems that are affected. As dams continue to be built in the 21st century, ongoing injustices on the landscape and in communities demonstrate the need for further research that can capture the experiences and identify opportunities for collaboration to ensure energy and water sovereignty for all.

2.2 Claims Versus the Reality of Dams

The contemporary development of dams emerged in the early 1900s, with the New Deal in the United States during the 1930s supporting the development of large multipurpose dams, such as the Hoover and Grand Coulee (International Hydropower Association, 2019; McCully, 2001). In the post-war economic and population growth emerging in the 1950s, development exploded and continued to flourish in Western Europe, North America, Soviet Union, and Japan throughout the 1960s and 1970s (International Hydropower Association, 2019). However, capacity began to slow in the 1980s, and the 1990s saw declines in development due to stagnant funding and increased global discussions on the environmental and social concerns associated with these dams (Goldsmith & Hilyard, 1984; McCully, 2001). Despite changes to the environmental policy agendas, development was revitalized in the early 2000s as the industry evolved its messaging (Ahlers et al., 2015).

The renewed push for dam development is associated with the industry positioning itself as a solution for water and energy security in the context of climate change (Baird & Green, 2020; Fitz, 2019). For one, there are claims that dams can help protect communities facing the risk of increased floods (Ahlers et al., 2015). However, in regions, such as the Himalayas, where there are heightened risks of flash floods due to the melting of glaciers, these claims are widely disputed by communities and researchers alike (Ahlers et al., 2015; Santoshi, 2021). This was exemplified in February 2021 when a landslide of ice and rock wiped out parts of two different

dams in the Uttarakhand region, resulting in over 200 people- mainly workers on the one dam's construction site- being killed or going missing (Shugar et al., 2021). Climate change also affects the consistency of precipitation, which further modifies the landscape and water resources for communities who are already impacted by dams (Hoang et al., 2019). This change can make for more flooding and drought, which puts communities further at risk (Chernet et al., 2014) and increases competition between water resources for agricultural irrigation and electricity generation (Zeng et al., 2017).

Hydroelectricity dams are also heavily marketed as being "clean" or "green" alternatives; those that release less greenhouse gas emissions compared to fossil-fuel burning energy production methods. In order for hydroelectric dams, in particular, to play a critical role in keeping global warming below 1.5 degrees Celsius, the International Energy Agency (2021) has indicated that an additional 1,300 GW of installed capacity is required by 2050; an almost doubling of the existing 1,330 GW that have been developed over the last 100 years (International Hydropower Association, 2021a). In 2019, the International Hydropower Association (IHA)- an organization created in 1995 with the mission to "advance sustainable hydropower" (IHA, 2020)- highlighted that global installed hydropower capacity had increased by 65% between 2000 and 2016 (IHA, 2019). This capacity was increased despite considerably fewer large-reservoir dams being built compared to the active development of the 1950s-80s, illustrating the size increase of dams compared to earlier years (Global Dam Watch, n.d.). In 2021 though, the IHA (2021) recognized that average growth of the industry would need to increase by at least 2% from year to year, up from the previous six-year average of 1.6%, to achieve the IEA's outlined target. Further, between 2013 and 2019, except for a jump in 2018 due to large hydro projects going online in China and Brazil, the increase in development has been on a downward trend (IHA, 2019; 2021). Refusing to release a position in the market, and recognizing that solar and wind power development was projected to eclipse hydropower, the industry messaging has come out stronger as emphasizing that "the only acceptable hydropower is sustainable hydropower", and defining "sustainable hydropower" as that which "delivers on-going benefits to communities, livelihoods, and the climate" (IHA, 2021b, p. 3). However, scholars argue against these claims, using existing sustainability standards to demonstrate that dams do not align with these requirements (Ahmadzai, 2021). Further, the building of dams plays into the capitalist messages that resource-dependent mitigation and adaptation strategies

are the only solutions, which shifts the blame away from the corporations and politicians that create water resource conflicts and escalate climate change (Joy & Srinivasan, 2020).

While it is unclear as to how the dam industry will change to be more "sustainable", it continues to push for more development, adding to an already incomprehensible number of dams. In terms of global cumulative figures, there are an estimated 16.7 million impoundments worldwide (2.8 million of which have a reservoir larger than 0.1 ha), which have a combined reservoir storage capacity of at least 8,070 cubic kilometres (Lehner et al., 2011). Of these dams, more than 60,000 are higher than 15 metres, placing them in the "mega dam" category (Grill et al., 2019). As a result, over 47% of the world's large rivers (those with average flows above 1000 m^3/s^{-1}) are affected by dams (Lehner et al., 2011). Further, one estimate found that of 12 million kilometres of rivers assessed worldwide, "Only 37 per cent of rivers longer than 1,000 kilometres remain free-flowing over their entire length and 23 per cent flow uninterrupted to the ocean" (Grill et al., 2019, p. 1). These figures are all estimates, based on what limited data are available, because contemporary databases are only just emerging in efforts to understand the cumulative impacts of these dams (Lehner et al., 2011).

2.3 Dam Impacts

Given the sheer magnitude of this development, it is challenging to quantify the bounds of its impacts. Scholars often categorize the effects of dams as either social or environmental in nature, although the issues are highly interconnected. River basins are some of the most complex, ecologically rich ecosystems on the planet (Grill et al., 2019; Winemiller et al., 2016). Because of this biodiversity, communities around the world have sustained themselves within the bounds of the ecosystems for time immemorial. However, the arrival of dams severely interrupts the natural flows that are critical to the functioning of healthy ecosystems and communities.

Research has demonstrated that dams restrict the flow of critical sediments that maintain landscapes. One study in the Lower Mekong River estimated that if all 133 proposed dams for the river and its tributaries were built, cumulatively 96% of the sediment would be trapped from reaching the Mekong Delta (Kondolf et al., 2014). Without the gravel, sand, and fine sediments, severe erosion would occur downstream, impacting both the agricultural sector and the fisheries that over 60 million people directly rely on (Hortle, 2009; Kondolf et al., 2014).

The human-managed flow rates create artificial fluctuations of water levels that also lead to erosion of shorelines (Hirsch et al., 2014). As a result of the erosion, trees and other debris

damage community fishing nets and other critical infrastructure (Elkaim, 2021; Hearings, Reports and Prints of the Senate Committee on Appropriations, 1965). This large debris and the rapid changes in water levels also create dangerous travel conditions for communities that use the river to access hunting or fishing areas, settlements, or cultural grounds. In regions where rivers freeze in the winter, ice forms in unstable layers associated with the different water levels, resulting in dangerous conditions for travelling (Elkaim, 2021). Communities in Northern Manitoba, Canada have recorded deaths of individuals that have fallen through the once-stable ice while trying to pursue subsistence activities (Elkaim, 2021).

Changes in the biotic composition of the waters also affects drinking water. The increase in organic matter added to rivers from erosion leads to increases in blue-green algae blooms in warmed waters of the reservoirs (Jarvis, 1988; Kageyama et al., 2016), which can lead to rashes, gastrointestinal illnesses, and liver damage, and even death (Otten, 2015). Many rural or remote communities are not equipped with adequate potable water systems, so communities are forced to boil or purchase their water to avoid damage to their health (Gyasi et al., 2018; Lerer & Scudder, 1999).

Dissolved organic matter also increases the content of the neurotoxin methylmercury, which bioaccumulates through the food chain. Communities whose diets rely on fish or upper-level predators are at high risk of serious health impacts from the consumption of traditional foods. While methylmercury is a global concern (Kasper et al., 2014; Liu et al., 2019; Mergler et al., 2007), considerations for the impacts on community health are not taken seriously by many developers (Calder et al., 2016). In the case of the dams along the Mista-Shipu (Churchill River) in Labrador, Canada, researchers echoed community members' concerns by estimating that existing high levels of methylmercury would double to unsafe levels for consumption (Calder et al., 2016). The same study also identified 11 other proposed sites across Canada that would have similarly high levels, distinctly putting Indigenous communities at risk of serious neurological damage (Calder et al., 2016). While the dam companies were aware of these concerns, they continued development under the assumption that the communities could simply change their diets (LeBlanc, 2020).

Being forced to switch from traditional foods means that communities must rely on often nutritiously-low store-bought foods that lead to declines in health (Austen, 2016; Rudolph & McLachlan, 2013). Indeed, a study in the Three Gorges Reservoir Region of China identified

that the arrival of the mega dam resulted in widespread lifestyle changes, including declines in physical activity due to lost land and increases in emotional stress, which could be attributed to the rise in diabetes in the region (Qi et al., 2014). Indigenous communities in Canada that have faced dam development also have high instances of diabetes, which can be attributed to the required changes in diets to less nutritious foods and less use of local territories (Manjoo et al., 2015). The flooding and erosion of the landscape also results in the loss of traditional medicines (Chetham, 2002), which have gained more notability in academia for the treatment of diabetes (Parikh & Parikh, 2014).

Other health concerns are also linked to the development of dams, including increased rates in malaria associated with the stagnant water of the reservoirs (Keiser et al., 2005). One case in sub-Saharan Africa demonstrated that at least 1.1 million infections to date are associated with the approximately 1,000 dams in the region (Kibret et al., 2016). This number is expected to rise as climate change leads to increases in temperatures that are favourable to mosquitoes that transmit the disease (Kibret et al., 2016). While some dams result in increased access to health care (Keiser et al., 2005), communities that are displaced often do not have the infrastructure to manage such widespread instances of disease either, which results in otherwise avoidable deaths (Nayak, 2015).

In studying cases of dam development, scholars have also demonstrated that poor health is more likely to occur in situations in which environmental conditions and economies are unstable (Tallman et al., 2020). Fishing, trapping, hunting, or agriculture rely on the health of river ecosystems. Yet, dams physically impede the movement of species that are critical to communities that rely on subsistence livelihoods (Beck et al., 2012). Erosion and flooding results in loss of habitats, spawning grounds, and food for species (Arias et al., 2014), which often degrade fisheries to the point of crashing (Buckland & O'Gorman, 2017). Community members that were raised in traditional ways of life are propelled into workforces that do not acknowledge their prior work experiences as being relevant (Kuokkanen, 2011). In remote communities, alternative livelihoods or jobs are extremely limited. Community members that were once self-reliant are forced to rely on social assistance or other subsidies (Buckland & O'Gorman, 2017; Kulchyski & Neckoway, 2006). For Indigenous communities in particular, these ways of life are not only about economics, but have important cultural rituals associated with being on the land and waters (McGuire–Kishebakabaykwe, 2010; D. Scott & Smith, 2017).

Scott and Smith (2017) refer to these disruptions as being “displaced without moving” (p. 30). While some scholars argue that those that are displaced physically and resettled somewhere else face the most intensive socioeconomic impacts (Zhao et al., 2020), Scott and Smith (2017) demonstrate that losing access to traditional ways of life in one's own territory is also unquantifiable. Indeed, they argue that communities that are displaced on their own lands in the name of climate change mitigation, can also be considered climate refugees (Scott & Smith, 2016).

2.4 Finding Justice

In understanding the injustices associated with dam development, scholars often turn to environmental justice (EJ) literature. EJ scholars argue that economic growth impacts the environment and is felt disproportionately by social groups that have been marginalized, including Indigenous communities whose traditional ways of life are inherently sustainable (Martinez-Alier, 2002; Pulido, 2016).

EJ struggles are typically framed in two broad categories of justice (G Siciliano et al., 2019). *Procedural justice* includes decision-making processes that are fair and include communities from the onset (Cooke et al., 2017; David Schlosberg & Collins, 2014). *Distributive justice* emphasizes equal protection from impacts (Jarratt-Snider & Nielsen, 2020; Kueln, 2000), as well as appropriate access to basic needs, such as clean water, health care, housing, and income (Cooke et al., 2017; David Schlosberg & Collins, 2014). These two categories are typically employed in the context of dam development, because limits in procedural justice mean that communities are excluded from decision-making, and a lack of distributive justice leads to communities bearing the brunt of the impacts (Sneddon & Fox, 2008).

Scholars argue that engaging community members in decision making processes is critical in later reducing harms associated with dam development (Hay et al., 2019; Vanclay, 2017). “Consultation”- a term that has been appropriated and toxified by industry and governments (Youdelis, 2016)- is often used in association with procedural justice. However, a lack of unified global standards for consultation often results in limited justice occurring for communities. For one, communities have had few opportunities to participate in decision-making processes related to dam development (Wickstrom, 2003). Instead, they are often presented with the plans or environmental impact assessments (EIAs) that have already been conducted, which

are presented in technical terms or languages that are inaccessible (Thomas Sikor et al., 2019). These projects often target remote communities that have restricted access to alternative sources of information, so have limited understanding of what will ultimately ensue with development. In some cases, communities are not as concerned with procedural justice as distributive justice, as few are aware of what rights or conventions are in place for them to demand adequate consultation (Sikor et al., 2018). For example, one case in Nepal demonstrated that communities equated justice with benefiting from the project and avoiding harm, without necessarily understanding the consequences that the development projects would have on their self-determination (Sikor et al., 2019).

In more contemporary approaches, some communities are included as "partners" in the development, which enables at least some members of the community to be more engaged in the decision-making processes and is often agreed to as an attempt to be included in projects that would otherwise proceed without any inclusion. However, scholars warn that such approaches have limited benefits, because not all community members are included (Kulchyski, 2004) or feel their participation matters (Buckland & O'Gorman, 2017), especially as processes are restricted to community leaders (Cooke et al., 2017). Further, these large-scale projects only begin to financially benefit communities once the debts- often in the billions- are cleared (Buckland & O'Gorman, 2017; Kulchyski, 2004; Samson, 2017). In encouraging communities to participate in these projects, industry is often utilizing the colonial narrative that communities can 'modernize' or 'progress' (Samson, 2017). Instead of communities identifying solutions that are grounded in their own sovereignty, they are coerced into agreements that still inflict damages. As such, partnerships continue to demonstrate procedural injustices and perpetuate the inequity that gives rise to the projects in the first place.

In working towards distributive justice, negotiations are often framed around compensation agreements. EIAs and social impact assessments (SIAs) have been important means through which communities can advocate to receive compensation as well as provide knowledge on mitigation strategies (Hanna et al., 2016; Mayer et al., 2021). Given that impacts are challenging to quantify, community members have shared that these strategies continue to be inadequate in including the externalities (Moran et al., 2018; Shoemaker et al., 2001; Zhao et al., 2020).

The process of distributing compensation has been documented as having limited ability to benefit communities. For one, scholars argue that projects emphasizing compensation shifts the focus away from more holistic understandings of the needs of communities (Lerer & Scudder, 1999). Simply requiring compensation as a necessary step for approval does not guarantee that the process is systematic, and instead, cases have demonstrated the arbitrary distribution of compensation as a means of expediting (Joshi et al., 2019) or legitimizing (Rousseau, 2020) the development. In cases where compensation is in the form of funds, corruption can impede the equal disbursement among all community members (Nayak, 2015). The impacts of dams also cannot be easily quantified in terms of funds, so the short-term financial compensation serves only as a distraction from long term problems that arise (Anderson & Elkaim, 2018). Indeed, one analysis of a proposed agreement between Sagkeeng First Nation in Manitoba, Canada, and the crown corporation, Manitoba Hydro, identified that the resulting "compensation" would amount to less revenue than the community receives playing bingo (Lucchesi, 2019). At the same time, lands and lifestyles are viewed as interchangeable, which scholars argue undermines the connections communities have to the land, leading to a commodification of lands as well as community members themselves (Cooke et al., 2017). Further, the lands are often insufficient in terms of quality for livelihood purposes or they are smaller or farther away from the community (Sayatham & Suhardiman, 2015). Any cultural values associated with particular lands are largely neglected from compensation agreements too (Hanna et al., 2016). Communities are provided with the basic means to survive (in some cases), as defined by the dam proponents, but without the means or spaces to practice livelihoods or cultural activities, communities continue to face serious social impacts.

Not all communities receive consultation or compensation (Lerer & Scudder, 1999). The scope of impacted areas are defined by corporations and governments, which typically take into consideration only the immediate areas, including zones that will be flooded (Procter, 2020). However, the impacts of dams on the ecosystem and communities go beyond the limited parameters identified (Procter, 2020). Downstream communities are often excluded from the perceived scope of the project yet face serious impacts for their livelihoods (Green & Baird, 2020; Shoemaker et al., 2001). These impacts transcend state borders that are not considered in processes, are farther away, and often are less obvious, yet despite being understudied, are still substantial (Baird et al., 2021; Beck et al., 2012). While there is a need to include communities in

these processes, EJ scholars argue that compensation focuses on procedures, which obscures or avoids recognizing the rights and injustices communities experience (Zanotti, 2015).

As many environmental injustices occur on lands occupied by Indigenous communities, scholars have expanded EJ to better reflect the values and relationships that such groups and cultures have with the land (Cooke et al., 2017). Some scholars argue that understandings of distributive justice need to be expanded to better acknowledge these relationships as a critical underpinning of the functioning of Indigenous communities, including lands that are central to identity (Jarratt-Snider & Nielsen, 2020; Schlosberg & Carruthers, 2010). Indeed, Anishinaabe scholar Deborah McGregor (2009) adds that EJ literature views the environment as an entity that is separate from people. Counter to this, Indigenous communities around the world understand their existence as being highly interwoven with other non-human beings (Athayde, 2014; LaDuke, 1999), therefore, there exists an ingrained responsibility for protecting all beings (Kulchyski, 2018; McGregor, 2009b). In response, scholars have also begun to emphasize the use of recognitional justice (Zanotti, 2015) which engages communities based on inherent rights associated with their own (Indigenous and non-Indigenous) histories and identities (Sikor et al., 2013). Indeed, concepts of justice exemplified in EJ have existed for time immemorial through expansive understandings of these responsibilities of justice for all (McGregor, 2009).

From these critical conjunctions has emerged a specific Indigenous environmental justice (IEJ) framework that centers its tenets on justice for *both* humans and non-humans (McGregor et al., 2020). For one, building on the water justice literature, IEJ understands water as a living being, with its own responsibilities to sustain life (McGregor et al., 2020; McGregor, 2013). This understanding counters the narratives that the landscape is a commodity for extraction or control, and recognizes that the impacts on the land are also unjust to non-humans that rely on the functioning of healthy ecosystems (Cooke et al., 2017; Schlosberg, 2013). In this regard, IEJ efforts articulate their demands on the basis of protecting relationships to spaces, rather than on the need for compensation or other material concerns (Joshi et al., 2019). It also exemplifies the cultural connections that individuals have to the land, which Jarratt-Snider and Nielsen (2020) emphasize establishes a distinct difference between IEJ And EJ:

> *"The common statement among EJ scholars and activists is that EJ issues are found where we live, work, go to school, and play. For Indigenous peoples, IEJ issues occur where we live, work, go to school, and play, and where we pray."* (p. 10)

IEJ also addresses the concerns expressed that EJ often includes Indigenous communities with other social groups that have been impacted, which does not adequately acknowledge that many of these communities have their own governance systems and understandings of justice (Jarratt-Snider & Nielsen, 2020). EJ is also critiqued as not addressing the additional burden of colonialism that these groups have faced (Grossman, 2017). Instead, IEJ goes beyond the geographical location of the problem to examine overarching systemic injustices, including neglect and coercion by the state and corporations (Jarratt-Snider & Nielsen, 2020). In grounding his analysis of EJ issues in colonialism, Potawatomi philosopher Kyle Whyte (2017) defines this systemic oppression as:

> "*Complex social processes in which at least one society seeks to move permanently onto the terrestrial, aquatic, and aerial places lived in by one or more other societies who already derive economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and ecosystems of those places."* (p. 8)

Under this definition, dam development can be understood as benefiting from and perpetuating colonialism. From the onset of colonization, Indigenous communities world over have been dismissed and coerced into systems and schemes deemed necessary for the continuation of settlers' economic and political gain (Urt, 2016). Despite each community having its own systems of governance that are centred on values associated with respect and justice in living with the land, settler governments acknowledge only a select number of communities as being Indigenous (McGuire–Kishebakabaykwe, 2010). Alternative governance systems have been forced onto communities, as a means of assimilating and controlling their use of the land, including traditional hunting, fishing, trapping, and agricultural livelihoods (McGuire–Kishebakabaykwe, 2010; Nayak, 2015). This control dismisses the sovereign rights of individuals to access and protect the land and water (McGregor, 2009).

These systems of oppression benefit dam development (Urt, 2016). Because community members have historically been dismissed or ignored, dam developers' knowledge and roles are granted greater credibility in decision-making processes. One scholar illustrated that Innu and Inuit community members joining an inquiry into dam development in their territories had to demonstrate their indigeneity according to terms defined by the settler state (Procter, 2020). Despite facing ongoing colonial attempts of dispossession of land, community members were

required to indicate the scope of their territory as a means of proving that they had a right to be concerned for the territories that the dams were impacting (Kuokkanen, 2011; Procter, 2020). Processes of setting land and water claims further commodifies natural areas, as it requires setting arbitrary boundaries and measures of the land and water, which goes against Indigenous ways of life and further assimilates communities into settler standards (Curley, 2019).

The damming of rivers is not just a repeat of the colonial past, but an ongoing process that impacts the people that rely on the ecosystem (Isaacman & Morton, 2012). Scholars argue that dams perpetuate colonial issues by erasing the geography that is associated with identity and culture (Alfred & Corntassel, 2005). Nishinaabeg scholar Leanne Betasamosake Simpson illustrates the relationship between people and land in the context of colonial pursuits: *"Extraction and assimilation go together. Colonialism and capitalism are based on extracting and assimilating. My land is seen as a resource. My relatives in the plant and animal worlds are seen as resources. My culture and knowledge is a resource…"* (Collard et al., 2015, p. 326; Klein, 2013). Isaacman and Morton (2012) share similar sentiments that the damming of rivers means they no longer operate as they would, and instead are subject to the colonial beholders. Whyte (2017) shares that often developers view these projects as beneficial as long as some form of procedural justice occurs and communities are provided with something; yet, he argues that this assumption dismisses the fact that ecosystems *"continue to participate in relationships with Indigenous peoples that honor Indigenous histories and stewardship responsibilities—that ultimately support Indigenous cultural integrity, economic vitality, and political self-determination*." (p. 161). In disrupting ecosystems, dams and other capitalist ventures will continue to inflict trauma and reverse sustainable practices unless replaced by alternative solutions (Isaacman & Morton, 2012).

2.5 Resistance to Development

Various community approaches for creating alternative narratives and solutions have been captured in the literature. Indigenous scholars emphasize that the efforts communities take should be understood as *"indigenous people(s)' innate capacities", with a specific focus on "success rather than overcoming challenges."* (McGuire–Kishebakabaykwe, 2010, p.121). Emphasis is placed on *"the strength and power of the collective, cultural knowledge of indigenous communities"* that has endured throughout colonialism (Thomas et al., 2015, p. 116). This knowledge is intrinsically connected to the land, and through this knowledge, individuals

establish a sense of self and their role in the community (Marker, 2004; McGuire–Kishebakabaykwe, 2010). Women are respected as having critical knowledge, particularly pertaining to water (McGregor, 2013). However, in the context of ongoing colonialism, this knowledge is given lower status than Western, scientific views (Chiblow, 2019). Particularly in the context of climate change, settler states continue to choose "solutions" that perpetuate extraction from the land, while ignoring the ancient knowledge that Indigenous communities have for living sustainably (McGregor et al., 2020). Scholars argue that colonialism threatens the perpetuation of traditional knowledge that ensures protection of the water and land (Chiblow, 2019). The more knowledge is threatened, the more underutilized it is (Thomas et al., 2016). If instead, this knowledge is reinvigorated, it can further the wellbeing of communities and ecosystems (Thomas et al., 2016).

Kahnawà:ke Mohawk activist scholar Gerald Taiaiake Alfred and Cherokee scholar Jeff Corntassel (2005) argue that knowledge-based resistance emerges at the local level, through the following mantras: *"land is life"*- any efforts need to be connected to ancestral teachings and values; *"language is power"*- overcoming colonialism requires the use of communities' languages that are steeped in culture; *"freedom is the other side of fear"*– colonial oppressive forces need to be opposed directly; *"decolonize your diet"*- traditional food, clothing, and medicine should be sourced where possible; and "change happens one warrior at a time"- each individual contributes something to the collective (Alfred and Corntassel, 2005, p. 613). While the scholars place specific emphasis on the ability for individuals to engage in decolonizing practices, they also argue that unity is critical in opposing the colonial forces that attempt to instead segregate communities from each other (Alfred and Corntassel, 2005).

Case studies from around the world demonstrate the unique strategies that communities utilize in efforts that exemplify the aforementioned mantras, in the context of dam development. Rusansky (2020) highlights the efforts of women in Baixo Iguaçu, Brazil who use embroidery to articulate their knowledge and establish a collective political place for themselves to counter the hegemonic narratives used by industry to commodify women and the rivers they rely on. Huber and Joshi (2015) demonstrate that Lepchas of the Eastern Himalayas mobilize together to create a space to make knowledge visible and to present solutions that are centred in communities' values and goals, counter to the climate change rhetoric being used by industry. Zanotti (2015) illustrates the Kayapo's use of ceremonies as a form of identity politics to participate in

resistance of dams on their own terms in Brazil. Throughout each of these cases, and many others that have not been highlighted in the literature, communities are redefining participation, based on their own values and concepts of justice.

