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FULL-LENGTH ARTICLES

Articulating Indigenous Futures: Using Target Seeking Scenario Planning in Support of Inuit-led Fisheries Governance

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Futures thinking is an increasingly popular approach to solving complex environmental problems because it offers a framework to consider potential and desirable futures. It is also possible to create highly participatory future planning processes that incorporate the perspectives, beliefs, and values of resource users. In 2019, a group of fisheries stakeholders in Nunatsiavut, an Inuit land claim region in northern Labrador, began a target seeking scenario planning process to help them create a vision for the future of commercial fisheries in the region. Through this process, the group hoped to not only create a vision of Inuit-led fisheries but also to advance communication, collaboration, and learning for the group. In this paper, we reflect on the process we underwent over the past few years, including the research design, data collection and analysis, and the results of the project to broadly consider the strengths and weaknesses of participatory scenario planning for Indigenous governance. Reflecting on the process that we undertook provides important, experience-based knowledge for future projects. The elevation of Inuit voices makes this vision specific to the region and reframes fisheries as a tool for cultural and political rejuvenation in the region.

Introduction

In Inuit Nunangat, the Inuit homelands in the country currently known as Canada, Inuit have long advocated for the importance of not just being involved in research, but of driving the research agenda for the benefit of Inuit. The National Inuit Strategy on Research (NISR) outlines five priority areas to facilitate Inuit self-determination in research: advance Inuit governance, enhance ethical conduct, bring funding into alignment with Inuit priorities, develop Inuit sovereignty over data resources, and build capacity within Inuit Nunangat (Inuit Tapiriit Kanatami, 2018). The concerted effort of Inuit to build self-determination in research has led to a proliferation of new projects that involve Inuit as leaders and partners and are directed towards Inuit needs (e.g., Carter et al., 2019; Held, 2020; Henri et al., 2020; Snook et al., 2018). This, in turn, has required new participatory approaches to research that are informed by Inuit values and priorities (Ferrazzi et al., 2019; Pedersen et al., 2020).

Scenario planning is an increasingly popular framework to consider potential and desirable futures (IPBES, 2016). It is possible to create highly participatory future planning processes that incorporate the perspectives, beliefs, and values of resource users (Harmáčková et al., 2022). Scenario planning can be used to predict how change might affect a system so that managers or practitioners can build more resilience into infrastructure or decision-making processes (Harrison, 2021). It can also be used to imagine

ideal futures so that management can work towards desirable outcomes (Tevis, 2010). This second approach is known as "target seeking" scenario planning. Despite the growing interest in participatory scenario planning, however, it remains underutilized in the Arctic and has limited engagement with Indigenous communities (Flynn et al., 2018; Oteros-Rozas et al., 2015)

In 2019, a group of fisheries stakeholders in Nunatsiavut, an Inuit land claim area in Labrador, identified a need to develop a vision of the future of commercial fisheries for the region. This group includes the Nunatsiavut Government, the Torngat Wildlife Plants and Fisheries Secretariat, and the Torngat Fish Producers Cooperative Society, who decided to lead a target seeking scenario planning process that would help them co-develop a set of objectives to help guide decision-making options for a future determined by and for Labrador Inuit. The authors of this paper are the partners who contributed to the process, including representatives from the partner organizations and academic researchers who facilitated the procedure.

Through this target seeking scenario planning process, we encountered challenges and opportunities and learned important lessons on using the target seeking scenario planning method for self-determination over natural resources. We report on the findings from this case study to reflect on our experience applying this method in practice and broadly consider the strengths and weaknesses of participatory scenario planning for Indigenous governance. In doing so, we acknowledge that many Indigenous Knowledge systems and governance regimes around the world have been repressed through colonial violence, and Indigenous Peoples are working to reclaim their rights to their lands and waters, and to natural resource management. As part of that process of reclamation, some are looking to build governing regimes beyond current colonial structures. This paper provides some reflections on one potential framework for articulating Inuit-led futures.