The cases illustrated above also provide insight into the power of collaboration. Regional alliances are often composed of Indigenous and non-Indigenous community members impacted by dams, as well as allies that include researchers, environmental and social justice organizations, and other advocates. Collaborating in this way allows communities to support one another and to resist dam development (Athayde & Schmink, 2014; Greyling et al., 2014). Studies have identified that regional resistance networks that collaborate with each other increase in scope and effectiveness, thereby learning from common experiences and sharing educational resources, funding opportunities, and efforts at public outreach (Han, 2013; Scholz, 2005). However, the multinational companies behind these projects are well resourced, influence governmental decision-making, and often collaborate with each other to weaken any resistance efforts – all at the global scale (Fearnside, 2017; Matthews, 2012). As such, efforts also look to transnational opportunities for collaboration on a global scale.

The anti-dam movement, which largely emerged in the 1970s and 80s in response to the rapid development of mega dams around the world, is one such effort that has utilized international collaboration to successfully challenge dam development (Cooper & Khagram, 2005). Prior to the 1980s, very few of the dam projects enabled participation or compensation for the impacted communities (Khagram, 2004). This movement brought together regional groups and communities to generate awareness about the impacts of dams, act in solidarity against projects, and participate in upper-level discussions (McCully, 2001). The counter-narratives that emerged from these efforts helped initiate broader questioning of the implications of dam development, which ultimately led to a decline in dam building in the 1990s (Cooper & Khagram, 2005; International Energy Agency, 2019).

As a result of these larger questions, major “sustainable development” players of the time, including the World Bank and the International Union for the Conservation of Nature and Natural Resources (IUCN), ultimately initiated the World Commission on Dams (WCD), a governance forum of 12 global stakeholders that congregated between 1998-2000 to discuss better approaches to dam development (World Commission on Dams, 2000). The resulting report was met with initial expectations for change, but its voluntary implementation left limited

accountability and enforcement within and outside of the industry, and dams continued to emerge in the 21st century with limited association with the sustainability standards set out by the WCD (Ahmadzai, 2021; Fujikura & Nakayama, 2009; Schulz & Adams, 2019).

Many scholars have highlighted the successes of the 20th century international anti-dam movement, with some beginning to identify a pattern for success. For one, Gray (1996) identified that dams could be postponed if three conditions were met: 1. There was strong local resistance with international backing; 2. Governments were willing to listen; and 3. In cases where the World Bank was involved, a sector of it was opposed to funding the project. However, as anti-dam movement efforts have continued into the 21st century (Delina, 2020; Shah et al., 2021; Talamayan, 2020; Thorkildsen, 2018), some scholars have concluded that certain efforts are not working in the same way they did in the late 20th century (Bratman, 2014).

While the first two points of Gray (1996) may remain true in the 21st century, international institutions, such as the World Bank, are not necessarily the main players in development (Gerlak et al., 2020). Indeed, in South America, private investment and bilateral agreements between regional and distant countries (e.g. China) have established well-resourced alliances that further complicate resistance efforts (Gerlak et al., 2020). These companies have created more funding opportunities for "developing" nations that previously were reliant on the international institutions for development projects (Bratman, 2014). With voluntary and varying global standards, countries are adapting their own regulations, including loose regulations that incentivize foreign investment (Finley-Brook & Thomas, 2011; Wickstrom, 2003).

China, in particular, has capitalized on these opportunities through economic and political internationalization strategies (Siciliano et al., 2019). Presently, it is the largest financier and developer of dams around the world, with its main targets being South and Southeast Asia, Latin America, and Africa (Jensen-Cormier, 2017; Siciliano et al., 2019). In Southeast Asia alone, China is responsible for 41% of the dams that were built, planned, or under construction in the period of 2006-2017 (Jensen-Cormier, 2017; Siciliano et al., 2019). However, while China is a key player in this development, other Global South banks, located in emerging economies, such as Brazil, Russia, India, and South Africa, as well as those in the Global North, also have an ongoing role in dam development (Moreira et al., 2019). Transnational collaboration is therefore necessary with allies in the investment countries to help support communities impacted by these projects.

In a globalized world, non-governmental organizations (NGOs) have been increasingly capable of entering international political spaces to advocate for grassroots efforts (Brown et al., 2001). However, NGOs are often restricted to their own agendas, such as concerns for climate change, and do not include space for community voices and visions, thereby further perpetuating a colonial cycle (Baird, 2016; Joshi et al., 2019). Further, NGOs involved in the anti-dam movement have declined over the last decade in some regions of the world. For example, in India, there were 30 NGOs working against Himalayan dams in the early 2000s, yet all but one has stopped actively contesting these projects (Joshi et al., 2019). The few that are funded by governments or external funding sources have strict mandates to not engage in politicized issues, so focus on research pertaining to water, forestry, or climate change mitigation strategies that align with the funder missions (Joshi et al., 2019). Such cases of selective involvement has led to lack of trust of some NGOs by local people (Hazarika, 2020). Therefore, there exists a need for more structured political spaces that can challenge policy, while also actively welcoming community members and grassroots knowledge.

Transnational Advocacy Networks (TANs) emerged from literature on social movements and organizational theories to conceptualize spaces that are dedicated to bringing change through disseminating information and changing policy (M. Keck & Sikkink, 1998b). While transnational efforts have existed for centuries, scholars Margaret Keck and Kathryn Sikkink (1998) conceptualized that TANs vary in size and structure, and are: i) a political space for informal and formal discussions amongst players; ii) composed of diverse actors- including civil society groups, NGOs, and individuals associated with unions, religious groups, etc.- that share common values; and iii) use information in creative ways to challenge existing policies and create new norms (Keck and Sikkink, 1998).

TANs often emerge from social movements, including anti-dam movements, as a tool for mobilizing knowledge. While TANs build on understandings of social movements (Kiel, 2011; Tarrow, 2005), scholars emphasize distinctions between the two. In the context of mobilization, TANs enable public awareness campaigns (Yeophantong, 2020), yet also provide alternatives to public collective actions; thereby providing a space for those that cannot visibly protest in their given political context (Tarrow, 2011). Instead, spaces are designated for discussion and the framing of issues (Keck & Sikkink, 1998b), therefore movements often utilize TANs as a space to help mobilize ideas (King, 2004).

While TANs engage in multiple forms of politics, the sharing of ideas is often through information politics: "the ability to move politically usable information quickly and credibly to where it will have the most impact;" (Keck & Sikkink, 1999, p. 95). Some scholars view networks as non-hierarchical, with the the ability of information to flow in multiple directions among participants (Finnemore & Sikkink, 2001; Stone, 2002), as well as from the network to outside efforts (Kadirbeyoğlu et al., 2005). These channels share news, scientific data, and undisclosed company information that can then be used by different nodes of the network to help influence policy changes (Kadirbeyoğlu, 2005). In focusing on policy, TANs aim to transform the systems in which the issues are perpetuated (Keck and Sikkink, 1998).

In cases where policy cannot change from within a national political context, due to oppression, TANs often mobilize the "boomerang effect". This form of leverage politics is engaged in cases when local or regional efforts bypass the oppressive state and utilize international allies that can then influence the government through NGOs or their own states (Keck & Sikkink, 1998a). In essence, those facing oppression throw out a "boomerang" to their allies, who in turn gather support from their own governments or NGOs to return the boomerang with greater force targeted at the oppressive governments. Indeed, the boomerang pattern is exemplified in dam situations, as governments often have large financial or political investments in projects (Khalid, 2020; Leong, 2007).

Scholars emphasize that moving to the transnational level improves the outcomes in disseminating information and starting the conversations, although many dams have still been built. In the case of the Ilisu Dam in Turkey, the TAN was successful in getting British funders to reconsider their contributions to the project, but the limited national political space did not allow for policy change (Kadirbeyoğlu et al., 2005). Bratman (2014) emphasizes that in the case of the Belo Monte dam, changing political dynamics, divides in local positions on the development, and increased economic autonomy of the Brazilian state left limited capacity for transnational network actors to engage or influence the development of the dam. Indeed, Leong (2007) uses a comparative study of India, China, and the Philippines to demonstrate that differing priorities among the local, national, and international members can weaken campaigns.

Scholars have also examined the diversity of participation as a means of understanding whether information is effectively disseminated throughout TANs. Multiple scholars have demonstrated that inherent power dynamics exist. For example, English is often used as the

lingua franca, which enables greater participation for English speakers over non-English speakers (Kim, 2002; King, 2004). Participation is also often restricted to those that have the means or resources to do so (Stone, 2002), which usually tends to favour activists or academics, rather than community members (Batliwala, 2002). In the case of the Zapatista movement, King (2004) examined the composition of the network to understand whether TANs could be useful or whether they inadvertently acted as neo-imperial tools for channeling more Western knowledge and norms onto local contexts. King (2004) identified that most organizations focused on one issue; and many operated in English and were from Western countries. While this illustrated that some neo-imperial norm diffusion was present, information was still able to be disseminated from the movement itself to reach greater audiences, so it was argued that both cooptation and cooperation had occurred (King, 2004).

Counter to these internal issues, Plaut (2012) built on the TAN literature to demonstrate the case of international collaboration among Indigenous communities and organizations. The Saami and Inuit of the Arctic are divided by colonial borders, but have faced similar experiences of injustice (Plaut, 2012). They utilized their similarities as an opportunity for collaboration on advocacy related to land use. Unlike networks in which competition occurs within, this collaboration focused on cooperation (Plaut, 2012). Plaut (2012) identified five specific opportunities for learning from the partnership: 1. they developed goals that complemented their unique cultures, but met their collective needs; 2. advocacy was viewed as occurring in day-to-day relationships as well as in formal arenas; 3. rather than aiming to change their political contexts, they applied community-led goals within their existing systems; 4. interpersonal opportunities for knowledge and cultural exchange were prioritized; 5. traditional knowledge was integrated with other knowledge and systems (Plaut, 2012). Indeed, Plaut (2012) demonstrates that TANs can be cooperative and include Indigenous knowledge as central tenets as a means of advocating for policy that is centred in Indigenous and community knowledge and goals. These findings are particularly relevant in the context of climate change, as scholars argue that this knowledge is needed to challenge norms that are perpetuating colonialism and injustice through dam building (McGregor et al., 2020).

2.6 Conclusion

As dam building continues, there exists a need for ongoing opportunities for impacted communities to come together to share their experiences, challenge rhetoric and provide counter

narratives based on Indigenous and community knowledge, and work together. Oliver-Smith (2014) argues that there are particular opportunities for Indigenous communities to collaborate given their shared experiences: *"[T]he threat and impacts of dam construction have provided a unifying and mobilizing motive for Indigenous people to defend their identity and resist the incursions of the state and international capital against their lands and their cultures."* (p. 119). There are therefore opportunities to further investigate collaborative spaces, such as TANs, that are centred on experiences and the knowledge held by Indigenous and non-Indigenous communities that are affected by dams around the world.

Chapter 3:

"Sustainable" Dams: Community Experiences with Impacts, Colonialism, and Resistance in the Context of 21st Century Dam Development

3.0 Abstract

The damming of rivers creates widespread and adverse effects on ecosystems and communities around the world. These impacts are well documented in the literature, and even acknowledged by industry, yet dams persist and construction continues. Indeed, in the context of climate change, dams are touted as opportunities for energy and water security, despite conflicting realities. In response, affected communities, whose lives and cultures are interwoven with rivers, have long been defending the interests of humans and non-humans through whatever means possible. However, existing systems of oppression add further barriers to being able to participate in decision making associated with dam development. This chapter uses an Indigenous environmental justice lens to contribute further insights into the historic and ongoing injustices that dam "development" inflicts. It demonstrates that impacts and oppression are prevalent in multiple regions of the world where dams exist. Further, it contributes greater understandings of the opportunities community members and allies can utilize in response, and their hopes for greater transnational collaboration.

3.1 Introduction

Large dams have been built around the world as a solution for irrigation, flood protection, and electricity generation; however, for as long as these dams have been built, communities and ecosystems have faced extensive and adverse impacts. These impacts have been well documented, demonstrating the reality of flooding and changes in water flow that severely alter the landscape, decimate important local fisheries (Castello & Macedo, 2016; Morand et al., 2012; Winemiller et al., 2016), compromise the safety of water for drinking and transportation (Calder et al., 2016; Rosenberg et al., 2005), and displace entire communities (Finley-Brook & Thomas, 2010; Sayatham & Suhardiman, 2015; Thompson, 2015). Affected communities are left without adequate resources and are disconnected from traditional lands and livelihoods, which in turn gives rise to poverty (Kulchyski & Neckoway, 2006), human rights abuses (Finley-Brook & Thomas, 2011; Nayak, 2015), health declines (Rudolph & McLachlan, 2013), and even cultural genocide (Kingston, 2015). These impacts are often defined in very constrained spatial and temporal scales, inaccurately indicating that the impacts will only affect certain communities (Baird et al., 2021) over a given time frame (Rosenberg et al., 2005).

While these impacts were well-known in the 20th century and ultimately led to a decline in the industry by the 1990s, dams are re-emerging under the labels of “sustainable”, “clean”, and “green”. In the context of growing concerns for climate change, the dam industry is marketing dams as being critical in reducing the greenhouse gas emissions associated with electricity generation and helping regions adapt to climate-induced floods or droughts (Ahlers et al., 2015; Baird & Green, 2020; International Hydropower Association, 2021c). In promoting these messages, the industry boasts that any new “sustainable development” will be better and more inclusive for communities (International Hydropower Association, 2021c). In the meantime, the impacts of existing dams are dismissed and downplayed as unfortunate, yet necessary costs for “clean” energy, leaving communities in what environmental justice (EJ) scholars refer to as “sacrifice zones” (Scott & Smith, 2016).

In response to dam development, EJ scholars and movements have argued for increased distributional, procedural, and recognitional justice. *Distributional justice* emphasizes equal protection from impacts (Jarratt-Snider & Nielsen, 2020; Kueln, 2000) as well as appropriate access to basic needs, such as clean water, health care, housing, and income (Cooke et al., 2017; Schlosberg, 2013). *Procedural justice* argues for decision making processes that are fair and

include communities from the onset (Cooke et al., 2017; Schlosberg, 2013), which in practice often ranges from informational sessions (Thomas Sikor et al., 2019) to partnerships (Kulchyski, 2004) and minor decision-making (Mayer et al., 2021). To achieve procedural justice, some scholars argue for increased access for participating in social and environmental impact assessments (Siciliano et al., 2018), however, other scholars argue that these assessments often fail to recognize the cultural dimensions of these impacts (Hanna et al., 2016), and distract from underlying issues associated with recognition (Zanotti, 2015). Indeed, despite extensive discussion on this topic, communities affected by dams continue to be excluded from processes or provided with compensation (Cooke et al., 2017; Hay et al., 2019; Zhao et al., 2020). As such, other scholars prefer to emphasize the use of *recognitional justice* (Zanotti, 2015) which engages communities based on inherent rights associated with their own histories and identities, thereby enabling processes that are reflective of communities' needs and wants (Sikor et al., 2013).

While diverse counter-efforts play out through EJ, there continues to be a question of why these dams persist. Indigenous environmental justice (IEJ) scholars explain the need to recognize the colonial roots of these injustices that enable continued extraction (Jarratt-Snider & Nielsen, 2020). Dams build on the displacement of Indigenous peoples that first occurred with the arrival of settlers, as well as the systems of oppression that have continued to control communities and lands (Urt, 2016; Isaacman and Morton, 2012). Counter to the commodification of peoples and ecosystems that capitalism and colonialism gain from, IEJ calls for justice for all beings (McGregor et al., 2020). In line with various Indigenous perspectives, it is built on the understanding that humans and non-humans (such as water) have rights and a role to play in sustaining life (McGregor, 2013; McGregor et al., 2020).

IEJ also recognizes that communities have their own knowledge for living sustainably during ecological change, counter to the solutions to climate change that are grounded in capitalism (McGregor et al., 2020). Mobilizing the knowledge of communities is central to establishing community-centred approaches to justice for all. In the face of oppressive dam development, communities have engaged in efforts that enable their own voices and values. For example, women's art collectives have emerged as a space countering the hegemonic narratives used by industry to commodify women and the rivers they rely on (Rusansky, 2020). Lepchas of the Eastern Himalayas have established a movement organization that is centred on Indigenous knowledge and that presents solutions that reflect communities' values and goals, counter to

capitalist approaches to climate change (Joshi and Huber, 2016). These community-driven forms of resistance are centred in the ability of communities to overcome colonialism through the (re)emergence of Indigenous knowledge to *"invigorate the re-conscientisation and liberation of indigenous peoples in reclaiming and advancing the physical, mental, emotional, and spiritual health and well-being of their Nations"* (Thomas et al., 2015, p. 116). However, the community voices are often lost in the narratives, impeding the ability to truly understand what their needs and wants are in efforts to counter development (McGregor et al., 2020).

While many studies have examined the impacts and efforts against dam development, few have simultaneously highlighted community voices from multiple regions around the world. In this chapter, I aim to amplify the perspectives of community members and their allies to provide insights into the (un)"sustainability" of dam development and in the face of ongoing capitalist schemes, to better understand what emerges across regions and nations and how these insights can help further community responses. More specifically, I aim to highlight: 1. the impacts and how they are experienced by communities in multiple regions around the world; 2. what systems of oppression are present that enable dam development; and 3. what existing resistance efforts are possible and what is needed to enable greater change.

3.2 Methods

Aiming to understand and reiterate the devastating experiences communities have faced requires careful consideration. Good intentions aside, research on injustices often furthers the victimization narrative of communities (Tuck & Yang, 2014). As such, decolonizing methodologies are increasingly used to recognize and name colonial injustices, and to explore proactive responses that are centred on Indigenous knowledge (Smith, 1999). Indigenous environmental justice (IEJ) was selected here as a frame for this work, as it emphasizes opportunities that communities are making for themselves, while also contextualizing such opportunities within the neocolonialism of development (Jarratt-Snider & Nielsen, 2020; McGregor et al., 2020).

Conscious of the colonial connotation of "research" (Smith, 1999), semi-structured qualitative interviews were used, creating a space for participants to co-lead conversations through non-prescriptive means (Kovach, 2010). The questions were open-ended, allowing interviewees to speak to topics with which they were comfortable and wanted to have shared more broadly. Particularly in the context of working with members of communities that have

been marginalized, the semi-structured nature was important in ensuring participants could share their experiences (or not) on their own terms.

A total of 12 interviews were conducted with 16 individuals from various river basins around the world (see Figure 1 for the locations of these rivers and Table 2 for participants' background information). Of these 16 participants, nine attended an international conference, called Kitaskīnāw ("Our Land" in Cree), which was held in Winnipeg, Canada in November of 2019. At this gathering, the over 200 Indigenous and non-Indigenous community members, activists, advocates, and researchers discussed the social and environmental impacts and community experiences of hydro-dam development and the nature of an international alliance that might be established to address these concerns. Following this conference, all attendees were invited to participate in interviews. In addition to the nine that initially agreed to participate, snowball sampling was used to identify the remaining seven participants for the interviews.

Figure 1

Research Participants and the Associated Rivers

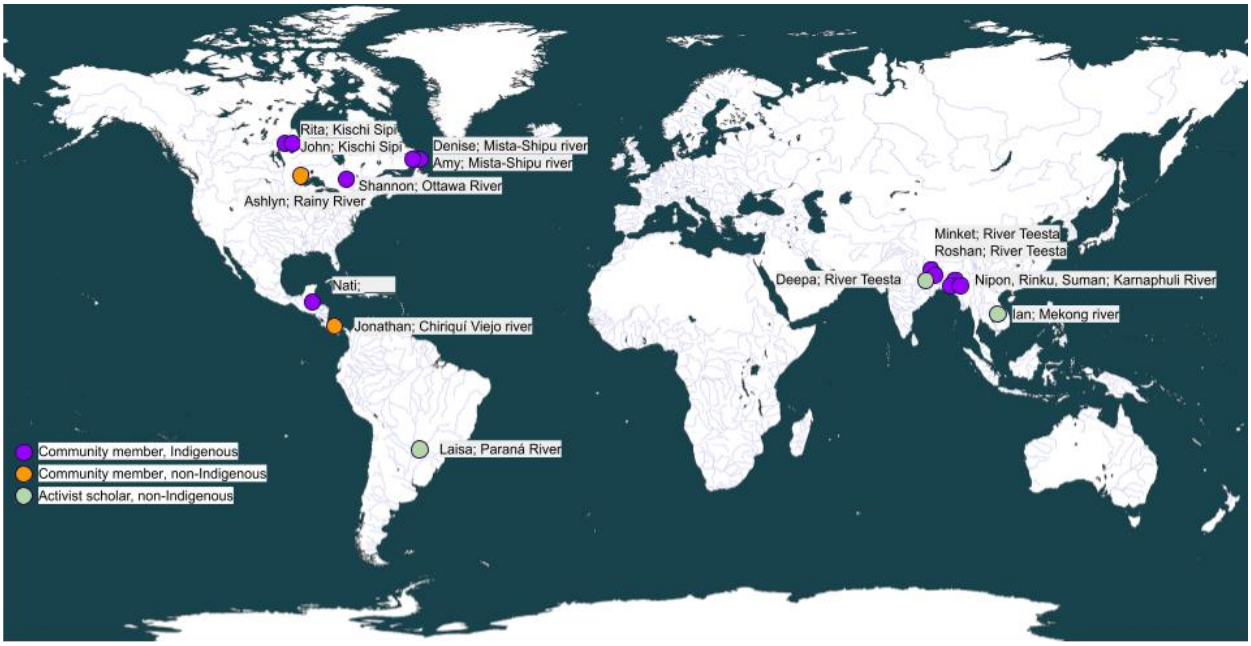


Table 2

Background Information on Research Participants

Community member	Settler states	River / basin	Nearby dam(s) that were mentioned (year competed)	Completed Survey	Attended Kitaskīnāw conference
Nipon Tripura	Chittagong Hill Tracts, Bangladesh	Karnaphuli River	Kaptai Hydroelectric Power Project (1962)	Yes	No
Rinku Marma	Chittagong Hill Tracts, Bangladesh	Karnaphuli River	Kaptai Hydroelectric Power Project (1962)	No	No
Suman Chakma	Chittagong Hill Tracts, Bangladesh	Karnaphuli River	Kaptai Hydroelectric Power Project (1962)	Yes	No
Amy Norman	Labrador, Canada	Mista-Shipu (Churchill River)	Churchill Falls (1970); Lower Churchill Project (2016); Gull Island (upcoming)	Yes	No
Denise Cole	Labrador, Canada	Mista-Shipu (Churchill River)	Churchill Falls (1970); Lower Churchill Project (2016); Gull Island (upcoming)	No	Yes
John Gonzalez	Manitoba, Canada	Kischi Sipi (Nelson River)	Jenpeg (1979)	Yes	No
Rita Monias	Manitoba, Canada	Kischi Sipi (Nelson River)	Jenpeg (1979)	Partially	Yes
Waba Mako	Quebec, Canada	Ottawa River	Barriere Lodge Dam (1928); Zibi (1908);	Yes	Yes
Minket Lepcha	West Bengal, India	Teesta River	Names unidentified, but multiple (mainly since 2000)	Yes	No
Roshan Rai	West Bengal, India	Teesta River	Names unidentified, but multiple (mainly since 2000)	No	No
Jonathan González Quiel	Chiriquí, Panama	Chiriquí Viejo River	Bajo de Mina (2011); Pando and Monte Lirio Hydroelectric dams (2012); El Alto Hydroelectric Power Plant (2014)	Yes	Yes
Ally	**Region of work**	**River**	**Specific dams mentioned**	**Completed Survey**	**Attended Kitaskīnāw conference**
Ashlyn Haglund	North America	Rainy River	Rainy River Dam, Canada	No	Yes
Laisa Massarenti Hosoya	Latin America	Parana River	Itaipú Hydroelectric Dam, Brazil	Yes	Yes
Nati Garcia	Latin America	NA	NA	No	Yes
Deepa Joshi	South Asia	Teesta River	NA	Yes	Yes
Ian Baird	Southeast Asia	Mekong River	NA	Yes	Yes

Note. Community members are organized alphabetically by settler state. Allies are organized alphabetically by region of work.

The original intention of the interviews was to gain greater understanding of specific hopes and needs individuals might have for an international alliance (see Appendix A for list of interview questions). Following the interviews, inductive coding was initially utilized to allow for the stories to speak for themselves. It then became apparent that a larger theme of ongoing colonialism and injustices was also central in how communities articulate their experiences. Deductive coding was then used to better understand how the barriers of colonialism have been perpetuated in dam development and have impacted communities' ability to respond. Particular attention was given to how this coding was completed, to minimize perpetuating a colonial narrative (Tuck & Yang, 2014). Wherever possible, and with their explicit approval, I used participant quotes to amplify their own voices in their own words. I also revisited the interview transcripts throughout the iterative process, to be open to other meanings that I may have initially eliminated through the coding process, as a means of reducing how I, as the coder, changed the narratives (Tuck & Yang, 2014).

As the qualitative interviews did not explicitly ask about the impacts and barriers of dam development, a follow-up survey was sent to the same 16 interviewees to provide a standard set of questions. Informed by the conversations and existing literature, the surveys (Appendix B) asked participants to indicate to what degree dam impacts and additional barriers were affecting communities (on a scale of 0= "no impact" to 5= "impacted all of the community"). Participants were also asked to rate (on a scale of 0= "cannot respond" to 5= "response method used all the time") how these impacts and barriers had affected their ability to use various responses, such as participating in public demonstrations, online discussions, and knowledge sharing activities. This quantitative approach was used in part to enable comparison among regions and participants. Eleven of the 16 participants returned a copy of the survey. The findings from these surveys were organized into radar diagrams to analyze any similarities or differences among participants on the basis of gender, region, and community member versus ally.

3.3 The Dam(n)ing Experience Around the World

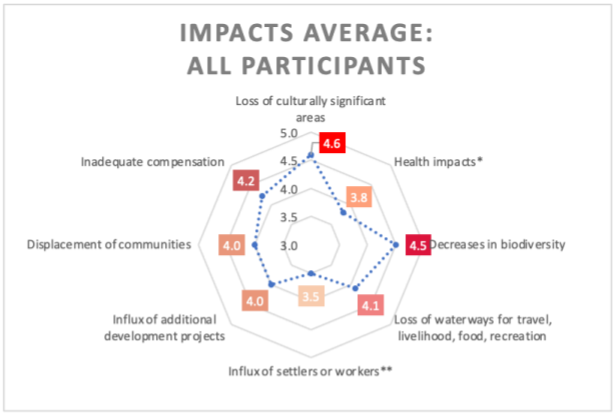
In making sense of the in-depth experiences that were shared, I have organized the results into three overarching themes: impacts, underlying barriers, and responses.

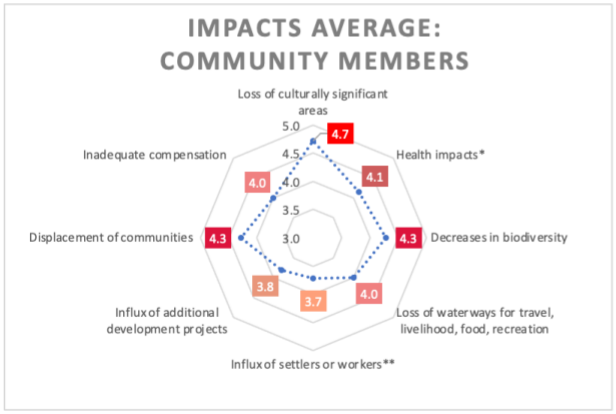
3.3.1 Impacts

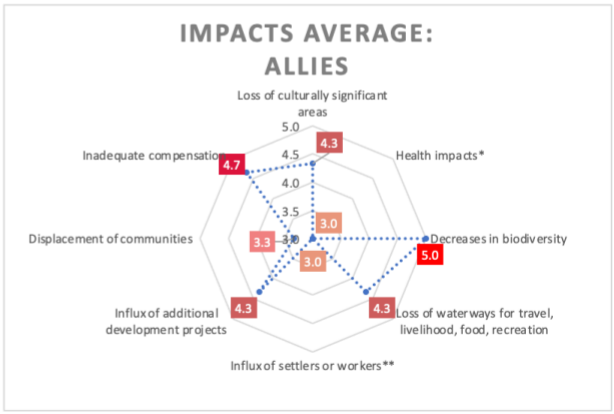
The experiences shared by community members and allies illustrate a poor record of dams enabling sustainability. The reality of communities living within the ecosystem is very different from the concepts of "sustainability" that the industry espouses. In the September 2021 release of the International Hydropower Association (IHA)'s Hydropower Sustainability Standards, sustainability was vaguely discussed in terms of ensuring "responsible" responses to ecosystem impacts and the "improvement" of lives in communities (International Hydropower Association, 2021b). The widely experienced and extensive nature of the impacts (Figure 2 and Figure 3) demonstrated that dam development creates a very different reality on the ground, and therefore is far from establishing activities that ensure sustainability. Below, I emphasize three critical insights that emerged countering these claims.

Figure 2

Average of Individuals' Assessments of Dam-Associated Impacts







*Health impacts include: decreases in wellbeing, increases in illnesses, loss of traditional medicines, loss of drinking water
**Influx of settlers or workers includes: increases in physical and sexual violence, substance abuse, racism

Figure 3

Individual Assessments of Dam-Associated Impacts

Note. Allies answered the surveys from their perspectives as witnesses of the impacts on communities. They do not claim to have experienced these impacts, but provided their insights based on what they have observed over many years of working with communities.

3.3.1.1 The Long-Term Cultural Effects of Displacement. The community members' surveys responses highlighted displacement as being one of the most widely experienced impacts associated with dams (Figure 2). I start here with displacement, as it continues to persist with the

construction of large dams that are built in the 21st century (Heiskel, 2016; McDonald-Wilmsen & Webber, 2010). Indeed, as was illustrated in many of the interviews, communities that are displaced are disconnected from their cultural spaces and practices, which is felt across generations, with no finite ending that can be addressed by developers.

Waba Mako was born after the two nearest dams were built in the Ottawa River basin (Eastern Canada), but she associates them as affecting the cultural impacts her community faces. She explained that Anishinabe identity is deeply rooted to the river and land:

> "*Well, it seems like the Ottawa River is pretty big and long, it connects to the St. Lawrence. And then you have all these watersheds that connect all the way up going north. I find that really identifies who I am because our people live throughout all the watershed and we have our migration stories. And to me, like to our people, that's just who we are.*"

She recognizes the impacts that are felt from the more than 50 other dams that are located throughout the watershed (Ottawa Riverkeeper, 2021). The dams have restricted her community's access to hunting grounds, cabins, and lands used for ceremonies and subsistence activities, making it challenging to practice traditional ways of life that are still very much important to community members. Waba Mako noted that losing these opportunities takes a serious toll on the wellbeing of communities, especially as it relates to gender roles:

> "*The healing and the wellness of men needs to be more, because our men are not very present right now at camp, you know. They're not helping our Elders. It's all because of the alcoholism… sometimes they feel like they haven't accomplished or achieved enough and they want more time to do that... There's just like lots of healing and wellness that has to be set up in a way to provide that for everybody."*

While dams are just one component of systemic injustices, breaking the ties to the land means that individuals lose their agency, sense of power, and their social roles that anchors them in the community (Marker, 2004; McGuire–Kishebakabaykwe, 2010).

Nipon Tripura, Rinku Marma, and Suman Chakma in the Chittagong Hill Tracts (CHT) of Bangladesh have also grown up in the state of displacement following the building of the Kaptai Dam in 1962, which displaced 100,000 Jummas[4] and flooded 54,000 acres of arable land

[4] The collective term for the 13 Indigenous peoples of the CHT (Nayak, 2015).

(Nayak, 2015). In being forced further into the remote regions of the hills, the Jummas lost access to basic necessities and land to engage in the *jhum*[5] agricultural practices that have long been a central part of their livelihood and culture (Chakma & Ando, 2008; Nayak, 2015). Suman expressed the shared sense of loss this displacement has caused: "*It is kind of a curse, as we are landless people. We are discriminated against by the government. Not only hydroelectricity but also other projects are affecting us politically, economically, socially, and culturally*." Indeed, the Jummas have been further displaced by an influx of Bengali settlers that were resettled to the area by the government, as well as the military that frequently engage in land grabbing. As the land available for *jhum* becomes less available, the practice itself becomes less sustainable for the landscape and communities, with reduced fallow periods leading to decreasing soil health and yields (Chakma and Ando, 2008). Suman shared that many individuals are now also required to work in industrial industries, such as the garment factories, which has created further disruptions to their traditional practices and wellbeing. The systemic injustices are deep rooted, but the Jummas attribute the displacement of the Kaptai dam as instigating the disconnection from the sustainable livelihoods and sovereignty.

Rita Monias of Pimicikamak Cree Nation (Central Canada) shared similar sentiments regarding the displacement her community has associated with dams along the Kischi Sipi (Nelson River). While previous dams on the Nelson River have affected traditional territories, in 1979, the community was directly impacted by the development of the Jenpeg Dam that flooded parts of the settled area. While most of the community was not physically relocated, the associated impacts on the landscape and community exemplify what scholars call being 'displaced without moving", in which the landscape is altered so severely that communities can no longer practice their cultural or subsistence activities (Scott and Smith, 2016, p. 30). Standing Bear John Gonzalez, another member of Pimicikamak, explained the impact this has had for the community:

> "*You know, this is about the survival of our people. Our rivers are dying. Our people are dying. Moose, sturgeon, wildlife cannot keep up with the fluctuation in its waters. The debris that goes into the waters causes boating accidents. It's a terrible thing. The water*

[5] Traditionally, the main livelihood for the Jummas is a form of shifting cultivation called *jhum*, which integrates the forest with diverse crops of vegetables and grains to self-sufficiently meet subsistence needs (Chakma and Ando, 2008).

is undrinkable. Our communities are in despair because they once had their means of livelihood by way of the rivers… We were known as the river people."

Indeed, he explained that these impacts were multi-generational in nature and undermined access to traditional food:

"*Our children can't swim anymore. They go swimming, they come out with rashes and boils and things like that. The food supply (that was) completely in the form of self-sustaining has been removed, much like the buffalo with the Plains Indians. It is affecting the hunting and fishing and trapping. Even the most seasoned hunters and fishers and trappers get caught in the fluctuation of the waters, the debris that flows through the waters*."

As John illustrated, losing access to the lands and waters for hunting, fishing, and trapping means losing connections with the landscape. The fluctuations, flooding, and erosion are dangerous to community members and animals alike, leading to drastic declines of biodiversity, particularly culturally significant species like sturgeon and moose. Where community members once were able to meet their needs through the land, there is now little choice but to rely on welfare and outside sources of food, further emphasizing the reversal of sustainable practices that the dams have caused.

3.3.1.2 Ecosystem Impacts Are Not Adequately Addressed. The disruptions to the ecosystems in relation to the communities have neither been adequately mitigated nor managed. For communities within the Mista-Shipu (Churchill River) basin, methylmercury poisoning has been one of the most serious concerns surrounding the development of the Churchill Falls megadam and the Lower Churchill hydro project (including Muskrat Falls Generating Station) in 1974 and 2016, respectively. Prior to the development of the more recent dam, Inuit communities living downstream from the existing Churchill Falls dam already had higher than average methylmercury levels in their bodies, as the cultural diet relies on fish and seals (Calder et al., 2016; Durkalec et al., 2016). Following the impoundment of Muskrat Falls, researchers estimated that levels of methylmercury would double, bioaccumulating to concentrations that were deemed unsafe for consumption (Calder et al., 2016). Communities would either suffer serious health impacts through mercury poisoning or be forced to abandon their traditional foods (Calder et al., 2016). Denise Cole, a community member from the Mista-Shipu basin, shared her thoughts on these concerns: "*The frustrating part for me is how people view economics over*

environment and over Indigenous sovereignty and over health, like really over health." Indeed, the 'solution' that Nalcor- the Crown corporation developing the dam- presented was putting up signs advising communities not to consume fish (Calder et al., 2016). This blatant dismissal of community concerns demonstrated the lack of understanding of the connection that peoples have to the landscape. This short-sightedness then meant that impacts were not adequately accounted for in relation to their effects on communities.

This dismissal was also shared by Dr. Ian Baird who has been monitoring dam impacts in the Mekong River basin (Southeast Asia) for over 20 years. He explained that due to the narrow scope of impact areas defined by project developers, downstream effects are often overlooked by the industry and in the literature: "*You can't ignore the impacts of reservoirs. But I think the more important and more underestimated impacts are downstream impacts in particular, and those aren't compensated for; they're often not even recognized and have serious social and ecological impacts."* Indeed, Ian has co-authored several articles highlighting the extensive impacts incurred, including from the perspectives of community members (Baird et al., 2021; Green & Baird, 2020; Shoemaker et al., 2001).

Minket Lepcha of the Teesta River (India) also highlighted that environmental concerns are not considered by state governments in the context of dam development in the Himalayas: "*Darjeeling and Sikkim are very politically oriented. They are always blinded by the political game that goes on, but the environmental problems that we are facing have not been addressed properly."* She included that there have been many discussions from the communities, activists, and researchers about the inadequate environmental impact assessments (EIA).

Roshan Rai, who is also from the Himalayas, and Deepa Joshi- an activist researcher that has worked in the region- also spoke about the limited EIAs associated with the dam development that has been occurring largely since the early 2000s. When they first began engaging in work related to dams, Roshan commented that they noticed that "*the impact assessments were not being done well, it was not transparent. There were methodology issues, there were representational issues*." He also added that in the context of the COVID-19 pandemic that was unfolding at the time of the interview, projects were being pushed through with very limited oversight for the ecological impacts: "*environmental standards really are being brushed aside, to allow for development projects to run through*."

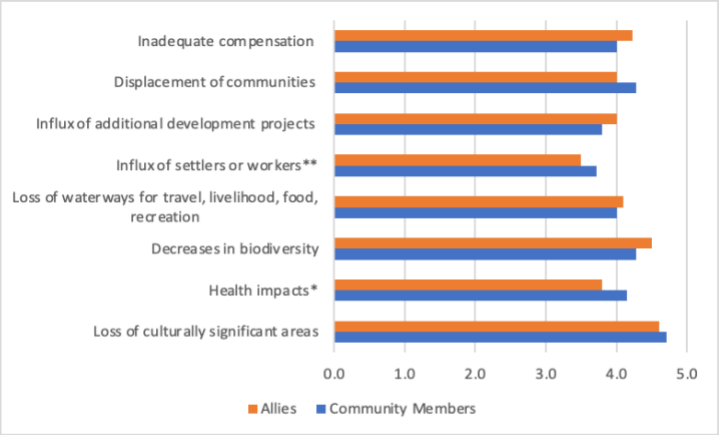
These oversights are particularly worrisome given the increasing instability of the geological conditions of the Himalayas in the context of a shifting climate. Communities and researchers have expressed concerns for melting glaciers that cause landslides and flash floods (Ahlers et al., 2015; Santoshi, 2021; Sati et al., 2020). Indeed, several months after the interviews with Minket and Roshan and Deepa, a landslide in Uttarakhand- another Himalayan state- washed out two dams, resulting in over 200 people going missing or being killed, many of whom were constructing one of the dams (Santoshi, 2021; Shugar et al., 2021).

Similarly, Jonathan González Quiel from the Chiriquí Viejo River (Panama), added to his survey that communities are "*more at risk of natural disasters*". Four months later, Hurricane Eta brought heavy rains to the Chiriquí region, rapidly filling the reservoirs of the eight dams along the main stretch of the river. To avoid damage to the dams, the floodgates of all eight were opened without any warning to the downstream communities, who in turn suffered widespread flooding and damage. Nati Garcia, a Maya-Mam activist from Guatemala who joined Jonathan in the interview, demonstrated the impacts in a news brief she wrote about the hurricane: "*Similar situations are reported in Honduras and Guatemala with hydroelectric plants that opened their floodgates to save civil works where they put thousands of inhabitants downstream at risk*." (Garcia, 2020). Despite these concerns, Jonathan indicated that governments in Panama and across Latin America are continuing to claim that dams can bring opportunities for economic development and for "clean" energy.

3.3.1.3 Perceptions of Impacts Differ from Experiences. Given the subjective nature of the surveys, I used averages to provide a general sense of the experiences and perceptions of impacts (Figure 2). Overall, the averages were similar between community members and allies, yet some observable differences emerged that may give rise to further inquiry. Community members recognized wider experiences of losing culturally-significant areas, declines in wellbeing, displacement (physical and cultural), and effects of an influx of additional settlers or workers, while allies indicated a higher prevalence of issues associated with compensation, additional development projects, use of waterways, and biodiversity (Figure 4).

Figure 4

Comparison of Average "Impacts" Responses of Community Members and Allies



*Health impacts include: decreases in wellbeing, increases in illnesses, loss of traditional medicines, loss of drinking water

**Influx of settlers or workers includes: increases in physical and sexual violence, substance abuse, racism

The latter impacts that were more widely observed by allies may be more apparent to those from outside a community. For example, to allies, changes to the physical landscape and other development projects may be more visible and recognizable than declines in wellbeing or lost cultural areas. These differences also emphasize that the effects of dam development can only be fully understood through lived experiences, thereby further indicating the need for community members' narratives to be included in understandings of impacts. Indeed, in the interviews, community members placed greater emphasis than allies on the changes in relation to culture and more holistic views, rather than understanding "health" simply as illness and "displacement" as being physically moved. Finally, as a whole, these averages provided further insights into impacts that are commonly experienced and often overlooked by industry, thereby prompting further acknowledgement of issues that still need to be identified and addressed prior to the development of any additional dams.

3.3.2 Underlying Barriers

The individual responses to the surveys (Figure 5) highlighted that community members recognize that a widespread presence of underlying barriers have created additional burdens on their ability to respond to and heal from dams. While there were differences in the degree to which community members identified these issues as being prevalent (e.g. Figure 5, Jonathan, John), the average responses (Figure 6, Community Members) illustrated a prevalence of oppressive issues. The responses of the allies also varied among them (Figure 5) and compared

to the community members (Figure 6, Allies), yet illustrated the presence of issues in additional regions. These insights complemented those that were shared in the interviews: that dam development should be understood in the context of systems of oppression. The barriers have affected communities both in terms of being able to resist dam development as well as being able to heal from the damages caused by it. While some of these barriers existed before the arrival of dams, developers have benefited from and exploited them as a means of proceeding with their own objectives. In retelling their experiences, community members demonstrated that the arguments against dam development are not simply about protecting livelihoods or the regional economy, but about ensuring cultural survival and community sovereignty.

Figure 5

Individuals' Experiences with Systemic Injustices in the Context of Dam Development

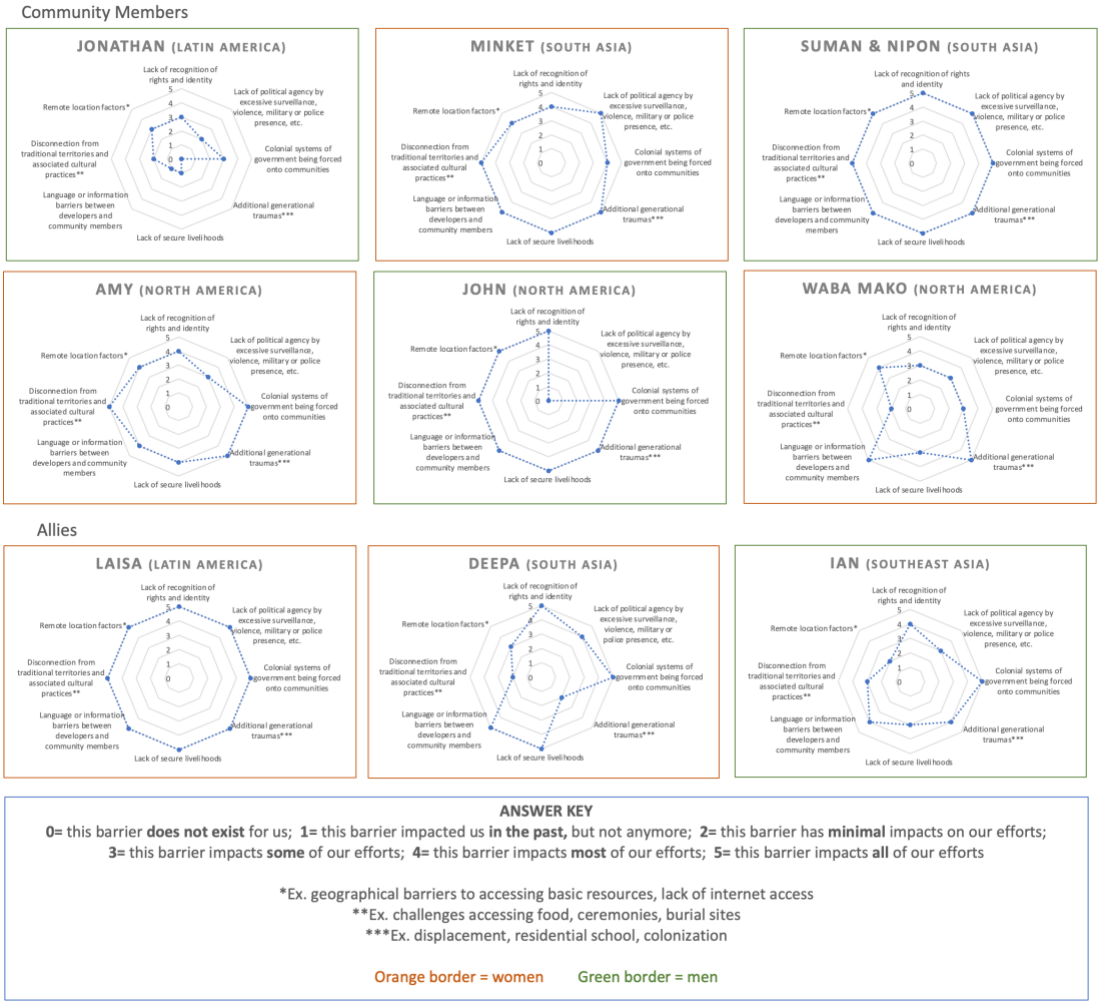
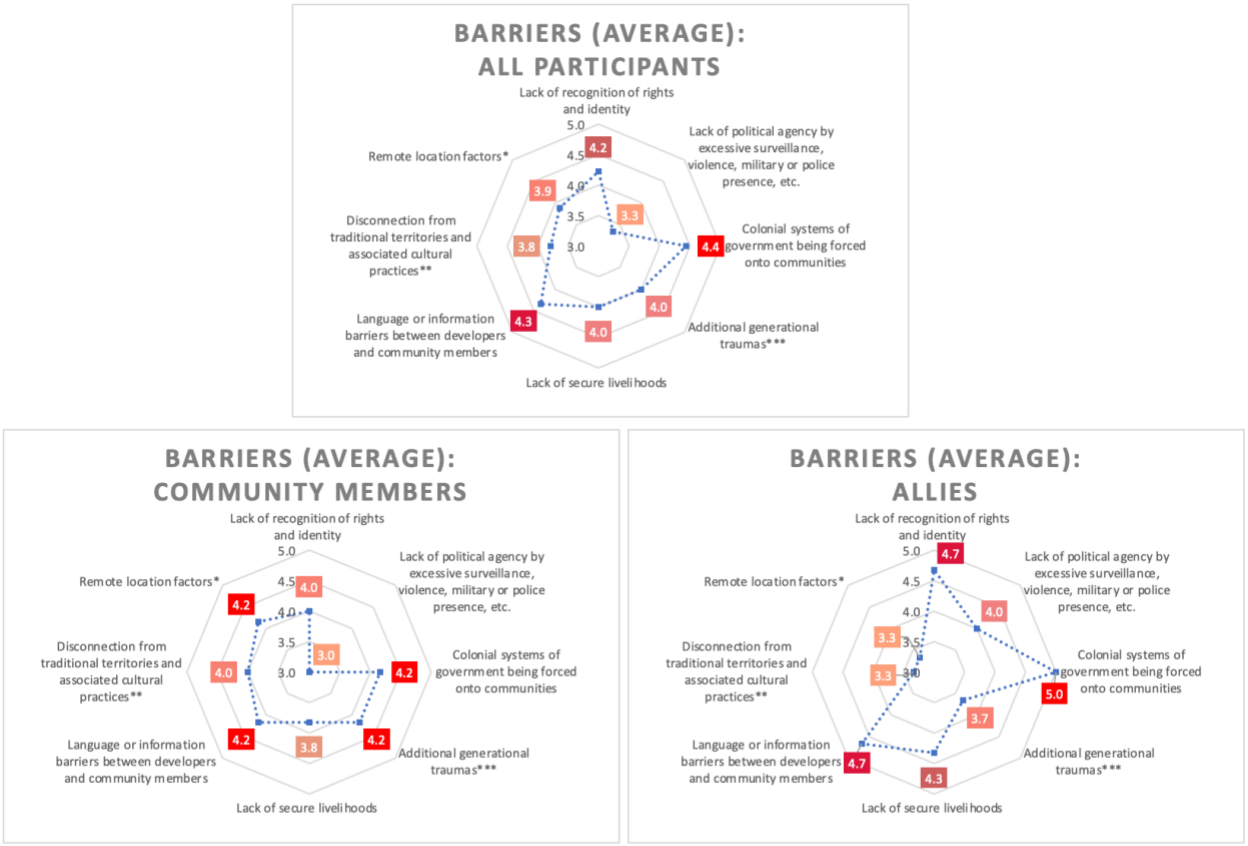


Figure 6

Average Experiences of Systemic Injustices in the Context of Dam Development



3.3.2.1 Dam Development Builds on Entrenched Dismissal of Community Identity, Rights, and Knowledge. Many of the expressed concerns stem from early systems of oppression, whereby governments implemented measures to assimilate or eradicate Indigenous peoples. John Gonzalez of Pimicikamak Cree Nation explained the context in Canada: "*You know, this isn't just about big hydro. Many, many people say that hydro is basically taking over where residential school left off.*[6]" He went on to explain the structural systems in Canada that allow dam development to proceed:

[6] Residential schools were boarding schools for Indigenous children that operated from the 1870s to 1990s as part of the Canadian government's assimilation efforts. Children were taken away from their families, forbidden to speak their languages and practice their cultures, and were instead subjected to emotional, physical, and sexual abuses that have contributed to generations of trauma. Reports are available through the National Centre for Truth and Reconciliation (2021).