Scenario Planning

Scenario planning (also known as scenario analysis/development/building) is a framework for imagining potential futures of a given region, resource, or ecosystem to develop strong policy and management measures (Amer et al., 2013; Blythe et al., 2021; Martin et al., 2022). Scenarios are potential or imagined states of a system and are described in order to reduce uncertainty about the future of that system (Birkmann et al., 2015). Scenario planning is often used in resource management and development because it provides an opportunity for large groups with diverse expertise and interests to navigate decision-making around contested spaces (Kiatkoski Kim et al., 2022). Increasingly, researchers are employing participatory approaches to scenario planning, frequently involving input from stakeholders, such as Indigenous rights holders, resource users, and subject experts, who help to bring a wide variety of perspectives and priorities to the visioning process (Freeth & Drimie, 2016; Wollenberg et al., 2000).

	Exploratory 	**Target Seeking** 	**Policy Review** 
Approach	Exploratory	Normative	Evaluative
Methods	Identify drivers through literature reviews, expert interviews. Quantitative and/or qualitative modelling future scenarios	Soliciting stakeholder perspectives	Document review
Output	Multiple scenarios are developed based on drivers of change	An ideal scenario is developed based on what participants want	Existing policy is assessed for its relative ability to support objectives
Outcome	Managers develop the ability to anticipate changes to the environment	Participants identify potential pathways for achieving an ideal future	Possible policy interventions are identified
Objective	Increased resilience and adaptability for communities of practice, added transparency and participation in decision-making	An articulation of an end point for future resource development for improved collaboration and empowerment of resource users in decision-making.	An evaluation of the policy landscape and locate ways to adjust policy for improved outcomes

Table 1. Three types of Scenario Planning

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) identifies three different types of scenario planning: exploratory, target seeking, and policy review scenario planning (Martin et al., 2022). We outline the basic format for each of these approaches below and in Table 1.

Exploratory scenario planning is currently the most common type of future planning in the literature. It involves the identification of significant drivers of change that will affect a given resource or ecosystem. Drivers include climate change, changes to traditional activities and harvesting practices, added pressures from evolving infrastructure, and socio-economic shifts (Carlsen et al., 2013; Enfors et al., 2008; Flynn et al., 2018; Harrison, 2021). These drivers form the basis of a series of scenarios or visions of potential futures. Managers can then use these predictions to help them develop management protocols and decision-making practices that will make the resource or ecosystem more resilient to harm and adaptive to change (Birkmann et al., 2015). Exploratory scenario planning is often employed in complex and contested resource management situations because it helps to anticipate change, set the agenda for discussion, and focus decision-making by limiting the scope of possibilities (Harrison, 2021).

Target seeking scenario planning focuses less on anticipating possible futures and more on the articulation of an ideal vision for the future and the subsequent identification of the steps it will take to accomplish that future (Aguiar et al., 2020). While exploratory scenario planning has historically been the most popular approach for thinking about the future of social-ecological systems, target seeking planning has emerged as a growing interest in recent years. This is in part because of global targets like the Sustainable Development Goals (SDGs), set by the United Nations 2030 Agenda (Aguiar et al., 2020; Kok et al., 2018). Thus, where a particular future is desired, or at least desirable, target seeking scenario planning offers a more efficient approach.

While the SDGs can be considered a very high-level and global effort to establish target scenarios, there are many examples of projects that focus on particular sectors and regions (Alcamo, 2008). In all cases, target seeking or anticipatory scenarios are developed first, and then actors are asked to work backward to establish potential pathways to achieve that future, an activity often called "backcasting" (Paehlke, 2012; Sarkki & Pihlajamäki, 2019). While some proponents of this method use the phrases "target seeking" and "backcasting" interchangeably, others distinguish between the development of an ideal or desirable future and the development of pathways as two separate (though related) activities (Aguiar et al., 2020; Leach et al., 2010). In this paper, we consider them as separate processes and focus specifically on the development of desirable futures.

The third type of scenario planning is known as policy review, which is a retrospective study of existing policy documents with the goal of evaluating policy interventions around a certain topic or resource to draw lessons for future management (Martin et al., 2022). This type of scenario development is less frequent than other approaches. Policy review may follow the implementation of an exploratory or a target seeking intervention, in order to evaluate the effects of the exercise (IPBES, 2016).