"And of course the Indian act of 1876, which, required a Chief and Council. This is what the problem is all across Canada right now; Chiefs and Councils are really an extension of the federal government. And what so often happens when benefit agreements are signed with these corporations, it's not done by way of the hereditary Chiefs... So it is a policy of assimilation and genocide."

Rita Monias of Pimicikamak Cree Nation also spoke about the challenges of the federally imposed system, and how it has affected the community:

"*The federal system does not help us people. It only puts us in a little box, a box of administration, of policy control, colonialism and all that, all the negative stuff that our federal system does to our people here in Canada. So that's why I felt alone to tell you the truth."*

She is proud to express her opinions about these systems and their connection to dam development, yet she explained that others in the community do not always agree, and so she has been ostracized at times. Denise Cole from the Mista-Shipu basin further expressed that the systems of oppression also obscure communities in the context of dam development:

"*There becomes a message I think, that has consistently been sent by our government, that this project has always been more important than downstream lives. Always. It was that way when they pushed around the environmental assessment… When people became more aware about methylmercury. When we knew the North Spur*[7] *wasn't stable. Government has always justified that this project is so important to the province as a whole and important enough that it's okay to put us at risk*."

Minket Lepcha shared similar sentiments about government dismissal of community wellbeing and the inherent community rights to the land. The Lepchas have long been connected with the Teesta River (Figure 7), but through ongoing colonialism there remains one last refuge, a sacred area called Dzongu, where they can freely and holistically practice their culture (Joshi et al., 2019). However, Minket explained that because she did not grow up in the state of Sikkim, she is not legally recognized as having inherent rights and cultural connections to Dzongu and the Teesta River:

[7]The North Spur is a land mass jutting into the Mista-Shipu, which the Muskrat Falls generating station and accompanying dams were attached onto to create a complete damming of the river. Given the sand and clay composition of the North Spur and the frequent occurrence of landslides along the river, there are well warranted and serious concerns regarding the potential for the Spur to collapse and to harm downstream communities (Bernander & Elfgren, 2018).

> *"And that narrative totally kills the Indigenous-ness in us, you know? So for me, it's even more complicated than probably an Indigenous (person) from Sikkim because the government has said, 'okay, Lepchas are from here', but we've never had borders before… Like you are Indigenous in one place, but if you cross the river, then you are not.*"

Because the Lepchas face challenges accessing the land, and the associated knowledge that could be used to counter the dam proponent narratives, Minket feels that dam development proceeds with less opposition than if more people understood the consequences on the landscape or if their knowledge was recognized as legitimate. As of 2020, five dams in the Teesta River basin had been completed, with an additional 15 under development, and at least 27 more proposed (Rahaman & Al-Mamun, 2020). Several of the proposed dams are even located within Dzongu, demonstrating the disregard for the cultural and ecological significance that these lands hold (Lepcha et al., 2018).

Figure 7

Lepchas Praying in Sacred River Teesta

Photo by Shivam Darnal and submitted by Minket Lepcha.

Jonathan González Quiel from the Chiriquí Viejo River also shared that community knowledge and connections to the land are ignored in the face of dam development in Panama: *"(Companies) are obligated to do consultation forums, but they tend to be information-based and explanatory only. They don't ask for consent*." Furthermore, when information is presented, it is often not adequately explained or translated (Wickstrom, 2003). As such, industry players have been successful at targeting communities individually. As Jonathan indicated:

> "*Initially, when the hydroelectric plants arrived, the whole town was united and the actions against these projects were recurrent, but the companies managed to divide the communities. The projects achieved their objectives and a decade later the communities are realizing that it was a bad business*."

Similarly, in Brazil, the systematic marginalization of communities has benefited dam developers. Laisa Masserenti Hosoya, a civil rights lawyer and researcher, has worked with several Avá-Guarani communities or *Tekohá*[8] that have been living with the aftermath of the mega Itaipú Dam since its impoundment in 1982. This project built on the injustices of colonization in which the land available to the Avá-Guarani to live and be their own people has been continually portioned away for settler opportunities (Urt, 2016). The banks along the Paraná River- which for 200km act as the state lines between Brazil and Paraguay- were one of the few remaining locations where the Avá-Guarani could still live as a self-determined people, freely moving across the transboundary waters. With the arrival of the Itaipú Dam, the Avá-Guarani were again violently evicted and separated from their family on the opposite riverbanks, as lands on which they lived were submerged within the Itaipú Reservoir. Laisa explained that despite the Brazilian state recognizing the rights of some Avá-Guarani in writing, power was ultimately afforded to the corporation:

> "*They have so much power that makes it a big struggle for the Indigenous community. And of course, the Brazilian state, it doesn't care so much about their rights. And so they don't recognize what is written in the Constitution; for example, that they have the right of their traditional land, which is written there. But on a daily basis, it doesn't work that way*."

[8] *Tekohá* is more than just a territory. Urt (2016, p.869) describes the translation of *teko* as the "way of being" and *ha* as place, coming together to roughly mean: "the space – and the many resources it brings that make life possible – where one can be and belong as Guarani."

Indeed, the Itaipú Binacional company generated a narrative that the Avá-Guarani were not living on the lands that the project flooded, and that instead they had arrived illegally from Paraguay or Argentina, and thus should have no claims to the land (Alcântara et al., 2019). The corporation had so much influence over the government that only three of the nine displaced communities were recognized by the state as having legitimate claims to the land (Massarenti Hosoya, 2021). The *Tekohá* that were not recognized have since been "occupying" any available piece of land to try to continue practicing their traditional ways of life. Yet, Laisa explained that this instability leaves them open to evictions and ongoing acts of racism from wealthy farmers and landowners claiming the Avá-Guarani are "invaders".

3.3.2.2 Dams Perpetuate Capitalist Development Agendas. These narratives that push for development at all costs, including the rights and respect of communities, are associated with capitalism, particularly in the context of climate change (Moore, 2017). The power dynamics between Global North and Global South countries has forced the idea that countries need to fulfill a certain standard of "development", which should be achieved regardless of communities occupying the land. Additionally, new global norms regarding concerns for addressing climate change have led countries to frame economic development projects, such as dams, as "clean" or "green". Under this narrative, the government of Panama has sought to build more dams over the last few decades. Jonathan shared his frustrations with the current political atmosphere that is plagued with corruption and foreign investment pushing for "sustainable development" schemes: "*...it is an unequal country, a corrupt country, a money laundering country, a country where there is a permanent displacement; what they call despojo, an accumulation of wealth through dispossession*."

Roshan Rai from Darjeeling, India, views dams as part of this larger issue of *"skewed development"* in which countries engage in economic opportunities that further hinder local opportunities, thus affecting "*the self-sufficiency and political agency and representation of people in communities like Darjeeling*". Many individuals in the region do not have rights to the land they live on or have basic amenities (Joshi et al., 2019), and thus have limited political space to contest this development for fear of retribution. Deepa Joshi elaborated on the political dynamics of development in the Himalayas and beyond:

> "*There are many communities globally who are not only impacted by what is happening in their backyard in the name of development, but who are also enormously impacted by*

the lack of ability to question these issues of development, given the lack of political freedom that they have as individuals, as citizens able to express their views."

As Deepa and Roshan explained, much of this is related to the lack of secure livelihoods, which certainly is not improved with increased "development" schemes, such as dams.

For participants in North America, despite their indication on the surveys that a lack of political agency associated with surveillance and violence was not as high of a concern as for those in South Asia (Figure 5), they too expressed that their political agency was impeded by a limited job security. Rita explained that due to the high unemployment rates, people are caught in a position where they need to work for the government or hydroelectric corporation or rely on the welfare system for support. In a remote community, where local politics are interwoven with everyday life, speaking out against this development or the oppressive systems can have serious consequences. Indeed, Rita shared that she lost her job in the council office for speaking up against the federal system and the ingrained injustices:

"*We can't get rid of the political interference but then can't make statements against political interference…. Politics does that. Politics doesn't want the truth out there about how they destroy the environment. And then by destroying the environment with these hydroelectric dams, nuclear bases and all that sort of stuff, you don't want people to hear the effects of it. So they turn against the people who are telling the truth about what really comes out of hydroelectric development*."

Amy Norman also expressed that living in a remote community has meant that there are limits to providing counter narratives to the enticing propositions generated by energy corporations. As such, some local people supported the development of the Lower Churchill project as an opportunity for much-needed job security, yet are now witnessing that many of the workers are flown in from other regions. As a result, the project faced a high amount of criticism within the province, particularly due to its $13 billion price tag (Maher, 2020). However, governments have recently engaged in shrouded discussions regarding the development of another dam to help cover some of these costs. Amy shared her uncertainty regarding this plan:

"I feel like there's a lot of behind-the-scenes stuff that we're not quite sure of. It's a bit opaque, whatever the governments are doing. But I think Gull Island[9] is looming closer and closer, and that's kind of freaking me out."

The concern over ongoing development was expressed by all the community members. Dams will continue to perpetuate these systems of oppression if changes are not made to the political norms and landscape of this development. Given the ongoing calls for dams to be developed in the context of climate change, I next turn to understanding what responses have been attempted to halt these efforts.

3.3.3 Responses

Insights shared in the interviews and surveys demonstrated that community members and allies are doing whatever they can to challenge these projects despite the ongoing barriers and impacts. For example, Laisa responded with all fives for the impacts and barriers surveys (Figures 2 and 5), but indicated that Avá-Guarani community members in Brazil are limited in their ability to respond to these issues (Figure 8, Laisa). The community member participants highlighted that they frequently gather in virtual and in-person spaces with others from communities that are located regionally, nationally, and internationally (Figure 9, Community Members). Many of the efforts build on IEJ understandings of community resistance, as they emphasize the uses of knowledge and cultural teachings throughout (Figure 9, Community Members). As I also illustrate below, participants expressed serious security concerns regarding their ability to engage in some activities though. In addressing these issues, an overwhelming hope for collaboration emerged.

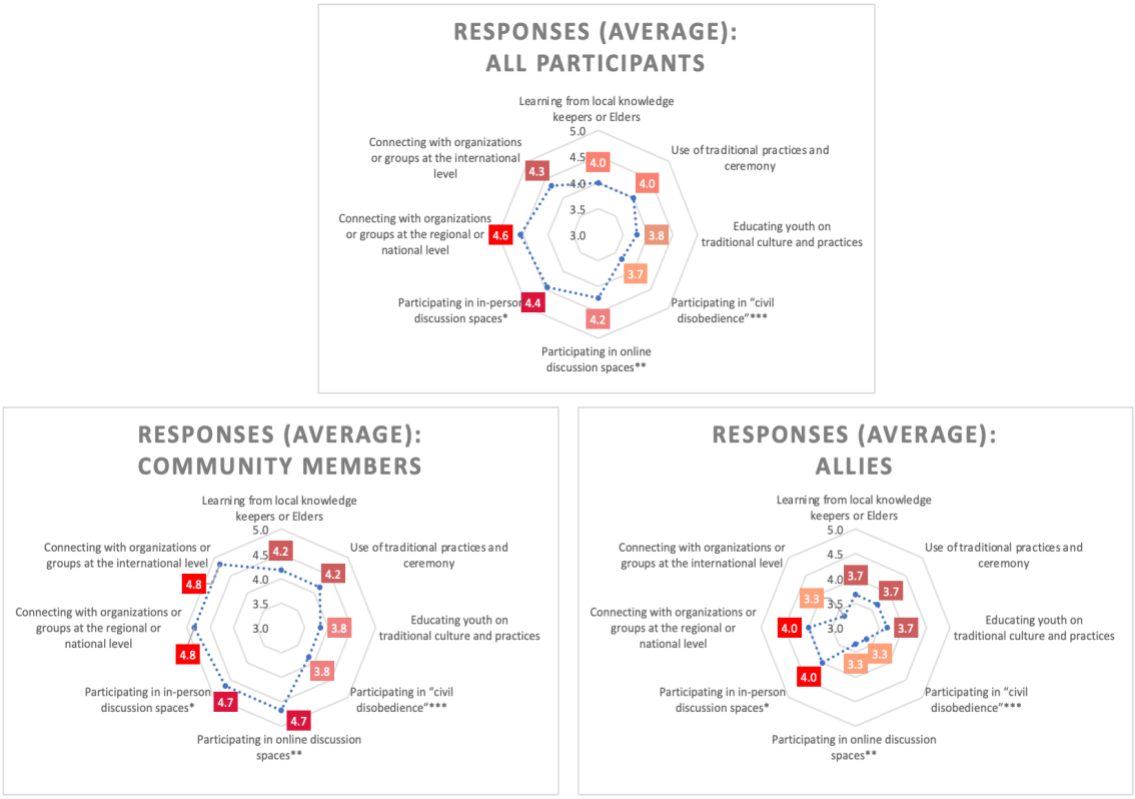
[9] Indeed, politicians at different levels of government are discussing the "opportunity" that Gull Island provides for helping Newfoundland and Labrador's economic recovery (Whiffen, 2021). With budding interest from international corporations, some politicians are encouraging the province to send an open call for proposals (Whiffen, 2021).

Figure 8

Individuals' Available Responses to Dam Development

Figure 9

Averages of Individual's Available Responses to Dam Development



*Ex. conferences, meetings, gatherings
**Ex. webinars, social media like Facebook, blogs
***Ex. protests, sit-ins, demonstrations

Note. Some allies responded on behalf of the communities, while others replied from their own perspective as an ally participating in efforts against dams.

3.3.3.1 Culture and Knowledge Centred in Resistance. Particularly for those that self-identified as Indigenous (all community members excluding Jonathan), the sharing of traditional knowledge and ceremonies was central in engaging in resistance efforts. After learning about the issues of dams on the Teesta River, Minket Lepcha left a teaching job in the formal education system and began a journey of reconnecting with Lepcha knowledge.

> "*(I) started interacting with a lot of Elders, meeting shamans, meeting medicine men and women. And it was an interaction with them that changed how I felt and it deconstructed my idea of what life is or even education is. And the way they spoke about the rainfall, the rainbow, the water, the rivers, the mountains, it was so much like a friend. And in education books, we've never had that kind of language."*

Since (re)learning this knowledge, Minket has dedicated herself to sharing these stories with youth that have been disconnected from the traditional knowledge that connects them to the landscape: "*teenagers especially have been going through this cross-cultural phenomena where you are taught about the Western world and the Western idea of understanding education, but the family, the DNA, has Indigenous blood in it*." Recognizing that youth hold inherent knowledge, Minket has established spaces for bringing young women together to tell their own stories of identity and experiences with the Teesta River through diverse mediums- such as song, textiles, photography- all that reflect their culture. Because of the pandemic, much of this work is done through virtual meeting spaces, bringing together the young women from across the Eastern Himalayas to discuss their concerns and hopes for the region, particularly in the context of development and climate change. Minket feels strongly that sharing these stories helps transcend the existing colonial borders by creating an informal alliance amongst youth who share the Teesta River as their common thread. From these spaces, youth are also gaining the confidence to articulate their knowledge and share it with others, thereby building connections to culture and guardianship for the land that systems of oppression have aimed to diminish.

Waba Mako also recognized the need for connecting youth to the land to educate them in traditional knowledge so they can question development and work towards self-determination. She spends as much time on the land as she can with the Elders, listening to stories, preparing traditional meals, and speaking her language. To share this important knowledge, she organizes camps that bring families together onto the land to:

> "*Talk a little bit about the issues around climate. Just to get the youth understanding about the things that are going on with the land, but also to do things with land so they understand the importance of protecting our territories."*

The impacts of dams are not isolated to individual communities though, so Waba Mako emphasized the power in bringing people together on a larger scale to discuss compensation and protection from further issues, largely through revisiting traditional knowledge of governance and treaties, as a means of participating in decision making according to their own traditions that are centred in relationships with each other and the land and water. Whenever possible, individuals from communities across the Ottawa River basin come together for a larger gathering. The most recent one was postponed due to COVID-19, but Waba Mako shared the significance of what would be shared:

> "*And this is where we wanted to talk about the treaties. And we wanted to talk about the damming and we wanted to talk about the mining and the pipelines and the Indian Act. All these things and talk about the old ways, how our people used to govern the land, use the family territories and all that… It has to start in that sense with people coming together, out on the land, having their fires, sitting around the fire without meeting in the school gym or that kind of stuff. You know, like nature, it has to be nature."*

As Waba Mako shared, the role of land protectors transcends colonial borders and addresses all issues pertaining to the land. Denise Cole also expressed similar sentiments about her sense of responsibility: "*As a land protector, I see all things that are threats to land should be of my concern."* Denise and Amy Norman are both part of a regional group, the Labrador Land Protectors, that have worked to halt the construction of dams on the Mista-Shipu (Figure 10). Their group is small and operates on volunteer efforts, but as Denise shared, they are determined to continue protecting the river:

> "*I wish we all had giant tribes of people working with us here on the ground. But most people were saying the same thing: we're a small group, but we're determined and we're resilient and we're not giving up*."

Figure 10

Land Protectors and Allies Protecting the Mista-Shipu from the Lower Churchill Project

Photo by Jacinda Beals, July 2015. Submitted by Denise Cole.

John Gonzalez also emphasized the need for collaboration, especially that which is centred in traditional knowledge. He explained that the journey of advocating for his community began in Standing Rock Sioux territory in 2016, where hundreds of water protectors had gathered to defend the lands and waters against the development of the Dakota Access Pipeline that was to pass through traditional territory transporting oil from Canada. Joined by Indigenous peoples from around the world, John explained that there was a powerful sense of unity that emerged from the dialogue about historic and ongoing colonialism that has been faced around the world. This experience was so powerful for him that he now uses the phrase *"Standing Rock is everywhere"*, emphasizing that through the sharing of knowledge and by standing together in any way possible, there are opportunities to challenge oppression collectively to work towards self-determination: "*We come together in solidarity. We have to do whatever we can at the local level, the state level and the federal level. Come together as Indigenous people. Come together and bring back the traditional forms of government*." John has taken this message forward with him in his work documenting environmental injustices on Indigenous territories, which he shares widely on social media and with national and international organizations.

3.3.3.2 Addressing Ongoing Security Concerns. Sharing these stories and speaking freely on social media is not possible for everyone around the world. Despite the survey responses indicating that resistance efforts are widely available (Figure 8 and 9), there are distinct differences in the reality on the ground. Nipon and Suman of the Chittagong Hill Tracts (CHT) answered the survey with all fives, indicating that they are free to engage in responses at will. In their interview, Nipon Tripura, Rinku Marma, and Suman Chakma further explained that discussions of self-determination and efforts for the recognition of their rights occur within regional groups. However, doing this work means they face a very real threat of violence from the military that has been stationed in the CHT since the 1980s in response to the establishment of political groups that represent the Jummas and their sovereignty (Nayak, 2015). Furthermore, due to the *Digital Security Act* that was enacted by the Government of Bangladesh in 2018, they are restricted from speaking out about these injustices on social media. As such, Rinku believes being connected to a larger struggle that goes beyond South Asia would mean more opportunities to tell their own stories: "*In an international platform, we can represent ourselves."* Suman also added that in doing so, *"We can learn from others' (stories) and others can know ours as well."*

Nipon emphasized this point too, sharing that solidarity efforts would be helpful in holding the military and government more accountable for the human rights abuses, as well as in having their Indigenous rights and identities recognized.

In the context of the Eastern Himalayas, Roshan Rai and Deepa Joshi also spoke about the opportunities and limitations for local organizations to work towards community sovereignty. Through his work with the regional organization Darjeeling Ladenla Road Prerna (DLR Prerna), Roshan helps create space for discussion and collaboration among communities in Darjeeling. The group hosts workshops and an online blog site to create awareness and dialogue on environmental issues, as well as works with selected partners on local projects that promote community-based approaches to agriculture and water management. However, Deepa reiterated the aforementioned barriers that limit community participation:

> "*Solidarity is a very big ask of communities, whose livelihoods are fragile and whose economies are insecure and who do not have political space and agency in an ever evolving dynamic but also very skewed political context, which is really the net reality of local communities in Darjeeling*."

Roshan and Deepa expressed that solidarity efforts would be beneficial to the communities, but they cannot be overtly political or community members would be risking their livelihoods or even their lives. To ensure continued operations and funding, DLR Prerna and other regional groups generally take very apolitical stances regarding the dams and development (Joshi et al., 2019).

Ian Baird elaborated on similar concerns for the political agency of the communities he works with in the Mekong River basin. He shared that because communities have limited opportunity to speak out without retribution, most of the public dissent is from activists, who in Thailand and Cambodia can be fairly open about their work. However, in Laos there is less opportunity, "*because there's a lot more pressure from the government and established organizations to even come out openly as being associated with groups that are critical of dams*."

Laisa Massarenti Hosoya also expressed that her role as an activist is limited in the context of Brazil, because the corporations are politically and socially powerful. Some organizations have formed to assist communities, but they have restricted financial and political capacity. Without organizational backing, allies also fear for their safety and job security.

The concerns for security are also felt in more ‘democratic’ countries, such as Canada. Ashlyn Haglund grew up in a dam-affected community, so has been an advocate for change for most of her life. Her history as an activist ally had previously resulted in her phone and emails being tapped by the Canadian government. While that this has not stopped her work, she explained her concerns regarding others:

> “*I'm always conscious that I'm exposing someone to surveillance, if they're communicating with me. I'm flagged. And so that's a concern for me. And it's a risk that I can take because my whiteness gives me a certain level of shield. And so I have a great deal of responsibility around how I maneuver*.”

Indeed, given these barriers, there are risks associated with participating in resistance efforts. For example, Amy Norman indicated in her survey response (Figure 8, Amy) that she had experienced repercussions for participating in resistance efforts. Despite their peaceful methods, members of the Labrador Land Protectors group, including Denise Cole, had been charged and/or arrested in their attempts at protecting the land by blocking access to the construction of the Lower Churchill hydroelectric project site at Muskrat Falls. In a news report on the court ruling a suspended sentence, Denise shared her continued frustrations with the settler justice system that fails to recognize the role of land protectors:

> *“We all sort of go under the belief that we have these constitutionally protected rights as Canadians, and then we realize that there's a lot of ifs or buts… this is a very broken system and there's still a tremendous amount of work for us to do."* (CBC News, 2021).

3.3.3.3 Collaboration on the Horizon. While each of the participants spoke about the regional, national, and even international groups they work with, they also each expressed their desire for more collaboration. For one, Jonathan González Quiel and Nati Garcia emphasized that the national efforts they are involved with can only go so far, due to government corruption and the loose regulations for foreign development companies acting in Panama. Nati translated for Jonathan: “*It's really just a very small handful of people throughout the whole country. And I think that's one of the things that we've really been struggling with as a network*.” As such, they explained that having allies in the countries where companies originate could help alleviate some of the cultural and language barriers when approaching these corporations. Others also expressed similar sentiments regarding the need for wider sharing of information and energy. As the survey responses indicated (Figure 8), participants across the regions were using similar methods as

activists– albeit in their own contexts and unique ways. Yet most of this work was independent of each other. Given that the corporations have well-resourced international networks, there is an argument for possible opportunities in which these community members can connect and collaborate with one other. In the meantime, it is quite apparent that the participants will continue to engage in whatever means possible. For, as Rita Monias shared: "*We will not be beaten up in silence*.".

3.4 Discussion

In building on existing knowledge related to the effects of and resistance to dam development around the world, this study has contributed and confirmed understandings of these experiences. Primarily, throughout the interviews and surveys, the cultural dimensions of these experiences were emphasized. Indeed, the connections to the land and rivers cannot be quantified. Even with the surveys, I recognize such limitations. As Rita Monias shared- and perhaps others that did not answer the surveys at all may have also felt- these experiences cannot be assigned a number, regardless of what it may represent. Because cultural dimensions cannot be understood through brief "consultation" sessions or be replaced with "compensation" agreements, this may why the cultural experiences are still generally overlooked in procedural and distributional justice (Hanna et al., 2016). However, given that culture is central to all other components of life, particularly for those whose identity is closely tied to particular lands and rivers, I argue that this dimension is central to understanding the extensive nature of impacts and why communities are still facing injustices so many years later.

If the cultural implication were more broadly acknowledged by industry and scholarship alike, there would be no grounds on which to make claims that dams are "sustainable". While dams may help governments achieve arbitrary standards, and even while such claims for reductions in greenhouse gas emissions are widely disputed (Fearnside, 2013, 2015a), the use of the term "sustainable" is thereby monopolized to mean something that does not apply to communities. These notions instead continue to turn communities and their traditional territories into unnecessary sacrifice zones (Scott and Smith, 2016). As I also demonstrated, this development then further puts communities at risk of climate change, thereby constraining them from achieving justice and security.

In striving for justice, the experiences presented here demonstrates that while some procedural justice is occurring- often in the form of EIAs- it is far from adequate. The continued

push for improvements to this realm is justified, as communities deserve to be included – and to play key leadership roles- in these processes (Schlosberg & Carruthers, 2010). Yet, I have demonstrated that the mere presence of these processes does not guarantee proper accordance, even in the 21st century. Emerging fields, such as energy justice, have argued for efforts of restorative justice to better address the implications of dams (Antadze & Gujaraidze, 2021; Siciliano et al., 2018). Yet, again, the emphasis is often on EIAs being conducted before a project begins in order to understand the mitigation and adaptation that might be required (Antadze & Gujaraidze, 2021; Siciliano et al., 2018).

I instead encourage more understandings of Indigenous environmental justice (IEJ) for two main reasons. First, IEJ is rooted in holistic understandings of cultural dimensions that are often excluded from construction-centred EIAs (Hanna et al., 2016). Further, justice is understood beyond replacing lost livelihoods or regions with another, and instead enters dimensions that understand justice as the enabling of both human and non-human life (LaDuke, 1999; McGregor, 2009). These beliefs were echoed throughout the discussions with community members, with many emphasizing that (re)connecting to these beliefs and practices is central to recovering from existing dams and protecting themselves from future developments.

Secondly, I encourage the grounding of concepts in IEJ as it emphasizes the acknowledgement and implementation of sovereignty. The findings here have built on existing literature emphasizing the need for community members to be their own advocates (Warren & Jackson, 2003). In particular, the differences between and among ally and community members' responses to the surveys illustrated that each community has its own set of priorities associated with their ways of life and cultural wellbeing. Again, I emphasize that while processes of inclusion need to be improved, the recognition of communities' identities, rights, and knowledge should play a more central role. If this recognitional justice is achieved, then processes can be better defined by those protecting and defending the land and water.

At present, in response to ongoing injustices, communities are centering their identity and knowledge in their resistance efforts. Other scholars have documented incredible cases of these efforts occurring in different regions and in response to dams (e.g. Huber & Joshi, 2015; Rusansky, 2020), while the participants' experiences shared here contribute further examples of efforts that have not yet been made adequately visible. For some of the participants, this work is local in focus and centred on healing by (re)connecting multiple generations to knowledge and

the land so that they are equipped with the skills and language to articulate justice and defend territories. Other efforts involve direct dialogue with the public to counter the claims of the industry and garner greater support for communities and ecosystems. All the participants here have engaged in multi-faceted efforts and take on whatever approach is possible and appropriate, even if it means taking risks.

In line with decolonializing methodologies (e.g. Smith, 1999; Thomas et al., 2015; Tuck & Yang, 2014), these experiences should not be understood as victims overcoming obstacles, but instead should highlight the barriers that are deeply entrenched in systemic injustices. The community experiences shared emphasize the increasing hopes for collaboration that can address these barriers and amplify voices beyond the oppressive borders and governments. These efforts are not operating in silos, oblivious to the work of others. Indeed, some of the participants are already acquainted with each other, while others have observed the resistance efforts of other communities around the world. Overwhelmingly, it was expressed that individuals wish to be connected directly with each other and engage in this work as their own advocates for change.

3.5 Implications and Calls for Action

Several opportunities for further meaningful research emerge from this work. Firstly, I argue that discussions of impacts need to include understanding of how culture is interwoven throughout. With further acknowledgement of the implications that impacts have on the ability of communities to thrive, it becomes very difficult to argue that procedural or distributional justice should dominate over recognitional justice. In this same line, under notions of recognition, I have aimed to demonstrate that true recognition of rights and sovereignty also means recognizing the effects of existing dams on communities and the need to make reparations.

Secondly, the impacts of dams should be articulated in the context of historic and ongoing injustices – some of which seemingly have little to do with but that compound the impacts of mega dams. The dam proponents and settler states that are perpetuating the development and other injustices should be named and highlighted as a means of holding them accountable to their damaging actions.

Thirdly, in identifying the players of dam development, it is also necessary to counter their rhetoric that dams are “sustainable”, “green”, or “clean” “solutions”. The impacts of dams are well documented, and no community that has faced these impacts would support such claims.

Despite the- usually inadequate- consultation or assessment protocols, communities face inevitable devastation that creates very unsustainable living conditions.

Fourthly, and perhaps most importantly, I argue for the continuation of collaboration efforts that transcend borders. The repeated hope for meaningful collaboration demonstrates that a great opportunity exists for communities that have been impacted by dams to come together to share knowledge and experiences to further solidarity and self-determination on a global platform. Researchers have a critical role to play in supporting such spaces by mobilizing their resources and utilizing their platforms to elevate community voices, regardless of their location.

Finally, discussions with individuals from various parts of the world have demonstrated that technology is allowing community members to increasingly see what others are experiencing and doing in response, much of which is centred in traditional and Indigenous knowledge and community-oriented solutions. There is now a critical opportunity to enable these individuals to connect directly with one another in safe and culturally relevant ways to discuss possibilities for collaboration and for action.

Chapter 4:
Building a Community-Centred Transnational Advocacy Network:
The Case of Dam Watch International

4.0 Abstract

International movements, coalitions, and localized groups have long been contesting dams for their widespread impacts on communities and ecosystems. Dam proponents have well-resourced international networks that enable this degradation to continue, garnering support for more dams under the auspices of their claims as “clean” or “green” solutions to ecological degradation and energy and water security in the context of climate change. In response, community members and allies around the world that had previously been working against dams separately are coming together under one transnational advocacy network (TAN), known as Dam Watch International, to share resources and knowledge to effect change on various scales. In helping facilitate and document the emergence of this network, a participatory action research approach was utilized, involving semi-structured interviews, surveys, participant observation, and action. This chapter demonstrates why communities and allies are coming together in this way, how the TAN emerged and evolved, and what challenges and opportunities arose for sharing knowledge and engaging in action.

4.1 Introduction

"The language used to market renewable sources of energy primarily focuses on the reduction of fossil fuels by using 'clean' sources… However, these are not 'clean' sources because they are violating human rights within the communities they are established within." (Translation)

"No es que no han generado, no es que han sido energía renovable, limpia, no. Ósea han llegado y también han generado conflicto, también hemos tenido una discusión porque aquí nos venden la energía hidroeléctrica como una energía limpia." (Spanish original)

-Jonathan González Quiel
(Chiriquí Viejo River, Panama)

"*So, this is being pushed as "green", as "clean", and we have to get that out of the public's mind. You know, there's nothing green and clean about hydroelectricity."*

-Standing Bear John Gonzalez
(Kischi Sipi River basin, Canada)

Extensive research has highlighted the reality of mega dams and their impacts on communities and ecosystems around the world. Flooding and changes in water flow severely alter the landscape, decimate important local fisheries (Castello & Macedo, 2016; Morand et al., 2012; Winemiller et al., 2016), compromise the safety of water for drinking and transportation (Calder et al., 2016; Rosenberg et al., 2002), and displace entire communities (Finley-Brook & Thomas, 2010; Sayatham & Suhardiman, 2015; Thompson, 2015). Impacted communities are left without adequate resources and are disconnected from traditional lands and livelihoods which in turn gives rise to poverty (Kulchyski & Neckoway, 2006), food insecurity (Okuku et al., 2016), and gendered violence (Bisht, 2009; Heiskel & Leifsen, 2016).

In defense of land, water, and communities, efforts have emerged around the world at regional, national, and international scales. Regional alliances composed of dam-affected Indigenous and non-Indigenous community members, as well as researchers, environmental organizations, and other advocates have emerged in order to better resist new projects and provide support to communities (Athayde & Schmink, 2014; Greyling, Knippers, & Tumakova, 2014). However, the multinational companies behind these projects are well resourced, influence governmental decision-making, and often collaborate with each other at regional and international scales to weaken any resistance efforts (Fearnside, 2017; Matthews, 2012). Scholars have thus demonstrated that resistance networks increase in scope and effectiveness through

transnational collaboration, thereby learning from common experiences and sharing resources, funding opportunities, and efforts at public outreach (Han, 2013; Scholz, 2005)

Anti-dam movements have successfully been using transnational collaboration techniques since the 1980s (Khagram, 2004). From the 1950s-1980s, mega dams were built on rivers around the world, namely in Western Europe, North America, Soviet Union, and Japan (International Hydropower Association, 2019). The anti-dam movement was instrumental in mobilizing knowledge to generate awareness about the impacts of dams, which contributed to a decline in dam construction in the 1990s (McCully, 2001). As a result, the World Commission on Dams, a global forum of industry and civil society stakeholders, was created to establish new global norms for dam development (Sneddon & Fox, 2008). The culminating report (World Commission on Dams, 2000) was met with initial anticipation for change to the destructive nature of dams, but its voluntary implementation left limited accountability within the industry (Fujikura & Nakayama, 2009; Schulz & Adams, 2019).

With the turn of the 21st century, dam development has once again emerged in bold ways, particularly benefiting from heightened concerns for climate change. Counter to the evidence that dams generate large-scale environmental and social impacts, the industry has been successful in reframing dams as "clean", "green", and "sustainable" mitigation and adaptation solutions that address concerns for water and energy security as well as climate change (International Hydropower Association, 2020a). Although scholars and activists refute these claims (Fearnside, 2013, 2015b; Scherer & Pfister, 2016) and communities that recognize the ongoing threat to ways of life continue to mobilize to challenge this development (Antadze & Gujaraidze, 2021; Delina, 2020; Shah et al., 2021; Talamayan, 2020), dam construction continues to escalate.

In the context of global concerns, Transnational Advocacy Networks (TANs) have emerged as important ways of supporting resistance and public education efforts that transcend borders. First conceptualized in the 1990s by Margaret Keck and Kathryn Sikkink (1998), TANs addressing various social and environmental justice issues have been established to share information among players in different regions of the world and to change policy. Grassroots activists, researchers, NGOs, and civil society groups that share common ideals are all valued as advocates within TANs (Keck and Sikkink, 1998). While TANs use various tactics to engage in politics, Keck and Sikkink (1999) particularly emphasize the use of information politics or the

"ability to move politically usable information quickly and credibly to where it will have the most impact" (p. 95).

Anti-dam TANs have been successful in engaging in these tactics to internationalize issues and influence national and international policy (Leong, 2007). For one, the "boomerang effect" is often employed (Kadirbeyoğlu et al., 2005; Khalid, 2020; Yeophantong, 2020), whereby groups in oppressive states engage allies in other countries who can then mobilize their own governments, organizations, and resources to put pressure on dam proponents (Keck and Sikkink, 1998). Through careful framing, cases in Turkey (Kadirbeyoğlu, 2005), the Mekong region (Yeophantong, 2020), and Malaysia (Khalid, 2020) demonstrate that the boomerang effect can be used to influence funders of dams to reconsider participation in the development. In these cases, TANs have carefully navigated politics and borders to influence broader discussions and policy in the regions, yet the dams continue to be built (Kadirbeyoğlu et al., 2005; Khalid, 2020; Yeophantong, 2020).

While the aforementioned studies have highlighted the successes of these cases, others have demonstrated that similar transnational efforts are no longer working in the evolving context in which dam development now proceeds (Bratman, 2014). Juxtaposed to the development of the 1900s, a majority of the dams being constructed in the 21st century are in the Global South (Law & Troja, 2019). Those leading these efforts are also emerging economies, including Brazil, Russia, India, China, and South Africa- also known as the BRICS (Moreira et al., 2019; Shipton & Dauvergne, 2021). Counter to previous reliance on international institutions, such as the World Bank, who were arguably accountable to higher global norms associated with ecological and social wellbeing particularly after the WCD, the BRICS have enabled poorer host countries to establish economic development opportunities on their own terms (Bratman, 2014; Moreira et al., 2019). With voluntary and varying global standards for environmental and social protection, countries are adapting their own loose regulations that incentivize foreign investment regardless of their social and environmental repercussions (Finley-Brook & Thomas, 2011; Moreira et al., 2019; Wickstrom, 2003).

Further, studies document that governments employ tactics to reduce the credibility of foreign, mainly global northern NGOs that constitute important partners in TANs, arguing that they are counter nationalist, thereby creating a divide between regional efforts that seek to be adequately represented (Bratman, 2014; Moreira et al., 2019). Simultaneously, since the

September 11, 2001 terrorist attack, governments have also increased surveillance of any protest or NGOs seen as inciting anti-government efforts, such as causes halting economic growth (Shipton & Dauvergne, 2021). NGOs opposing dams fall into this category, and there has been a significant reduction in their involvement and effectiveness in overtly opposing dam development over the last two decades (Ahlers et al., 2015; Shipton & Dauvergne, 2021). These shifting politics and norms have resulted in the need for alternative approaches to TANs to emerge.

In response to these challenges and the recognition of North-South power dynamics, new networks are forming between countries of the Global South, under the name South-South or BRICS-South TANs (SSTANs) to enable collaboration among grassroots advocates in countries that are host to the mega dams and those that are home to the multinational proponents. Moreira and colleagues (2019) highlight the case of one such SSTAN that formed to halt a series of dams that were planned by Peru and Brazil. Rather than employing the boomerang tactic and leaning heavily on partners from the Global North, the SSTAN mobilized from the grassroots to employ three regional campaigns targeted at different funders of the project (Moreira et al., 2019). In using effective framing, such as illustrating the development as a continuation of colonialism that would further impede sovereignty, the SSTAN was successful in mobilizing individuals in both countries, which led to collective actions that halted the construction (Moreira et al., 2019). Conversely, Shipton and Dauvergne (2021) highlighted three cases of SSTANs between efforts in the host and funder countries, which employed the boomerang effect but engaged Northern players in support roles only. These efforts varied in success- this largely associated with the political contexts of the BRICS-South efforts- making the argument that there is still some need for Northern partners to engage (Shipton & Dauvergne, 2021). Moreira and colleagues (2019) also explain the need for further growth within SSTANs, as these efforts did not affect policy. Therefore, in the political context of emerging economies and Southern dams, there continues to exist a need to understand how North and South participants can better work together in ways that are grounded in the priorities of impacted communities.

While a majority of new dams are being built in the Global South, dam construction continues to plague marginalized and Indigenous communities in the Global North (Cox, 2018; Procter, 2020). Regional alliances among community members and allies often form in the face of these challenges (Gosnell & Kelly, 2010; Grossman, 2017), with transnational collaboration

also sometimes unfolding among affected communities and their allies in a North-North context (Powell & Draper, 2020). This was illustrated in the case of Standing Rock- a gathering of water protectors in Standing Rock Sioux territory (USA) in 2016 to halt the construction of the Dakota Access Pipeline (DAPL) that was carrying oil from Canada- which highlighted the power of collective action among individuals from different nations (Powell & Draper, 2020). While DAPL would only impact certain tribes, it represented ongoing colonialism and dismissals of sovereignty that others in attendance were experiencing. Solidarity actions arose across the US and Canada, as well as in Australia, Chile, Germany, the Netherlands, Norway, and Scotland (NoDAPL, 2016). Indeed, after joining hundreds of Indigenous and non-Indigenous activists gathered at the site of the pipeline construction, Sámi activists were successful in mobilizing DNB, Norway's largest bank, to be the first to divest from DAPL (Bonogofsky, 2016). This example of transnational advocacy demonstrates the possibilities for further opportunities among communities affected by dams to mobilize around sovereignty, particularly in a North-North context. Further, the Standing Rock example demonstrates that, despite facing similar experiences of colonialism and exploitation in the name of resource development, there are limited opportunities for communities in the Global South to support those facing marginalization in the Global North. As such, there exists a need to further examine how community members from both the Global North and Global South can advocate for themselves and each other in the context of resource exploitation, such as dams.

In understanding how these partnerships can emerge and play out effectively for sharing knowledge and influencing policy, there is a need to examine the internal relationships of TAN players. Because networks transcend borders and all players are viewed as each having their own information to contribute, TANs have been (perhaps naively) viewed as non-hierarchical in structure (Keck and Sikkink, 1998). However, TANs have also faced criticism regarding whether they effectively share the messages of the communities or whether they inadvertently act as neo-imperial mechanisms for further channeling Western norms, knowledge, and priorities onto local contexts, and making invisible the voices of impacted communities that they claim to represent (King, 2004). Particularly through the boomerang effect, local concerns and contexts can be eclipsed by other external priorities (De Almagro, 2018; Rosenberg et al., 2005; Temper, 2019). Due to restrictive political contexts or limited resources at the local level, advocacy is often employed by allies, who typically have greater resources and privilege than those that are

affected (Batliwala, 2002). However, differences in goals, framing, and access to resources exist among local, national, and international players, which can often weaken campaigns (Allen, 2015; Cheng et al., 2021; Leong, 2007). Further, such initiatives often exclude spaces that enable communities to influence policy that is rooted in their own needs and perspectives (Dupuits & Pflieger, 2017; McGregor, 2018). If impacted community members come to play leadership roles in these initiatives, TANs reduce the risk of using cooptation rather than collaboration in achieving their goals (Plaut, 2012).

While acknowledging such limitations, it is clear that research can play an important role in documenting and informing this body of knowledge and in both supporting and promoting TANs. Many studies on TANs (e.g. Christoff & Sommer, 2018; Martin, 2014; Yanacopulos, 2007) investigate the successes and failures years after the networks have been in operation, often using interviews and content analysis to make sense of how they operate at a specific point in time, yet many of the studies fail to explicitly include community members directly. Few studies on TANs have examined the emergence from the beginning, and even fewer as a participatory action research (PAR) case study in actively supporting the initiatives. This study specifically utilizes PAR as a method of including the voices shaping these spaces and exploring how the research can support the imitative, as a means of helping to fulfill "the need to build and strengthen the transformative research paradigm through power-equalizing knowledge mobilization processes that give voice to actors typically marginalized in knowledge transfer processes." (Anderson and McLachlan, 2016, p. 296).

Through this work, I seek to document the establishment of a collaborative network that is centred on supporting community-grounded needs and solutions, as a means of countering the increased alliances among dam proponents. We aim to better understand the community needs for outcomes of and participation in TANs by highlighting their experiences of grassroots resistance to dams in various regions of the world. In observing how this community-grounded TAN emerges in a space occupied by North and South community members, activists, and researchers, I focus on understanding how this initiative can mobilize information and both challenge and affect policy over time. Building on existing understanding of barriers, I seek to highlight how such priorities emerge and can be addressed while maintaining a community-grounded approach.

4.2 Methods

This paper examines the emergence of one transnational network, called Dam Watch International (DWI), that is bringing together dam-impacted community members and their allies[10], to collaboratively share information and resources as a means of challenging mega dams. While this network is still emerging and could be conceptualized in various ways, here it is envisioned as a TAN that is building on, and bringing together, existing efforts. DWI emerged from the ongoing work of Waniskātān, a regional alliance among researchers, activists, and Indigenous communities affected by dams, this based in Manitoba, Canada. Recognizing an opportunity to connect and collaborate other alliances, Waniskātān organized an international conference in 2019 that brought together over 200 community members and allies from around the world (Wilt, 2019). From the many conversations and presentations emerged the hope for a collaborative global network. In early 2020, DWI was created under the guidance of an advisory council largely composed of conference participants.

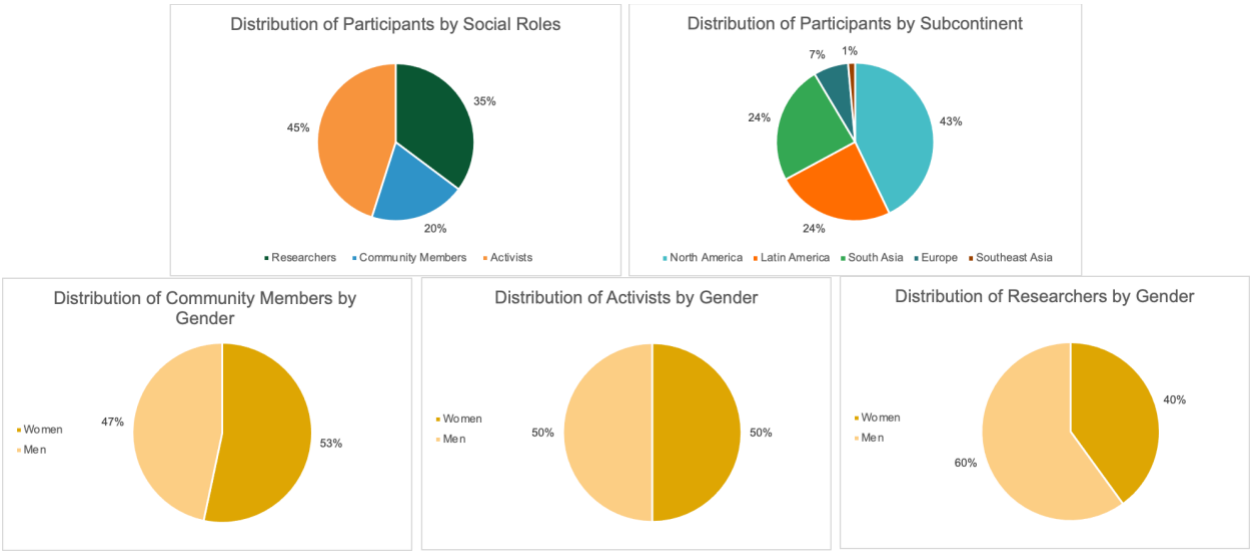
DWI presently includes over 190 participants – of which approximately 70 have actively engaged in meeting spaces or sustained information exchange activities over the last two years. Each individual contributes a unique set of resources, knowledge, and experiences. To provide a very broad sense of these participants, we have (over) generalized them into roles of dam-impacted *community members* (those that have been directly affected by mega dams); *researchers* (those whose involvement in DWI is on the basis of research); and *activists* (those that engage in counter-efforts to dam development, but that do not fall into the other categories); however, we recognize that many individuals may refer to themselves in different or multiple terms. Within these definitions, community members represented 20% of the active participants, while researchers made up 35% and 45% were activists (Figure 9). Of those that are specifically identified as impacted community members, gender is largely balanced: 53% women and 47% men, while it was an even divide of 50% women and 50% men for activists, and only 40% women to 60% men researchers (Figure 9). Participants live and work in different watersheds around the world, including in Argentina, Bangladesh, Brazil, Cambodia, Canada, China,

[10] Allies are defined here as participants who seek to support dam-impacted communities and challenge barriers that further inflict injustices on them. In this paper, allies are differentiated from community members, as being those that have not been directly impacted by dam development. Allies include Indigenous and non-Indigenous researchers, artists, activists, and members of civil society groups, all who aim to prioritize community members' needs before their own agendas. I view allies as different from advocates, as an advocate can be anyone speaking on behalf of themselves or others (i.e., both allies and community members can be considered advocates).

Colombia, Costa Rica, Germany, Guatemala, India, Laos, Mexico, Nepal, Panama, Spain, Thailand, and the United States; with those in North America, Latin America, and South Asia representing the majority (Figure 11).

Figure 11

Distribution of DWI Participants by Social Roles, Subcontinent, and Gender



While the network operates around the world through the participants and their connections, the current coordinators are based at the University of Manitoba in Treaty 1 territory[11] (Winnipeg, Manitoba, Canada). As one of the coordinators of this work, I recognize the importance of placing myself within the work itself to address my role in contributing to power imbalances that are imbedded in research (Smith, 1999). My involvement is in part for the completion of the academic requirements as a Master's student, which means that there are inherent biases and power dynamics at play in how this work has evolved and is reported here. I am a white woman of settler decent that has not been negatively affected by dam development, yet have been granted the privilege of capturing the formal and informal discussions and any insights that emerge from those who might be considered "insiders" or "outsiders" (Hill Collins, 2008).

[11] Treaty 1 was signed in 1871 between the Crown of Great Britain and Ireland and the Anishinabe and Swampy Cree nations, for peace and friendship. (Treaties 1 and 2, 1871). Today, the area is recognized as a part of the traditional lands of the Anishinaabeg, Ininew, Anishininew, Dene, and Dakota peoples, and the homeland of the Métis Nation.

In engaging in this coordination and documentation work, I used a participatory action research (PAR) method. Through PAR, we were all participants and co-facilitators involved in the action, research, and related discussions. We operated under the view that "ordinary" people also produce knowledge that is useful in struggles for change, and [that] the research process itself can be an important arena for making change" (Dyrness, 2011, p. 203), and therefore heavily relied on "insider" experiences to shape the formation of DWI. In alignment with scholarship (Reason & Bradbury, 2007), we engaged in processes of knowing and doing, followed by reflection and more action. This study was in part informed by Anderson & McLachlan's (2016) conceptualization of PAR as being a cyclical processes of 1. *Planning* actionable items to address an identified problem; 2. *Acting* on the plan; 3. *Observing* the consequences of the actions; and 4. *Reflecting* on the meaning of the observations to inform the next cycle. I conceptualized DWI's emergence into four such cycles of knowledge mobilization and action (described later in Figure 13).

Throughout each cycle, methods of PAR were utilized, allowing me to engage as a participant in the action, while also documenting the proceedings (Fuller & Kitchin, 2004). In November 2019, I assisted in the organizing of the international conference, Kitaskīnāw, which provided an opportunity to gather insights using evaluation surveys and session notes. The evaluation surveys asked for feedback on the conference itself as well as what hopes participants had for international collaboration. Session notes taken during the conference reflected the outcomes of breakout groups regarding the formation and governance of such an alliance. I summarized these findings into a document that then served to help inform the decisions of the Advisory Council that was established in March 2020. In mid-2020, I conducted semi-structured qualitative interviews with 16 individuals, including community members and allies connected to watersheds within and beyond the borders of Bangladesh, Brazil, Canada, Cambodia, Guatemala, India, Laos, Nepal, Panama, Thailand, and the United States to get a sense of what hopes they had for the network. Through several iterative cycles, I inductively coded the interview data for any general themes that had emerged from the conversations, and subsequently deductively coded for specific understandings of the need for a transnational network. However, as codes inherently grant the coder greater power of deciding what voices and messages are included (Tuck & Yang, 2014), the interviews continued to be revisited throughout the project to realize other perspectives and deeper meanings that were not initially identified.