Though these three forms of scenario planning have been separated into types, in practice, the distinction between them is more ambiguous. For example, some exploratory approaches include an intermediary step for "scenario creation," where a normative, desirable future state is established (Flynn et al., 2018). Similarly, exploratory and target seeking approaches often require a preliminary policy review to understand the historical and contemporary legislative context for intervention. In general, the tools and paradigms that are used to support scenario planning can be tailored to fit the needs of the particular policy context (IPBES, 2016).

Target seeking scenario planning and participatory governance

When it comes to using scenario planning for empowerment of resource user communities, we see target seeking as the first step in building a truly participatory process. Therefore, we focus the attention of this paper on processes for identifying desirable futures for a community of resource users. First, we outline *why* the identification of desirable futures is an essential component of participatory scenario planning.

Interest in participatory methods is on the rise as academics and practitioners recognize the importance of including affected and/or vulnerable communities in planning and decision-making (Leach et al., 2018; Oteros-Rozas et al., 2015), as well as communities with particular rights over lands and resources. Inuit researchers and community leaders have provided ample guidance on how to engage in participatory research methods in ethical ways, and there are a great number of important works on ethical and responsible approaches to participatory research that non-Inuit researchers should follow when entering the Arctic. The *Aajiiqatigiingniq* research methodology, for example, was developed in Nunavut by the Aqqiumavvik Society to help non-Inuit researchers approach research through culturally-relevant methods, ethical engagement, and relationship building (Ferrazzi et al., 2019). As previously mentioned, the NISR contains numerous important resources. This has led to a growth in successful research partnerships in the north (Carter et al., 2019; Henri et al., 2020; K. J. Wilson, 2022)

Participatory scenario planning, however, remains an underexplored practice in Inuit governance planning (Flynn et al., 2018). Target seeking scenario planning asks resource users, stakeholders, or members of the public to imagine an ideal future, thus allowing communities an opportunity to steer decision-making in ways that reflect their needs and priorities. Participants are asked "What future do we want, and how do we achieve it?" (Aguiar et al., 2020). As such, scenario planning may involve a discussion around what constitutes a "good life," highlighting the needs and priorities of communities, and making the method useful for the development of just and equitable management measures (Amazonas et al., 2019).

As is always the case with participatory methods, *who* is engaged matters. To that end, some researchers may focus on engaging with subject matter experts to provide insight into plausible futures (Revez et al., 2020; Varho et al., 2016). Calls to democratize this approach by including non-experts

and stakeholders have shown that a greater diversity of participants supports more creative problem-solving (Hussler et al., 2011). In a diverse group of stakeholders, individuals will have a variety of interests in the subject matter and will be affected differently by the outcomes of a scenario — what is good for one may have negative consequences for another (Reed & Rudman, 2022), and indeed the same stakeholders might perceive the potential benefits of a scenario differently in different contexts (Reed et al., 2021). The inclusion of a governing authority can also affect the extent to which the process has practical implications. Rawluk et al. (2018) call for scenario planning that brings multiple decision-making authorities into dialogue with one another to encourage understanding and problem-solving where trade-offs exist. The discussion of who is included in a scenario planning process is essential for the quality and influence of the outcomes.

Finally, the literature reflects the view that eliciting visions of the future also provides an opportunity to gain insight into contemporary conceptualizations of governance. By asking diverse groups of stakeholders to reflect on the current state of the system, and then to reflect on and often negotiate a better future, researchers uncover unspoken and underlying characteristics of the system, including assumptions about what institutions should be responsible for delivering on that future (Loring & Hinzman, 2018; Özden-Schilling, 2022). All these characteristics make scenario planning, and particularly target seeking scenario planning methods, appear to be a useful tool for Indigenous Peoples who are working to move beyond current colonial structures of governance and towards governance that reflects their values, cultures, and knowledge systems (Nikolakis, 2020).

Not everyone, however, sees futures-oriented research as positive for Indigenous governance. Some have warned that long-term future planning initiatives run counter to Indigenous Knowledge systems, and therefore rather than challenging colonial structures, futures research may further entrench a Western way of thinking about governance (Howitt, 2010; Suchet, 2002). Certain anthropological studies have pointed out that for Inuit, claiming knowledge of the future is a futile, even hubristic, practice, and therefore governance emphasizes flexibility and adaptation in the face of uncertainty (Bates, 2007; Kaplan, 2012). To be culturally relevant and aid in Inuit self-determination, scenario planning projects must acknowledge this legacy. Where Indigenous Peoples have been involved in scenario development processes to date, they are generally included as one among many stakeholder groups, represented by community leaders such as councils, elders, and knowledge holders (Flynn et al., 2018; Oteros-Rozas et al., 2015). There is a need to reflect on whether scenario planning that is led by, and focused on, Inuit futures is a useful and appropriate approach for developing Inuit self-determination. In particular, it is essential that this work is requested, led, and owned by Inuit, as it was in this case.