In early 2021, one year following the creation of DWI, check-in surveys were distributed to the Advisory Council members for them to articulate what was working, what needed improvement, and what next steps they wanted to see. A summary of the results was made available to the Advisory Council to facilitate further discussions on what directions should be taken. Later that year, as subcommittees within DWI became more established, another survey was sent out, this time to get a sense of what experiences others not involved in the network were facing regarding the use of "green", "clean", or "sustainable" framing by the dam industry. The results of this survey were again summarized and made available to those involved in the efforts countering "greenwashing".

Through the existing Facebook account run by Waniskātān, I created and monitored two DWI Facebook groups – one public, one private – which served as spaces for individuals and groups to share information among members and with other networks. The data, stories, calls for solidarity, and engagements in these posts provided further insights into what different people were needing, who was participating, how different people could engage, and where the network was reaching. The built-in Facebook analytics also provided information on who posted the most in the group, which was useful in understanding engagement.

Throughout 2019-2021, many formal and informal meetings were held. I attended, documented, and often facilitated most of them to gather notes to further inform how the TAN was emerging. Meetings were also typically audio recorded so that those not in attendance could listen along, although these recordings were rarely accessed and instead individuals read the written notes. These meetings, coupled with the aforementioned methods, helped inform the direction of the emerging network.

4.3 Results

4.3.1 Understanding the Need for a Dam-Related Transnational Network

The need for DWI is rooted in a long history of efforts that community members and allies have taken to enable justice for the ecosystems and people affected by the development of dams. These are complex stories that are embedded in systems of oppression; discussions that have been explored elsewhere (Alfred & Corntassel, 2005; Isaacman & Morton, 2012; Procter, 2020; Urt, 2016). Here I choose to focus on understanding the specific needs for transnational networks on a more empirical, rather than theoretical, basis. Participants of the network emphasized in the meetings, surveys, and interviews that they needed more collaborative efforts

to help achieve their goals. These needs can be generally classified into the two main areas that TANs focus on as a means for change: information and policy.

The sharing of information occurred both internally and externally through DWI. Internally, community members expressed their hopes to share knowledge among themselves as a means of learning and coming together. John Gonzalez of the Kischi Sipi basin in Central Canada emphasized the need for impacted communities to be connected on the basis of their similar experiences facing dams and other extractive projects around the world: "*We cannot segment ourselves any more than we could segment these infrastructure projects*". Denise Cole from the Mista-Shipu basin in Atlantic Canada emphasized: "*The more we share our stories, the more we see the commonalities and the common threads and how this network works*". Laisa, from Brazil, emphasized the need to affirm region-specific knowledge and to connect knowledge between regions: "*It's important to open more space to hear the voices from Latin America and also build a "bridge" to connect our knowledges*." In connecting knowledge across a network, those at the 2019 international conference viewed it as an opportunity to "*share knowledge of partnerships and methods*" (Respondent 81) and for "*creating understandings of the issues from many perspectives and find collective solutions*" (Respondent 24). Indeed, those at the conference emphasized a need to create spaces for sharing knowledge as a means of bringing together people, communities, and different understandings to create change (Figure 12).

Figure 12

Word Cloud of Terms Used in Brainstorm Session at the Kitaskīnāw Gathering, 2019

Note. The larger the word, the more frequently it was used.

Individuals also expressed the need to mobilize this shared knowledge externally. Jonathan González Quiel from the Chiriquí Viejo River basin of Western Panama expressed that a transnational network was needed to help highlight the situations communities are facing: "*the international alliance (would be) really helpful because it allows us to give visualizations of struggles*". Like Keck and Sikkink's (1998) boomerang model, he shared his hopes that others could mobilize their own governments or powerful corporations and NGOs to publicly shame or hold the government of Panama accountable for encouraging industries to persist in repressive development. Nipon Tripura from the Chittagong Hill Tracts in Bangladesh, also expressed that due to the *Digital Security Act* (2018) in his country, he and his colleagues were restricted from being politically active on social media, so were seeking a safe network through which to share their own experiences: "*In an international platform, we can represent ourselves. Build leadership and get support to fight against the government and work for our rights*."

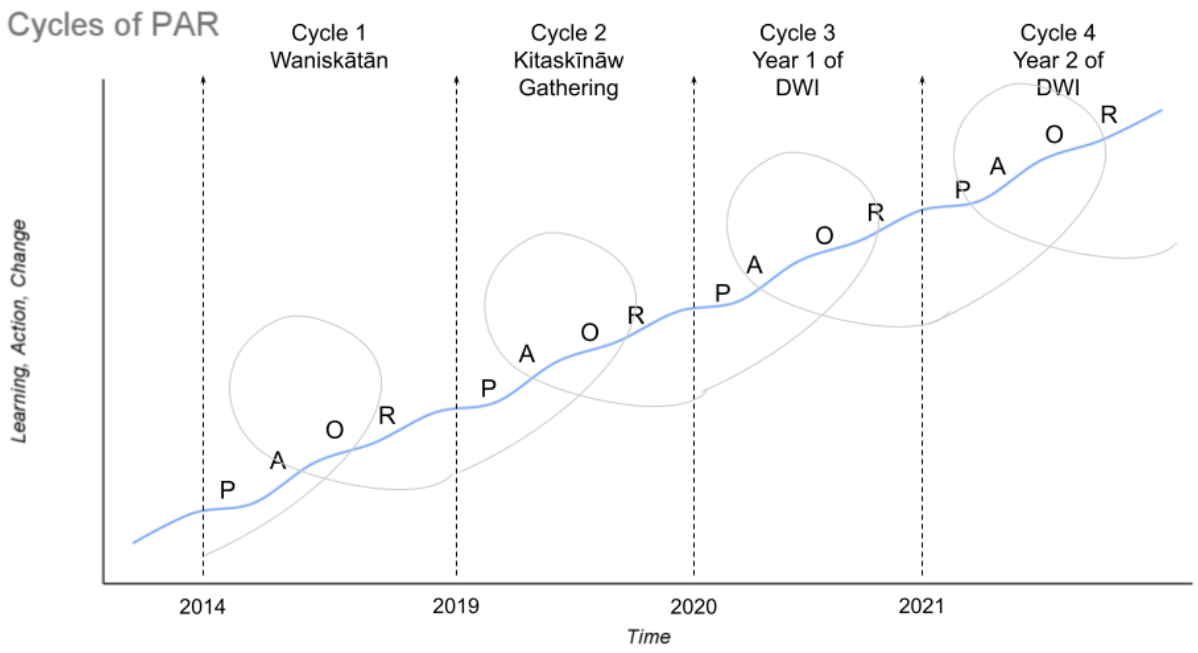
The need for large-scale change was also highlighted by many. Through the presentations and discussions at the Kitaskīnāw gathering, shared visions emerged for action, such as: stopping all dam construction; decommissioning existing dams; de-commodifying water; reclaiming identity, language, and sovereignty; and implementing alternative energy projects. As a means of engaging in this work, individuals expressed the need to change policies and regulations that are enabling dam construction and that perpetuate injustice. Many of these ideas emphasized engaging with politicians and challenging the industry's messaging that dams are "clean", "green", or "sustainable". Meg Sheehan, from the North American Megadam Resistance Alliance (NAMRA) based in Massachusetts, United States, shared how pervasive this rhetoric was in her work: "*[Governments] are totally swayed by the industry. Even some of our allies at big environmental groups around here have bought into it. And so we're in fact, even fighting with them*." She went on to explain that some of the large environmental NGOs, including the Nature Conservancy and the Conservation Law Foundation (Whittle, 2021), have made settlement agreements with the corporations, in which they receive millions of dollars for environmental projects if they do not oppose the dam development. In countering these claims, Meg and others emphasized the need for collaboration on researching existing policy issues and initiating a campaign to influence politicians and groups enabling these policies.

4.3.2 The Evolution of Dam Watch International

In borrowing from Anderson and McLachlan's (2016) understanding of PAR as cyclical, we categorized the emergence of DWI into four cycles. While there were collaborative efforts prior to the start of Cycle 1, for this paper, the network is identified as emerging in 2014 with the formation of Waniskātān: Alliance of Hydro-Impacted Communities. Waniskātān itself emerged from community members and allies facing dams along the Kischi Sipi (Nelson River) and its tributaries in Northern Manitoba. These regional efforts then led to Cycle 2: the *Kitaskīnāw* international gathering in 2019 that brought together community members and allies from over 25 different watersheds around the world. While the gathering itself only lasted 4 days, the second cycle focused on the learning and hopes that emerged from it. Cycle 3 followed the first 11 months of Dam Watch International, and the many lessons that were learned. In Cycle 4, and the second year of DWI, the beginning of larger collaborative actions and knowledge mobilization was examined. Throughout each cycle, there were patterns of planning, action, observation, and reflection that emerged (Figure 13).

Figure 13

Cycles of Participatory Action Research in the Evolution of Dam Watch International



Key: P= Planning, A= Action, O = Observing, R= Reflection

Note: Figure is adapted from the original by Anderson and McLachlan (2016). Each cycle is viewed as a continuous motion of learning, action, and change. In each subsequent cycle, these outcomes increase.

4.3.2.1 Cycle 1: Waniskātān. This regional alliance emerged from frustrations surrounding unjust processes for dam development that prioritized opportunities for industry over the wellbeing of communities in northern Manitoba that were struggling against the long-term effects of dams. A concerned citizens group formed in response to hearings related to the construction of the newest Manitoban megadam, Keeyask, bringing together community members as well as researchers and activists with long-standing relationships with these communities. Together the group applied for and were successful in receiving a seven-year, 2.5-million-dollar funding opportunity through the Social Sciences and Humanities Research Council (SSHRC) of Canada. Under the name *Waniskātān* – meaning "rise up" or "wake up" in Cree – emerged a regional alliance of 24 Cree (Ininew/Inniniwak), Anishinaabe, and Métis communities affected by dam development; 22 researchers from nine universities; and 14 partner organizations (Wa Ni Ska Tan, n.d.).

Annual gatherings hosted by Waniskātān have occurred since 2014, bringing together community members and allies to discuss priorities and opportunities for knowledge mobilization and change (Figure 14). Gerald McKay, a member of Misipawistik Cree Nation and of the Steering Committee with Waniskātān, emphasized the importance of collaborative efforts: "*We have no money to fight Hydro, so we've got to fight back with words and with words we can fight back. By telling the truth about what really is happening to these communities*." (Wa Ni Ska Tan, n.d.). Building on these needs, over 50 community-initiated research projects have been funded by Waniskātān, enabling community experiences to be shared more broadly with the public and academia, and for opportunities to be established. Members have also participated in provincial and federal regulatory hearings, international conferences and meetings, and policy conversations, aiming to change the regulations that grant governments and corporations control over communities and the landscape. While these efforts have resulted in some change, the collaborators of Waniskātān also observed that parallel efforts were occurring around the world, and each region was struggling to oppose the well-resourced corporations and governments developing dams.

Figure 14

Participants of the 2015 Gathering of Waniskātān in OCN, The Pas, Manitoba

Photo courtesy of Jonathan Ventura, 2015.

4.3.2.2 Cycle 2: The Kitaskīnāw Gathering. In recognizing the need for collaboration, an international conference was hosted in Winnipeg in November 2019, with the name *Kitaskīnāw*, meaning "our land" in Cree. The gathering drew together over 200 community members, academics, activists, advocates, and artists from 14 different countries. Two critical outcomes emerged from the conference. Firstly, through discussion spaces, exhibitions, cultural experiences, and presentations, the conference enabled an initial opportunity to share knowledge and experiences among community members, activists, artists, and academics (Figure 15). In the conference evaluation forms, respondents remarked on the impact of sharing their experiences: "*I like how I learned how other Indigenous people are dealing with the same problem as in Northern Manitoba. I never knew about their problems too*." (Respondent #36).

Secondly, notes from the group discussions and evaluations emphasized a strong desire for global collaboration that could challenge ongoing dam projects. Indeed, 85% (n=76) of those that filled out an evaluation responded that they wished to participate in a transnational network, with many emphasizing the need for greater unity: "*We can't fight the system on our own and there are so many similarities across the world*" (Respondent #5). In echoing the community-grounded format of the gathering itself, individuals reflected that transnational efforts should be centred on the needs and knowledge of those that are often neglected in such spaces: "*Any next*

steps must include community-based decision-making and traditional knowledge" (anonymous Kitaskīnāw participant).

Figure 15

Participants at the Kitaskīnāw International Gathering Partaking in a First Nations Round Dance Ceremony

Note: A Round Dance ceremony is an opportunity for people of different backgrounds and cultures to join together via dance. Photo courtesy of Emily Unger for Waniskātān, 2019.

4.3.2.3 Cycle 3: The Emergence of Dam Watch International. In early 2020, a diverse group of conference attendees formed the Advisory Council to provide an initial direction for a transnational network, based on the concerns and hopes expressed during and immediately after the 2019 gathering. Shortly after this first meeting, the COVID-19 pandemic began to escalate, dramatically shifting all sense of normalcy and stability around the world. Despite this setback, and in some ways because of it, individuals continued to find ways to be engaged. Indeed, the necessary switch to online gathering spaces helped expedite the use of virtual platforms and participation in meetings regardless of location. Over the course of a few meetings in early 2020, the name Dam Watch International was selected and a logo created by participants to represent the efforts moving forward (Figure 16).

Figure 16

The Dam Watch International Logo

Created for DWI by Laura Westover in collaboration with feedback from DWI participants.

While many individuals joining the efforts had hopes for creating change right away, it was recognized that spaces were first required for building relationships and sharing knowledge. A private Facebook group was established to help maintain networking among participants of the conference. Ninety-five individuals joined the group, including several that were not at the conference but who had been invited by those who attended the conference. Not everyone was active in this group, but several felt comfortable introducing themselves and engaging in some form of dialogue. It also became a space for sharing information that people could then share with their own networks. As DWI became more established, a public Facebook group was also created to provide a secondary space for individuals and groups that had no affiliation with the conference to participate in the network in a more visual way.

A DWI website was also established early on as a collaborative space for disseminating information, accepting contributions of dam-related campaigns, written pieces, photos, videos, and stories from members and the public (https://damwatchinternational.org). To enable greater access to academic information, a publication database was also created and housed on the website. Using bibliography software, articles relevant to dam impacts and resistance were collected and organized into searchable categories. Non-academics were able to access

information more easily and researchers were able to highlight their work for additional audiences.

By mid-2020, the website and social media were garnering additional attention from individuals and groups looking to engage with DWI. Until this point, the Advisory Council members were the only people meeting in any official capacity, and any mobilization arose from them connecting with each other and their own networks. It was determined that establishing subcommittees would enable additional participation. Initially, four subcommittees were formed based on key themes that emerged from the conference: Policy; Action, Activism, and Networking; Education; and Research and Funding.

Each subcommittee formed from a diverse set of community members, activists, and researchers, and met at least once by the end of 2020. The spaces were intentionally provided limited direction, with the hope that new members would use their own experiences and visions to help shape DWI. This approach had mixed success, with many individuals seeking a space that was more established and ready for action. The Action, Activism, and Networking Subcommittee and the Education Subcommittee had less than five individuals in each, with some individuals being in both groups. As such, the groups combined to form the Action and Education Subcommittee as a space for cross-cultural sharing of knowledge and collaborative action among community members, activists, and researchers. The Policy Subcommittee, which was the only designated space for engaging in critical discussion about regulations that were perpetuating dam development, only had four very busy professionals join the first meeting. While there was a brief discussion on the issues of greenwashing, the concept was determined to be too broad, so the subcommittee was postponed until further direction was provided from the Advisory Council.

The Research and Funding Subcommittee formed out of a group of ten academics – working and living in Latin America, Southeast Asia, and North America – that were applying for a Partnership Development Grant from the Social Sciences and Humanities Research Council (SSHRC) of Canada. The funds from the grant would bolster the efforts of DWI over three years, enabling collaborative research across borders as a means of sharing more information and engaging in action. Ultimately, the first application was unsuccessful in securing funds, but provided an opportunity to engage in critical discussion about how to sharpen the vision of DWI and the application for the following in-take in November 2021.

Under the guidance of an Advisory Council member from Brazil, a Latin America and Caribbean Subcommittee was also established. Twelve members from different regional groups engaged in discussion about opportunities for solidarity, community-centred efforts, and sharing of information. However, they also had larger questions about the mission, vision, and goals of DWI, so decided to hold off on meeting formally again until the Advisory Council had solidified the network's objectives. In the meantime, the messaging app, WhatsApp, was used as an informal space for quick exchanges of information and campaigns.

Throughout the efforts of this cycle, there remained much anticipation and eagerness to engage. However, repeated questions regarding how DWI was forming indicated that the network could not keep expanding as it was, without first establishing a mission, vision, goals, and operating principles. Additionally, at this point, most of the members attending meetings were allies, so individuals emphasized the need to reflect on who was included and whose voices were not being heard.

4.3.2.4 Cycle 4: Year Two of Dam Watch International. The Advisory Council came together in early 2021 to discuss and formalize the intentions of DWI. Following several meetings, a document was produced with the vision and mission statements, guiding principles, and governance structure. Following the reflections made in Cycle 3, it was decided that more representation of community members from around the world was needed to better understand what goals DWI should pursue. As such, a roundtable discussion meeting was organized to invite others to engage and help inform DWI's next steps. This preliminary discussion brought together 24 individuals – including several new community members, activists, and researchers – who shared valuable information and emphasized the desire for collaborative action. With these further insights, plans for successive conversations were initiated to continue engaging informally.

During this period, three of the subcommittees continued to pursue knowledge exchange and action. Notably, the Research and Funding Subcommittee regrouped ahead of rewriting the application for the SSHRC grant and began to refocus the proposal to emphasize knowledge mobilization, particularly among dam-affected students, their communities, and researchers in the network. The Action and Education Subcommittee began conceptualizing tools that would bring different knowledges together to be shared in diverse ways for the public and for university classrooms. In the Latin American and Caribbean Subcommittee, new campaigns from different

regional networks were shared and collaborated on. For one, a Global Movement of Rivers and Peoples was emerging in response to "sustainable hydropower" being selected as the key theme for the 2021 World Hydropower Congress hosted virtually by Costa Rica. The Latin American and Caribbean Subcommittee had connections to this movement and began to engage members of DWI in solidarity actions.

During this time, the policy group was not yet meeting, yet another node emerged regarding the "sustainability" claims. Activist researchers in India were noticing an increase in the use of "greenwashing" messages being used by governments and corporations throughout the country. In recognition of this as a global issue, they turned to DWI, and a Greenwashing Ad Hoc Committee was established. The group emphasized their hopes to engage in action and soon caught wind of the World Hydropower Congress' greenwashing. In response to this, the group created a statement countering the claims being made by the International Hydropower Association's "San José Declaration on Sustainable Hydropower". Through the Latin American and Caribbean Subcommittee, the declaration was shared with the Movement and earned more signatures.

To get a sense of what other efforts would be beneficial in different contexts around the world, a survey was distributed throughout DWI and adjacent networks by the Greenwashing Committee. The survey resulted in 15 responses, with representation of community members, activists, advocates, and researchers facing greenwashing in the context of dam development in Brazil, Canada, India, Sweden, and the United States. All the respondents expressed that they had connections with other groups regionally, nationally, or internationally, and had tried several different methods for mobilizing knowledge, such as public awareness campaigns, teaching students, writing papers, or conducting research.

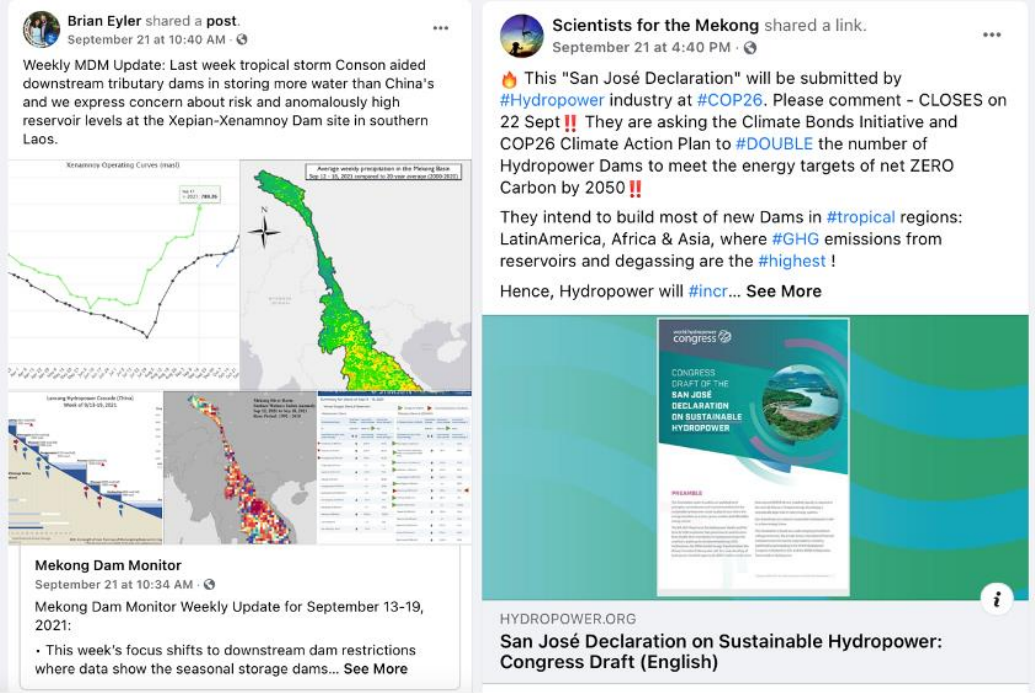
However, there was a sense of frustration that these tactics were not enough to meet their goals: "*We have supported or done all of the (aforementioned methods). Still losing*." (Respondent #8). In particular, respondents highlighted that governments were heavily involved, commenting that this creates additional difficulties in resisting dam development: "*Governments as everyone knows are stuck in their political realm, political survival and do not admit their policies are all greenwashed products and they, too, will promote them as green*." (Respondent #11) and "*In Southeast Asia, shaming them, or direct confrontation never works. This is a face-saving world. There's great tolerance for diverse views, dependent entirely on how these are*

delivered." (Respondent 15). In response, many respondents emphasized the need for more collaborative, large-scale knowledge mobilization, including sharing studies and research in ways that are accessible to the public, such as through documentaries and multi-media reports; and connecting with others' existing efforts via signing onto letters, sharing information on social media, and joining campaigns. These needs aligned with those identified early on in DWI which had led to the establishment of the website and social media. In engaging new individuals in the working groups, there was hope that DWI could engage in action for change, but these concerns have yet to be acted upon.

The public Facebook group also continued to gain members as the DWI network grew. By late 2021, over 120 individuals, most of whom were not at the conference, had joined from regions around the world, and the space had daily activity from community members, researchers, and activists sharing their experiences, campaigns, and information associated with dam development (Figure 17).

Figure 17

Examples of Posts from Individuals and Groups in the DWI Facebook Group Demonstrating Community Members' Experiences, Scientific Data, and Opportunities for Activism



Note. These examples were posted over a two-week period (September 6 to September 21, 2021).

In November 2021, two Advisory Council members – Jonathan González Quiel and Roberta Benefiel – and an associated Indigenous student – Fiona Lebar – were able to secure funding and passes to represent DWI and their regional groups at the 26th annual United Nations Conference on Climate Change (COP26) in Glasgow, Scotland. Prior to attending, they connected with an emerging coalition, "Undam the UN", that had formed among organizations such as International Rivers, Waterkeeper Alliance, and Rios to Rivers, that were attending COP26 to specifically call on leaders and other activists to not consider dams as climate change solutions. The DWI participants, along with the coalition, was successful in engaging in conversations with others in sessions and on the streets in protest (Corbett, 2021), yet the members each shared their disappointment that more was not achieved by politicians. Jonathan called the conference a *"double-edged sword for the territories of planet Earth",* sharing that "*At no time during COP26 was there a discussion of reparation to victims who have been killed for defending the environment, much less recognition of environmental defenders."* and that instead, politicians from Latin America had shared their ambitious plans for more dam construction

(Gonzalez Quiel, 2021). Fiona shared similar sentiments of disappointment in the politicians, yet also expressed her optimism in the opportunities that were afforded:

> *"It is easy to look at COP26 as a whole and see it as nothing more than a greenwashing event that politicians attended to make themselves feel like they are trying to protect the planet. As a grassroots organization representative, COP26 was so much more to me. I had the opportunity to learn from individuals from around the world and hear their personal stories about how they have been affected by mega dam development and climate change… The atmosphere at the conference was truly a mix of fear for our future but also optimism that if we work together and listen to Indigenous individuals from around the world, we might have a chance at creating a better future."* (Lebar, 2021)

Roberta was also prepared to take what she had experienced and turn it into effective action. She presented back to the DWI Advisory Council that the anti-dam activists were often disconnected from each other, as there were no specific areas dedicated to countering dam greenwashing. She therefore expressed her commitment to working towards establishing a coalition that could attend COP27 in 2022 and have its own exhibition area dedicated to educating politicians and fellow activists on the impacts of dams. These experiences and motivations demonstrated that DWI was capable of supporting individuals at a global platform, and if it so chose, could continue to participate in or even lead transnational debates.

4.3.3 Challenges and Successes

Through the reflection on these spaces by the researcher and participants, it emerged that DWI still needed to be modified to enable full participation by impacted community members in internal and external information exchange. It had been initially envisioned that DWI would operate through an advisory council and several subcommittees, with information flowing reciprocally between each committee (Figure 18, Diagram 1). However, in reflecting upon the evolving membership, it became apparent that disparities were emerging in how information was being shared among community members, allies, and the public (Figure 18, Diagram 2).

Figure 18

DWI's Evolving Governance and Knowledge Sharing Structures

Diagram 1:
DWI's Envisioned Governance Structure

Diagram 2:
DWI's Operating Structure as of 2021

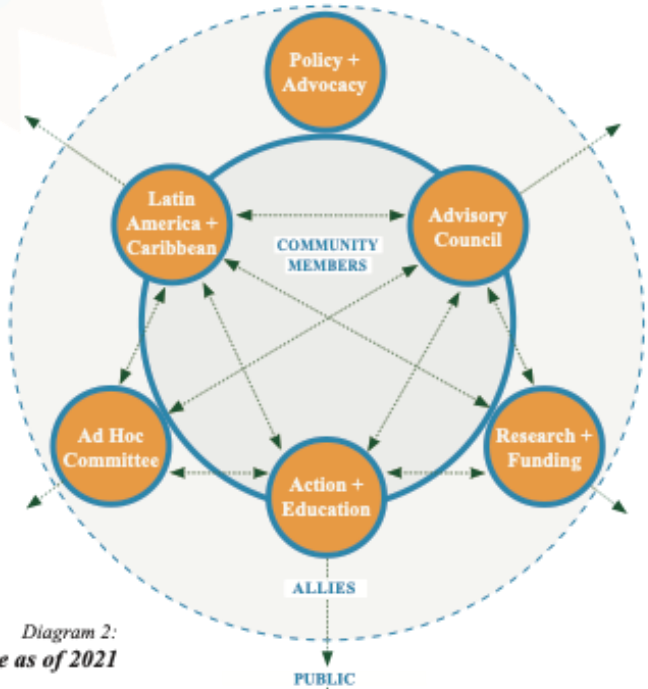
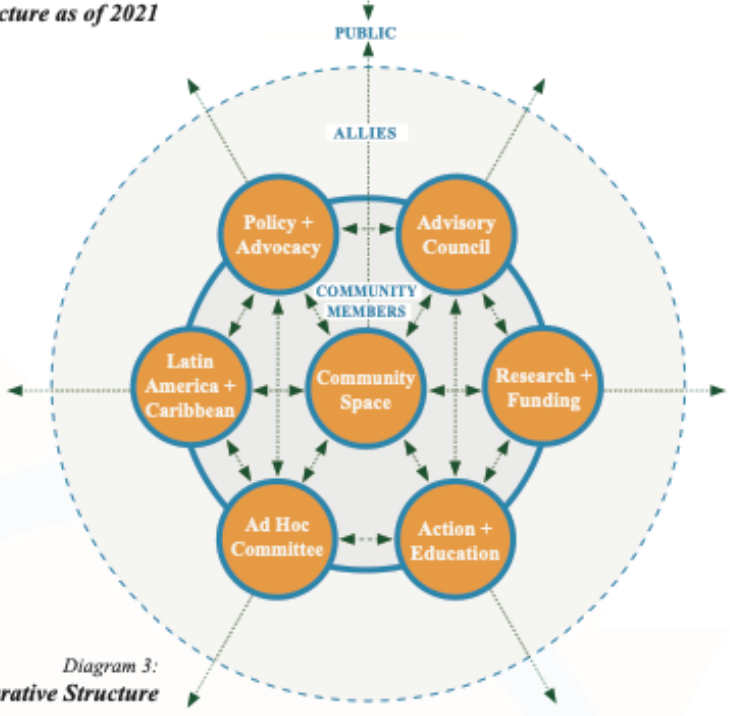


Diagram 3:
DWI's Ideal Cooperative Structure



Diagrams created by Dilaxshy Sivaguranathan, based on guidance from the DWI Advisory Council (Diagram 1) and conceptualizations by Rebecca Kingdon (Diagram 2 and Diagram 3). Arrows indicate the reciprocal flow of knowledge.

For example, the Greenwashing Ad Hoc Committee and Research and Funding Subcommittee – two of the most action-oriented groups – had not succeeded in including any community members. The Advisory Council, Action and Education Subcommittee, and Latin America and Caribbean Subcommittee were more successful in this respect, but – as will be discussed below – disparities also occurred within these spaces. The Policy Subcommittee was put on pause, so was envisioned as being stagnant in the ally realm.

In reflecting on the limitations of the spaces for community members to be involved, a new structure was envisioned (Figure 18, Diagram 3). This structure captured the need for a community space that was informal, yet informative for the other committees, that would be central to all decision making. Several members had indicated their hopes for this space, but the three community leaders hoping to help initiate it each in turn expressed the need to focus on family and their local concerns during the pandemic. Counter to the lack of inclusion present in some of the committees (Figure 18, Diagram 2), the ideal structure (Figure 18, Diagram 3) also envisioned each committee being composed of both allies and community members.

In demonstrating how the challenges and any successes played out in terms of sharing information internally, sharing information externally, and engaging in policy realms (Table 3), three notable examples are shared below.

Table 3

Challenges and Successes in DWI

Example	*Challenges*	*Successes*
Meetings (Internal information exchange)	Power dynamics	Information exchanged between cultures and places
Facebook Group (External information exchange)	Not accessible to all members	Information shared beyond DWI by community and allies
Countering Greenwashing (Policy)	Short time frame; limited capacity	Counter statement created to challenge industry claims

4.3.3.1 Internal Information Exchange. The exchange of information among its members was one of the main efforts of DWI. However, there were limits in who was able to join these conversations. For community members living with the impacts of dam development, DWI was viewed as a critical space to share their experiences and discuss action, a space that was not available in communities due to complex social and political dynamics. Rita Monias, a land defender from Pimicikamak First Nation, shared her enthusiasm at joining the Advisory Council:

> *"I'm going to tell you, I'm really looking forward to this. I am very very truly truly truly very happy to go this far, because… People around here don't want to hear what I am doing, but I'm doing it anyway."*

However, living with the effects of dams also meant that there were inherent barriers. Of those that answered the conference evaluations, 85% (n=76) expressed interest in participating in an international network in the future, but several of these indicated they did not have the capacity to be involved in the inception. Several attempts were made to invite conference participants to be involved, yet by the end of 2021, only 22% (n=46) of the conference participants were engaged in some capacity – such as the Facebook group, subcommittees, or partnering on the SSHRC grant application. Further, while approximately 40% of the conference participants were community members that had been impacted by dam development, this demographic represented less than 20% of those involved in DWI. These figures indicated that barriers were present in achieving a space that was community-centred.

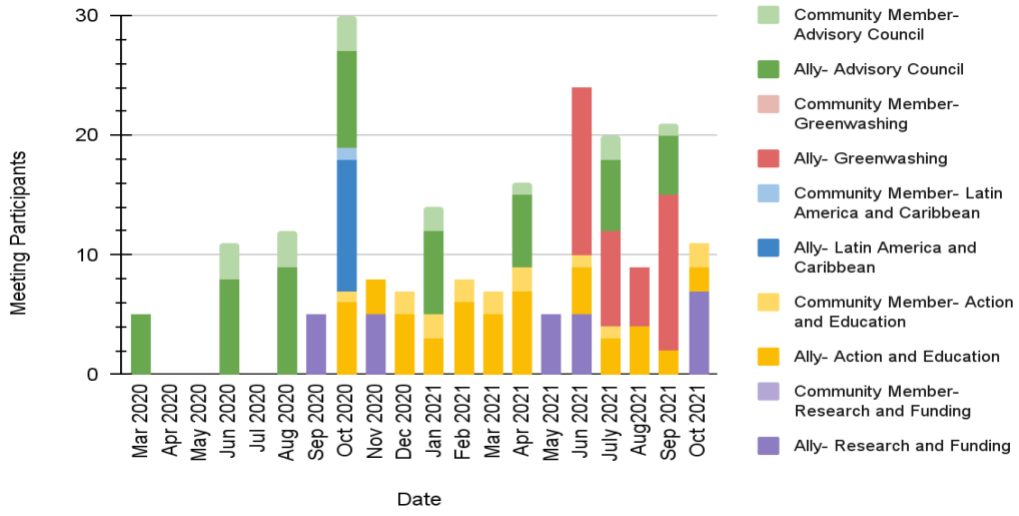
For one, involvement in DWI was peripheral for most community members. Therefore, scheduling meetings during the day limited some members' opportunities for engaging in meetings. For many allies, joining DWI was considered a part of their daily work, so they often had greater flexibility and support to join. Several community members stepped away from DWI, each citing that they needed to focus on family or on local concerns, or that they were not able to attend enough meetings to feel that they were contributing as they would like to. Others stayed involved, but familial obligations frequently meant that they were unable to attend meetings, thereby unfairly limiting their involvement in the decision making and direction of DWI.

In the meetings themselves, power dynamics also played out. Most meetings occurred via the online meeting platform Zoom. The COVID-19 pandemic had normalized online meetings, and the platforms provided a variety of options for users to join, including toll-free call-in numbers for regions around the world that had poor internet connection. As this platform was new to most individuals, there emerged new social etiquette for these calls, including making it acceptable to join with just audio while keeping cameras off. While this norm was established, those most likely to keep their camera on were the allies. Those without a camera often remained quieter and listened more. While everyone participated, those that were the most vocal directed the conversations, leaving limited time for other knowledge and ideas to be shared. Therefore, the direction of these spaces was guided by those that had the most voice, and in most cases, this was the allies.

Given the limitations of these meeting spaces, there also continued to be more allies than community members in each of the meetings (Figure 19). The Advisory Council and the Action and Education Subcommittee consistently involved community members, but representation was from either Canada or Panama, so there was limited direct involvement of community voices from other regions. The Greenwashing Committee and the Research and Funding Subcommittee both failed to engage any community members, even as time progressed. Overall, the committees were providing much of the direction of DWI yet were limited in their capacity to be directed by community members or their concerns.

Figure 19

Composition of Committee Meetings Over Time



Enabling a space for non-English speakers was identified as a priority early in the formation of the alliance. Ultimately, English remained the lingua franca, which entitled any English speakers to greater access to resources and participation (King, 2004), but measures were taken to increase the accessibility of DWI's spaces. Spanish and Portuguese translators were hired to translate materials for dissemination throughout the network and on the website. Live interpreters were also made available for non-English speakers to join meetings normally conducted in English. Additionally, the Latin America and Caribbean subcommittee operated in Spanish and Portuguese only, enabling an important space for engaging individuals from across the Americas in discussion. While more spaces were required with similar regional opportunities for collaboration, this committee provided an important model for integrating knowledge and resources from different regions in a more accessible way, particularly through using WhatsApp as an informal, quick, and safe way to engage.

Alongside the issues, cooperation became evident in the way that these spaces brought together individuals from around the world for knowledge and cultural exchanges (Plaut, 2012). In the December 2020 check-in survey, a member of the Advisory Council remarked on the experience of being involved: "*What I like about the alliance is that it is kept rather informal and easy paced. The discussions/meetings are held in a participatory manner and all of us get a chance to express our views, share things*". While there was a need for increased accessibility regarding meetings, the sustained engagement of the committees, particularly the Action and Education Subcommittee and the Greenwashing Committee (Figure 19), demonstrated that people were keen to commit to making these spaces work. If it continued to reflect on and learn from some of its issues, individuals, such as community member Jonathan González Quiel, felt that DWI was still on track to addressing community concerns:

> (*Spanish) "Dam Watch Internacional tiene la posibilidad de construir un espacio de articulación que pueda frenar proyectos que destruyen el los territorios. Para ellos es preciso garantizar que las comunidades tengan participación activa y que los*
>
> *(Translation) "Dam Watch International has the possibility of building a space for discussion and planning that can stop destructive projects. For them, it iss necessary to ensure that communities can actively participate and that the movements*

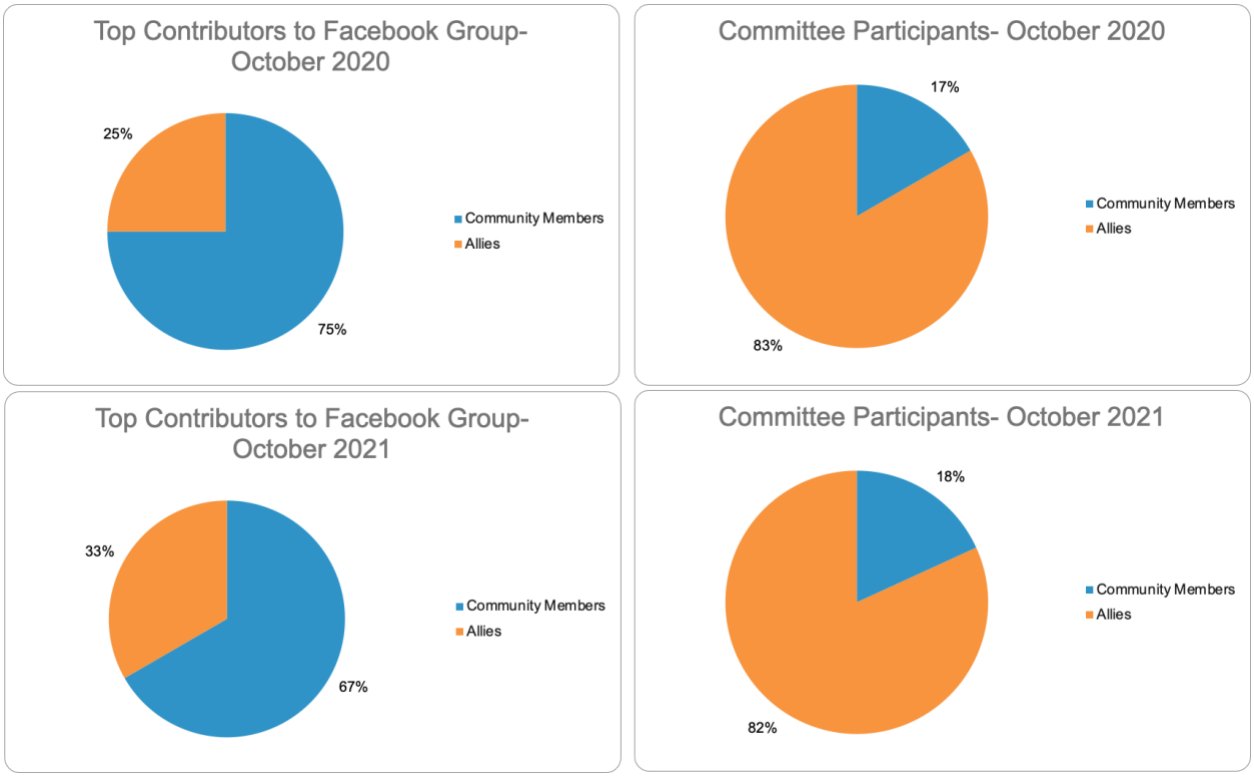
movimientos puedan articular junto con los académicos."

work with academics."

4.3.3.2 External Information Exchange. Compared to the meetings, the Facebook group acted as a more equitable space, at least for those that could use social media in their given political context and access to technology and the Internet. In this space, community members and allies alike had equal access to the Facebook group functions. Unlike Zoom, Facebook was a public arena that was already familiar to many members, so many of the community participants were quite comfortable sharing their experiences on this platform. Compared to live meetings, this group enabled individuals to engage on their own time, which resulted in community members participating at a much higher rate than allies; an almost inverse of the involvement in meetings (Figure 20).

Figure 20

Participation of Community Members and Allies in the Facebook Group and Committees (October 2020 versus October 2021)



Further, the Facebook group was a space that was growing on its own, through each individual's network. Indeed, only 33 of the over 120 members of the Facebook group were at

the conference. In examining this from a cooperative perspective (Plaut, 2012), this space enabled the integration of traditional knowledges and non-traditional knowledges in creative ways, such as through videos, photos, data, and stories (Figure 17). Community members frequently posted about experiences with dam development and the tireless work advocating for their communities. In sharing a series of photos of resistance and hydro impacts, Rita wrote: "*The injustices, we, the indigenous, face, yet we are one of the world's most conservationists and we respect water, land, and people's lives*." Many grassroots groups were also able to benefit from the spaces in sharing events, data, and information on the tactics dam proponents were using (Figure 17). This enabled multi-way knowledge exchange within the group, while posts were also frequently shared beyond to other pages or networks for further dissemination.

Given that approximately 46 conference participants were actively engaged in DWI (and only 33 of these were in the Facebook group), it also exemplified that this platform was not accessible to every member. For some individuals, such as Nipon Tripura and his colleagues from Bangladesh, they could not post freely about their concerns or experiences with dams without fear of retribution: "*If anyone writes anything on social media, there will be charges against them. So, it is better if any other alliance can speak for us (on this platform).*" In Brazil too, Laisa expressed that the dam corporation, Itaipú, has a lot of money and power, so as an ally it is difficult to be involved in this work for fear of job security and safety:

> *"When you're engaging in this kind of fight, it is always dangerous, because you're facing big corporations… If I publish something and my name is there, I think for me getting a job in the country would be difficult. Or depending on what I write, it might even be dangerous… In this region where I am, there aren't armed conflicts, but I know there are cities close that there are, and then they can kill for nothing."*

Indeed, serious violence against those engaged in this work has also been documented in the literature (Scheidel et al., 2020). As such, a majority of those vocalizing concerns, particularly against governments, on Facebook were from North American, while WhatsApp was more frequently used to share events and information by those in Latin America and South Asia. In bringing together these voices, there continues to be a need for spaces that enable participation of all interested members.

4.3.3.3 Participating in Policy. While efforts targeting policy were not fully developed within the first couple years of DWI, in part because of the failure of the Policy Subcommittee to

meet, collaboration within the network led to the creation of the San José Declaration Counter Statement (Figure 21) (Dam Watch International, 2021). This represented a critical first document created by DWI that countered the "sustainable dams" claims of the industry. Following the guidance of the those involved in both the Latin American and Caribbean Subcommittee and the Global Movement for Rivers and People, this statement emerged from the Greenwashing Committee, successfully bringing together knowledge and perspectives of researchers, activists, and community members to counter the claims being made by the dam industry leaders and supporters. Once written, the document was sent to other groups in the social movement and through the DWI network to add their signatures. The document was then distributed on social media and in e-newsletters throughout the network. While other campaigns were housed on the DWI website and other events had been shared by DWI on Facebook, this statement marked the first instance in which collaboration occurred across two subcommittees, and the information was mobilized into a document that DWI itself released.

Figure 21

The San José Declaration Counter Statement

This process evolved over two weeks and the document emerged while the World Hydropower Congress was already in session. As such, there were limits in who the counter statement was disseminated to and any accompanying discussions. For example, there had initially been hopes that this document could be sent to delegates attending and speaking at the Congress, including individuals representing large NGOs, such as the World Wildlife Fund and The Nature Conservancy. However, given the limited capacity of the newly formed

subcommittee and the restrictive virtual format of the Congress, this became impossible and instead the group ultimately watched as delegates from the mainstream ENGOs went forward in supporting the claims of dams as “sustainable” options.

4.4 Discussion

In building on existing TAN literature, DWI contributes a unique perspective on efforts that are emerging in response to a global agenda. While dam-related TANs typically emerge in response to a particular dam development project (Kadirbeyoğlu et al., 2005; Leong, 2007; Moreira et al., 2019; Shipton & Dauvergne, 2021), DWI has emerged in response to the ongoing building of dams around the world. In this way, it represents a network that is not focused between two countries in the typical position of dam funder versus host countries. Instead, it has evolved from and reflects an inherently international network from which partners can be identified and mobilized when specific needs arise. In this way, it builds on literature regarding why players get involved (Kiel, 2011), demonstrating that individuals are involved to help access resources and contribute knowledge reciprocally, as they are motivated to challenge the systems enabling dam development.

Building on the existing literature on the power dynamics of TANs (De Almagro, 2018; King, 2004; Plaut, 2012), I have contributed further insights into who wants to be involved, who gets to be, and how this involvement changes over time. While other literature has demonstrated that community members can be involved through organizations (Moreira et al., 2019; Plaut, 2012), we have specifically indicated that there is strong interest from community members to be involved in this work as their own individuals, independent of being involved in an organization or local group and – indeed – in the leadership of the TAN. As such, I have worked to facilitate spaces that are inclusive and adaptable to any community member that wishes to join. However, some spaces have been more successful in achieving this goal than others. The spaces that are open to discussions and reflection, namely the Advisory Council and Action and Education subcommittee, have met consistently and had ongoing involvement from community members. Conversely, the Research and Funding Subcommittee and the Greenwashing Committee have emerged from and responded to specific actions, which has inadvertently excluded community members. While more work needs to be done in this arena to ensure that actions are centred on community voices and needs, I also recognize that different spaces should exist or be prioritized to achieve different needs.

As such, I have identified the need for more informal and accessible community-centred spaces. Technology has now advanced to levels in which communities affected by injustices can use social media and cell phones as a means of creating space for dialogue and networking (Moreira et al., 2019; Sanz & Alencar, 2020). While often overlooked as being informal, these spaces proved to be some of the most effective for sharing information and gaining quick responses. The WhatsApp group chat used by the Latin America and Caribbean Subcommittee was particularly well utilized and enabled the dissemination of campaigns that members supported each other on through their own networks. Indeed, WhatsApp has been a central tool for political organizing for over 10 years in places such as Spain and Mexico (Trere, 2020), and particularly for communities where the cheaper SMS and phone call options improve access to communication (Baulch et al., 2020). As such, DWI has a distinct opportunity to utilize the existing technology to help improve accessibility to mobilizing efforts and discussions spaces.

The Facebook group provided a platform for community members to share their experiences and knowledge if and when they wanted to, as a means of network members and the general public learning about the experiences. The platform was also used to document and widely disseminate data, campaigns, and news. Other studies identify that indeed these social media tools can be useful in disseminating information and communications that are critical in Indigenous movements, however, they also warn that these efforts are only effective if there is a receptive audience (Lupien, 2020). If smaller, more remote communities are unable to access these tools or be made visible, these efforts will only further serve to disadvantage groups already facing marginalization (Lupien, 2020). As such, efforts moving forward with DWI should consider enabling existing online spaces as informal areas for community members to engage directly with each other, from which direction can guide the network's actions.

In making these considerations though, safety concerns associated with the use of public social media need to be taken seriously. The threats of violence or prosecution are very real for many community members and activists opposing dam development (McGowan, 2021; Scheidel et al., 2020). Multiple members shared their concerns for security and safety in various forms, but each were determined to continue their work in whatever capacity possible – often in less public ways. DWI has a role to play in enabling safe spaces that better serve these community members and allies to engage in work that removes them from direct security concerns, or in the very least does not create further vulnerability.

It is also important to note that the ongoing COVID-19 pandemic has affected the emergence of DWI and many of these results. In interviews and surveys and through informal interactions, community members expressed that they were facing additional challenges in joining the network, including new caregiving roles, job and home insecurity, and declines in wellbeing. While individuals struggled to find a balance in home and work life, governments and industry players utilized the isolation of individuals and the bans on gatherings to their benefits. Several participants indicated that new legislation was being pushed through regarding reduced environmental protections for dams and other resource extraction (unpublished data). Mobilizing could not occur as it had, and individuals sought new ways to still create awareness and participate in proceedings despite the pandemic.

Due to these new burdens from the industry, as well as changes in routines, I also observed an overarching issue of burnout among all participants, as they became more over-committed in working against these efforts. Initially, there were high expectations for what the DWI network could provide, with many individuals and groups hoping large-scale change could emerge immediately. While this energy was motivating, each member already had existing efforts and obligations, so the network sometimes stagnated, impeding the network from achieving its goals. The nature of DWI as a volunteer network meant that the internal spaces needed to operate on their own, with members helping each other mobilize knowledge through collaborative action and the sharing of resources. However, this meant more onus on those that were joining to bring energy and provide guidance. As there were still uncertainties about what the capacity of DWI could be, duties often fell on the coordinators at the University of Manitoba, as they had become the de facto connectors to resources and other people.

This need for direction also brought new insights to the scholarship. The explanation of power dynamics here has already demonstrated that the structure of TANs is not inherently non-hierarchical as has been suggested by Keck and Sikkink (1998). Goals and objectives were required to influence how the network emerged, and when they were not available, important facets of the work- such as the Policy Subcommittee – did not take shape. Later, once the goals were articulated, individuals that joined understood the nature of the network and therefore were ready to dedicate time to helping shape the work.

As these spaces continue to evolve, actions are expected to emerge. In the meantime, we recognize that DWI has still been successful in facilitating opportunities for the sharing of

knowledge and resources, particularly through the creation of the website, webinars, the conference, several other co-created pieces, and committees. As Powell (2016) argues in relation to knowledge sharing, success is not only about the execution of the plan, but also about bringing people together. Further, Yanacopulos (2007) shares, *"Research on TANs is not only about understanding how and why they operate in the world, but also about how the research itself can be transforming."* (p. 52). While I have spent much time here explaining the "how" and the "why" of DWI, the beginnings of knowledge mobilization have demonstrated a transformation of how communities and allies can come together to address a pressing and global issue.

There is still much that can be learned from DWI as it continues to emerge over time. Each of the committees are developing plans for actions that can address dam development from different perspectives and approaches. As these spaces evolve, collaboration amongst them will be pivotal in addressing the hopes for change. Already, the beginnings of this cross-pollination were seen in the San José Counter Statement, which involved efforts between multiple internal committees to support the Global Movement for Rivers and People following a call for assistance from a member involved in both DWI and the Movement. Increasingly, other members of the network are also representing DWI in discussion spaces of other coalitions and at international forums, including COP26 in Glasgow. As these efforts continue to encourage collaboration, there is ongoing hope for this advocacy network to build and participate in spaces where community members and allies can represent themselves.

4.5 Concluding Thoughts & Implications

In documenting the emergence and evolution of this transnational advocacy network (TAN), I hope to help influence actions and scholarship that aim to assist local efforts facing resource "development" in the context of climate change. Firstly, in line with Plaut (2012), this work has emphasized that collaborative efforts be embedded in cooperation, rather than cooptation. Counter to ideas that TANs are non-hierarchical in structure, the DWI case study demonstrated that there needs to be direct acknowledgement of the ongoing challenges that dam-impacted communities have in joining these spaces, and more direct opportunities for community members to be their own advocates and storytellers.

Further inclusion in TANs can be facilitated through the PAR cycles of planning, observing, acting, and arguably most importantly, reflecting on whether spaces are meeting needs and including the voices that these networks are designed to serve. As the operations of

DWI emerged and changed over time, the PAR approach has provided a foundation for understanding change through these cycles. While there was much anticipation for policy change and action in the beginning, also engaging in observing and reflecting was necessary for building spaces for information exchange. I strongly urge others engaged in (advocacy networks) research to utilize PAR methodology as a means of truly capturing the challenges and opportunities of these spaces.

The use of informal spaces that are already accessible and utilized by community members, including social media and messaging platforms, is also critical for facilitating involvement, especially for the inclusion of impacted community members, most of who already use these tools. Some studies has begun to reveal the utility of social media and smart phones for this work (Allen, 2015; Mayer et al., 2021; Sanz & Alencar, 2020), while others emphasize the need to further explore how these spaces can be used effectively and safely (Baulch et al., 2020; Trere, 2020). Particularly in the context of a TAN in which two platforms are almost conflicting- Facebook use was widely associated in Indigenous communities in Canada, while WhatsApp was more widely used in South Asia and Latin America– there is an opportunity to further examine how community members can work together to find common grounds and collective spaces for these efforts to unfold.

While this work is still emerging and has shown the beginnings of this collaboration, it has highlighted the needs that are being echoed by individuals from different regions: that the work of healing from and stopping dams needs to come from the local contexts but be connected on the global scale. The insights shared here has demonstrated that while individuals are joining with specific needs, they have similar goals and knowledge that can help each other. By providing a central space for information and resources, DWI has illustrated a critical importance of TANs. Rather than establishing a TAN to address a singular dam project, DWI has demonstrated that the shared values and hopes for ending injustices as a whole has provided enough of a goal to bring together a committed group of individuals ready to tackle global change.

As climate change continues to escalate and dams be lauded as solutions, dam-related TANs are particularly necessary in challenging the global greenwashing. DWI has demonstrated that there is a need for a transnational network that can bring together existing groups working on this topic. Through DWI, individuals have been able to enter global platforms, such as

COP26, and collaborate with other organizations in capacities that would not have otherwise been possible. This case study also has implications for other injustices being experienced in the context of climate change. Given the very global nature of this issue and the associated capitalist solutions that continue to inflict challenges on communities that are often already marginalized, there is an opportunity for other community-grounded, collaboratively networks to emerge to provide a central space for sharing information, knowledge, and resources. Again, academics have a critical role to play in this work, whether through participating on the ground, helping fund community projects, challenging the greenwashing rhetoric, or by amplifying the voices of those involved in this work.

Chapter 5: Thesis Discussion

5.1 Dam Development

The past two years of facilitating and documenting discussions and actions related to dam development has provided me with a great deal of insight into the experiences of communities in different regions of the world. While this thesis has only touched on a portion of this work that I have observed and engaged in, I hope that a few key messages might contribute to further areas of understanding in the academy and beyond.

Primarily, I hope that in sharing the community experiences that others in the academic, activist, or even industry worlds acknowledge that dams cannot continue to be pursued under the idea that the impacts are necessary or negligible, particularly in the context of climate change. As I aimed to demonstrate at the beginning of this thesis (Chapter 2 and Chapter 3), there exists a rich body of academic and community knowledge on this topic, yet the insights shared here provide further evidence of the extensive nature of dam impacts. The community members that participated in the interviews, the subcommittees, and other formal and informal discussion spaces of DWI have shared that, once dams are built, no amount of compensation or restoration efforts to date have alleviated their experiences with livelihood loss, cultural degradation, or community unsettling. For many participants, the dams were built before they were born, but the effects continue to be felt on their generation and those that follow. These experiences counter any claims that dams are "sustainable" for communities and ecosystems. Arguing that these impacts are justifiable in any situation only further marks these projects as destructive and illustrates a lack of understanding of the experiences that are faced.

Next, I aimed to illustrate here that healing from the development that already exists is an ongoing battle; one that involves addressing the historic and contemporary injustices that permit such development. Many scholars have highlighted that dams are approved for areas where marginalization has occurred (Jarratt-Snider & Nielsen, 2020; Urt, 2016), further affecting communities' ability to (re)achieve sovereignty. If these narratives have not been convincing enough, the stories that are shared here have further articulated the injustices that are present in concepts and practices of "development". I (through the voices of many incredible individuals willing to share their stories) have hoped to emphasize that these overarching, undermining barriers must be highlighted, discussed, and countered in explorations of the impacts or 'opportunities' of dam building.

In learning from these experiences, the most powerful narratives I have aimed to contribute are those regarding the ongoing resistance efforts. The literature surrounding these movements (Cooper & Khagram, 2005; McCully, 2001; Talamayan, 2020; Thorkildsen, 2018), networks (Kadirbeyoğlu et al., 2005; Moreira et al., 2019; Shipton & Dauvergne, 2021; Yeophantong, 2020), and other forms of politics (Huber & Joshi, 2015; Rusansky, 2020) continues to document important knowledge and experiences from these resistance efforts. Likewise, I have aimed to contribute another perspective – to illustrate a group of people undertaking this resistance – as a means of documenting and eternalizing the work that is unfolding. I hope that the insights shared here might contribute to similar emerging efforts, particularly as it relates to the inclusion of community members that have been affected by dams. However, more importantly, I hope that this contribution can demonstrate that community voices need to be the guides and to play a critical leadership role throughout any development or counter efforts. Communities are concerned about energy security needs, climate change, sustainability, and power (sovereignty) too, and indeed existing discussions and projects are occurring around the world at the local level (McGregor et al., 2020). If determined to embark on serious consideration for addressing climate change, I hope that governments and researchers will turn their ears to community-led solutions of the land and water and the communities who are protecting them.

5.2 Building A Network

In demonstrating the emergence and evolution of this network through its infancy, I have aimed, in part, to redefine notions of "success" associated with action-oriented efforts. Spaces for knowledge mobilization or action are not only about creating change, but are also about the process and the act of bringing people together (Powell, 2016; Yanacopulos, 2007). While action has started to emerge within and from DWI, we have also focused on an important first step of creating spaces and reflecting on how they emerge. As a whole, we have been successful in achieving the initial goals of creating multiple and diverse spaces that individuals previously did not have access to or could not participate in as their own advocates. In examining this work, success must be attributed to the participants from various regions of the world that are continuing to come together to share their hopes and help grow this network.

Many TANs form to support existing social movements or other efforts for which they provide critical resources associated with a particular project or effort. In building DWI, we have

contributed a unique network that is not focused on any one dam project, but instead on challenging the narratives that enable the dam industry as a whole. Based on the goals of those that came together initially in November 2019 for the Kitaskīnāw gathering, DWI has emerged as a space for individuals to gather and help one another access resources for compensation, protection, or healing. This space is further unique in that it is based on what Denise Cole referred to as "*heart work*"; it is about love, compassion, and fulfilling responsibilities that are felt for each other and the rivers around the world. The work is not easy, but coming together in this way helps share these duties on the basis of cooperation and mutual support.

While DWI continues to emerge and evolve, and ultimately could be defined in other ways, understanding it as an advocacy network has helped ground it in an important body of literature that continues to emerge and evolve. The conceptualization of DWI as a dynamic and decolonized (in the making) space has contributed further insights into how TANs can be understood. It is about advocacy, but it is also challenging perhaps preconceived notions of who can be an advocate. It is about reciprocally sharing knowledge, especially knowledge that is traditional, Indigenous, and local. And it is about building a network that transcends borders, threading together the rivers and peoples that have been separate by dams and other colonial ventures.

5.3 Participatory Action Research (PAR)

In reflecting on this PAR journey, there are a few key notes I wish to share in the form of lessons that I have learned along the way.

5.3.1 Lesson 1: Discussion Spaces Only Work If People Are Listening

As I explained above (Chapter 4), one of the most critical outcomes of DWI is the establishment of multiple spaces- including the website, e-newsletters, Facebook group, committees, roundtable discussion, webinars, and other informal conversations – where discussion could occur amongst community members, allies, and the public. While these spaces existed, I have also demonstrated that power dynamics played out, limiting effective engagement. In response we have engaged in ongoing conversations aiming to reduce these effects to ensure community members are not only about to speak, but that allies are also actively listening to their priorities and their concerns and needs.

5.3.2 Lesson 2: It Is Hard to Build Momentum Without a Vision

DWI received an overwhelming amount of interest at various points in time, but ultimately lost momentum when we could not provide enough guidance on how to move forward. As is the nature of PAR work, we were able to use this period as a moment of observation as well as reflection to then result in greater planning and action. On a personal note, I cannot help but also reflect on my own engagement at this time. While it was very early on in the process, I already felt behind. I was not sure whose vision I was following and was hyper conscious of not inputting my own opinions or goals – although, I now recognize that my own biases and experiences influenced some efforts. As such, I kept waiting for guidance from the Advisory Council or other members to help steer the ship, while they in turn looked to me for direction as the proxy representative of the University and the organization that had brought this vision forward initially. Eventually, I learned to slow down, listen and re-listen, and even provide input; while the members also built relationships with each other and together we began to learn what we needed to do as a group.

5.4 Commentary on the Role of Academics

Throughout this work, I have gained insights into the work that Participatory Action Research (PAR) can offer, not only through engaging in it myself, but also observing mentors skillfully use their positions of power within the academic institutions to challenge systems of oppression. In their own ways, each engages in (PAR), taking direction from communities and listening to how they can use the education system to advantage those it has disadvantaged. I believe this is an important commentary to make, because the academy – as an often problematic, marginalizing space – has a critical role to play in effecting change through making this work visible. Indeed, DWI has exemplified that collaborative "research" has a lot of potential to address global concerns and affect positive change.

Further commentaries and observations will emerge over the long term to better understand if Dam Watch International (and other such networks) can be successful in challenging development and injustices on a larger scale, however, the last two years have demonstrated that there is energy and eagerness to make this network work, and a lot of that energy has come from the academics. Their roles have been critical in enabling access to resources – including time, funds, knowledge, and people. Indeed, it was their collective visions and observations that gave rise to and shaped this work. However, it is also worth mentioning that they have been able to choose to engage in this work and theoretically can also choose when

to disengage. The community members and non-academic allies will continue to show up when they are able and ask for what they need, so academic allies need to be ready to meet those needs and listen to the hopes. Having worked with many incredible mentors, I have faith that these efforts will continue, yet wish to contribute my own emphasis that academics as a whole need to be cautious about their capacity to engage meaningfully in "heart work", as it requires acknowledgement of the deeper significance it holds for those that have a lot of energy and hope attached to it.

From the perspective of the 'author' capturing these observations and the narratives, I recognize that I too (like any other author of these projects) have a deep responsibility that extends beyond my engagement. In particular, in line with the arguments of decolonization scholars, it is necessary that these stories be shared and told carefully (Smith, 1999; Tuck & Yang, 2014). Relaying the trauma of dam development and the systemic injustices can easily fall into continuing the victim narrative (McGregor et al., 2020; Thomas et al., 2015; Tuck & Yang, 2014). Instead, I have aimed to explain the injustices in a way that is reflective of the reality, including naming the players that are creating the damage, while setting the narrative in the context of systemic and systematic oppression. I am conscious that there are inherent issues with the fact that I have told this story, which encapsulates many others' knowledge and experiences, while also acknowledging that I have not achieved a perfect balance, because despite all efforts, I have still determined the narrative. Indeed, as I finish in my capacity as a Master's student, there is are questions of what role I will play: will I still have access to the same connections and resources? Should this position be given to another student so that they may grow (with) this work? Can I help initiate a transition of this work to a coordinator located in another country, so that this work can inherently take on other biases or foci? This work is not simply about "research" to me, so I do not plan to simply walk away, yet will continue to reflect on the position I was granted and to transition this work on to whoever may next wish to take it on. In all, I hope that the lessons shared here may help contribute further efforts for centering community voices in these forms of research, as well as in the action that has driven this work.

5.5 A Brief Note on COVID-19

When the COVID-19 pandemic took hold in early 2020 (a mere 6 months into my Master's), I soon witnessed the significance it played in my work, as well as the reality of life in communities affected by dams. While I was enthralled and ready to dive further into

understanding the implications of the pandemic in the context of dams, I also recognized that my commitment was to the transnational alliance and taking on both was simply not possible. Certainly, there could – and should – be an entire thesis written around the experiences that individuals, the network, and communities impacted by dams have faced; however, I aim to briefly capture a few critical points that would otherwise be remiss to exclude.

It was such an incredible time to be a part of the alliance network. The ebbs and flows of participation in the alliance were indicative of the experiences of the world too. When places initially shut down and we moved online, there was a learning curve for everyone around the technology, but soon it became second nature to use Zoom for those of us that were meeting frequently. After about five months of figuring out DWI and the pandemic, we received a surge of keen individuals to engage, as they had taken the time to find new routines and identify priority areas, which for some included DWI as a critical space for hope and opportunity.

My first real data collection (the interviews) took place in the summer of 2020, during what now seems like the early, or almost naive, phase of COVID, where caution was at its highest, but case counts were at its lowest for many regions – at least in Canada. At this point, it was only 2-6 months into what is still an ongoing pandemic almost two years later, yet the folks that I spoke to around the world were already sharing powerful observations about systemic failures, as well as opportunities and hope.

5.5.1 Community

Despite the challenges that were unfolding, a surprising number of individuals – mainly community members – were hopeful about what this pandemic could lead to. To many folks – such as Waba Mako from the Ottawa River basin (Canada) and Minket Lepcha from the Teesta River basin (India) – it was viewed as an awakening, emphasizing the need to slow down, go back to the land, and (re)connect with traditional knowledge. There was much hope that this period of reflection could enable communities to acknowledge the past and ongoing hurts, and then could come together to heal. Simultaneously though, community members recognized that there were certainly limitations to this, particularly, as case counts rose and everyone was forced to physically stay away from each other, ultimately creating further isolation.

5.5.2 Building Connections

In some ways, the alliance benefited from this period. For one, the move to being online already aligned with the necessary format that the alliance was taking on. While certainly there

was hope for more in-person gatherings (including my own hopes to visit communities), the reality of DWI was that it required people to meet and share space virtually. Within a matter of months, everyone was well-versed in the use of Zoom. However, this too had its limitations, as the technology only works if there is also internet access. For those – namely the community members – in rural and remote locations, Zoom was not a seamless tool void of frustrations. It often cut out and did not allow the use of video, which inherently emphasized power dynamics, in which the more affluent members of the group were able to see and be seen, and hear and be heard, allowing them more space to participate. Further, the virtual gathering format was alienating, compared to the collective in-person gathering spaces that are aligned with Indigenous practices. Through allies – such as Laisa Massarenti Hosoya in Brazil – I also learned that meeting virtually was simply not possible for many community members who would have to travel to the nearest city to access the internet, despite their eagerness to learn more and be involved. These experiences highlighted the disparities of access to the internet, but also the cultural differences associated with how communities are willing to engage.

5.5.3 Additional Systemic and Systematic Barriers

During this wellbeing crisis, governments and corporations continued to think in terms of capitalist gain and loss. While the public worked to heal and find ways of supporting each other, secretive decisions were made that further affected communities. For one, bills were passed in many jurisdictions around the world that lessened the environmental protocols for large-scale development (Deepa Joshi and Roshan Rai, personal communication, May 20, 2020; Christensen, 2020; Kohli & Menon, 2020), as well as limited the freedoms for people to be publicly political (Kavanagh, 2021). While other job forces critical social services were shut down, dam construction was given the go ahead to continue, leading to COVID-19 being brought into isolated and vulnerable communities (Peters, 2020). Further, previously tabled dam projects, such as Gull Island in Labrador (Canada), were also quietly brought back into discussion as a means of assisting the economy (Amy Norman, personal communication, October 20, 2020). Community members and allies saw these happening, but due to the lockdowns and restrictions, were unable to rally together in the same ways to garner public awareness and support against these changes. These issues only further emphasized the need for more spaces that can advocate, provide resources, and generate collaboration from anywhere and in multiple ways.

5.6 Moving Forward with Hope

As I draw this thesis to a close, there is still much momentum and hope for what lies ahead. I came into this work with very limited prior knowledge on dam development, community experiences, and even resistance efforts. While I was committed to learn and re-learn, I had many uncertainties along the way. A large part of the uncertainty came from the responsibility of guiding the emergence in a way that was inclusive and not my own. Because I did not have the background understanding of the experiences or activism, I viewed my role as a "helper" for building spaces that those who had this knowledge could then take forward. At times I felt utter despair at not being able to move things fast enough or far enough for people coming to these spaces, but then realized that much of this was my own anxieties and urgency. While I helped bring people together and ensure that indeed there were meetings to attend, spaces to build, and people to bring together, work was still happening in other spaces that I did not see and discussions that I did not hear, even with people I did not know. Through the incredible members that have come together, DWI is getting carried into new spaces where further hope is shared for better opportunities ahead.

As I write these concluding thoughts, world leaders are gathering together in Glasgow for COP26. Among these leaders are two of our very own Advisory Council members, who have carried us along from the beginning and who are now representing DWI. An Indigenous youth from Manitoba also joined them, bringing her own insights and readiness to learn more about others' experiences with dam impacts. Through these members, the spaces will continue to reach more people, engage in more efforts, and slowly but surely influence change.

I am ending this piece with hope. It is not my hope alone, but the hope that has surrounded this work for decades, and which I have felt from the moment I entered the conference in 2019. There is much hope for the work that can occur collaboratively: that things will get better for communities living with and resisting the effects of dams, that future generations will make better choices, and that the rivers will eventually be revitalized with the ultimate decommissioning of dams. In being immersed in this work after coming from a climate change education background that was saturated in falsely labelled "green solutions", I too have hope that the collaborative work we have shared here will continue to overcome challenges and build spaces for change.

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Appendix A
Alliance-Building Interview Questions

1. How have you or your community been impacted by social or environmental factors associated with resource extraction (ex. hydro)?
2. What did you gain from attending the Kitaskīnāw Conference? Were you able to make connections that you believe will be useful to you in the future?
3. What concerns, if any, did you have about the Conference, especially as regards alliance building and networking?
4. What tools have you found most effective in responding to industry-associated impacts? Some examples of tools include: resistance protests, talking to other industry-impacted community members and their allies, talking to decision-makers, participating in court cases, building awareness/education.
5. What values, if any, do alliances have? Is there value in building and participating in an international alliance? How would you want it to benefit you individually or your community/organization? What, if any, risks to you or your community would such an alliance pose?
6. What next steps do you suggest we take to continue working towards an international alliance?

Appendix B

Interview Follow-up Surveys

International Alliance Interview Follow-up Questions

****Please note that all of these questions are optional. Feel free to leave anything blank or to add anything you want.**

Name: _____

NOTE: As is consistent with the previous consent form you filled out (see attached), if you do not wish to have the information you shared be linked to your name, please leave this blank. I will ask you before publishing if I can use any specific quotes, and will share with you what I plan to include from the interview and this form as drafts emerge.

I am answering this from my perspective as a (pick all that apply):

- ❑ Hydro-impacted community member
- ❑ Land protector and water defender
- ❑ Activist
- ❑ Academic
- ❑ Other: _____

Please note that I recognize that the topics explored here are far more complex than a simple 0-5 scale can indicate. I hope that these follow-up questions can help support the information you have already provided, so that I might further understand and illustrate these challenges to the academic audience. Thank you for taking the time to share more of your knowledge and stories with me.

Impacts of dam development:

Name of dam(s) or other development projects you consider as impacting your community:

_____

Approximate year(s) of construction of above listed project(s): _____

Below are a few areas of impacts that have been identified as occurring with dam construction. Please circle or highlight the number you feel best corresponds with how these issues have impacted your community or the community(ies) you work with.

0= this impact **does not exist** in our community
1= this impacted us **in the past**, but not anymore
2= this has **minimally** impacted our community
3= this has impacted **some** of our community
4= this has impacted **most** of our community
5= this has impacted **all** of our community

**Please click on the number and a checkmark will appear.

1. Decreases in biodiversity- ex. loss of animal and plant species	0	1	2	3	4	5
2. Loss of waterways for travel, livelihood, food, recreation, etc.	0	1	2	3	4	5
3. Loss of culturally significant areas- ex. burial sites, hunting spots, ceremonial grounds	0	1	2	3	4	5

4. Health impacts- ex. decreases in wellbeing, increases in illnesses, loss of traditional medicines, loss of drinking water	0	1	2	3	4	5
5. Displacement of communities	0	1	2	3	4	5
6. Inadequate compensation	0	1	2	3	4	5
7. Influx of settlers or workers- ex. increases in physical and sexual violence, substance abuse, racism	0	1	2	3	4	5
8. Influx of additional development projects following / associated with the initial development- ex. mining, agriculture, roadways, transmission lines	0	1	2	3	4	5
9. Other: _____	0	1	2	3	4	5

Barriers that impact a community's ability to respond to dam (or other) development:

Based on all the interview responses, the following were some challenges experienced by many. However, if you feel these do not apply to your community / the communities you work with, please write any alternative barriers in the "other" section.

0= this barrier does not exist for us
1= this barrier impacted us in the past, but not anymore
2= this barrier has minimal impacts on our efforts
3= this barrier impacts some of our efforts
4= this barrier impacts most of our efforts
5= this barrier impacts all of our efforts

1. Lack of political agency by excessive surveillance, violence, military or police presence, etc.	0	1	2	3	4	5
2. Lack of recognition of rights and identity by colonial governments and developers	0	1	2	3	4	5
3. Colonial systems of government being forced onto communities	0	1	2	3	4	5
4. Additional generational traumas- ex. displacement, residential school, colonization	0	1	2	3	4	5
5. Language or information barriers between developers and community members	0	1	2	3	4	5
6. Lack of secure livelihoods	0	1	2	3	4	5
7. Disconnection from traditional territories and associated cultural practices- ex. challenges accessing food, ceremonies, burial sites	0	1	2	3	4	5
8. Remote location factors- ex. geographical barriers in accessing basic resources, lack of internet access	0	1	2	3	4	5
9. Other: _____	0	1	2	3	4	5

Responses that are available for addressing the development:

Below are responses that interview participants identified that they use to address or resist dam development. What are efforts you or the communities you work with have used to respond to dam development?

0= this response has no purpose to me
1= I cannot use this response
2= I have used this response, and faced repercussions
3= I have used this response, but it has serious risks for me
4= I use this response sometimes, and feel mostly safe doing it
5= I use this response regularly, and feel safe doing it

1. Learning from local knowledge keepers or Elders	0	1	2	3	4	5
2. Use of traditional practices and ceremony	0	1	2	3	4	5
3. Educating youth on traditional culture and practices	0	1	2	3	4	5
4. Participating in "**civil disobedience**"- ex. "protests", "sit-ins", "demonstrations"	0	1	2	3	4	5
5. Participating in **online discussion** spaces- ex. webinars, social media like Facebook, blogs	0	1	2	3	4	5
6. Participating in **in-person discussion** spaces- ex. conferences, meetings, gatherings	0	1	2	3	4	5
7. Connecting with organizations or groups at the **regional or national level**	0	1	2	3	4	5
8. Connecting with organizations or groups at the **international level**	0	1	2	3	4	5
9. Other: _____	0	1	2	3	4	5

If you have any additional thoughts you would like to share, please include them in the space below. Or if you would prefer to discuss them verbally, please leave your name and I will contact you. For any additional questions or concerns, please feel free to contact me (Rebecca) at kingdonr@myumanitoba.ca. Thank you again for taking this time to help inform the emerging international alliance and associated research.