Case Study: Nunatsiavut Commercial Fisheries

Background

In May 2019, a group of stakeholders in the Nunatsiavut commercial fishing industry assembled to discuss the state of the industry. In the room were members of the land claim co-management board, the Inuit government, and leaders of a fishing cooperative, all of whom agreed that the commercial fishing industry in Nunatsiavut has faced barriers to long-term planning and that collective, strategic planning would be necessary to move the industry forward for the benefit of Labrador Inuit. This group partnered with university researchers to undergo a visioning process to identify a desirable future for the Nunatsiavut commercial fishing industry: a future that is Inuit-led and proactive, rather than colonially-led and reactive (Tuck & Fine, 2007)

The group's visioning process can provide important insights into the needs, values, and priorities of Labrador Inuit in commercial fisheries. Insofar as target seeking scenario planning asks participants to articulate an idealized future that is in line with culturally specific values, perspectives, and priorities, this method may provide an opportunity for Indigenous rights holders to think beyond the current colonial management systems and imagine a self-determined future. We reflect on this process to better understand the role that target seeking scenario planning might play as an emancipatory tool towards self-determination for Inuit.

The Labrador Inuit Land Claim Agreement (LILCA) was ratified in 2005, recognizing the lands and waters on the north coast of Labrador, Canada, as the traditional territory of Inuit and naming the new region Nunatsiavut (*Our Beautiful Land* in English). Fishing and marine harvesting have always been culturally, economically, and socially significant activities for Labrador Inuit, who have relied on the coastal and marine environment around Nunatsiavut for generations (Cadman et al., 2023). There has been a commercial fishing industry in the region for 200 years, and during that time Labrador Inuit have participated in multiple commercial fisheries, harvesting marine mammals, anadromous species, pelagic species, groundfish, and shellfish.

Today, Nunatsiavut beneficiaries harvest from five main commercial fisheries: Greenland halibut (*Reinhardtius hippoglossoides*), Snow crab (Putjotik, *Chionoecetes opilio*), Northern shrimp (kingupvak, *Pandalus borealis*), Arctic char (IKaluk, *Salvelinus alpinus*), and Icelandic scallop (Matsojak, *Chlamys islandica*). The fisheries management regime is complex and involves multiple jurisdictions, in part due to the long history of fishing and evolving colonial policies. Through the LILCA, a fisheries co-management board was formed under Article 13.11. The Torngat Joint Fisheries Board is responsible for making recommendations to the federal minister of Fisheries and Oceans Canada (DFO) on the conservation and management of fisheries within the Labrador Inuit Settlement Area (Labrador Inuit Land Claims Act, Labrador Inuit Land Claims Agreement Act, 2005). The Nunatsiavut

Government, the Nunatsiavut Group of Companies, and the Torngat Fish Producers Cooperative (hereafter referred to as the Torngat Coop), all have powers and responsibilities within the fisheries sector.

Labrador Inuit who are beneficiaries under the LILCA can participate in these fisheries in several ways. Most significantly, the Nunatsiavut Government holds communal commercial licenses in Snow crab and Northern shrimp, and beneficiaries can apply for a portion of the quota under those licenses. The Nunatsiavut Group of Companies, an institution designed to stimulate Nunatsiavut's economy, also hold additional Snow crab quota, which it gives to the Nunatsiavut Government to distribute. As a cooperative, the Torngat Coop owns licenses for offshore Northern shrimp, and operates fish processing plants in the communities of Makkovik (processing Snow crab and turbot) and Nain (processing char and scallop), which employ several community members during the fishing season. Very few beneficiaries own individual commercial fishing licenses, and until recently most had to lease boats from the south to come up to the region to fish their quota in exchange for a percentage of the profits. The inability to invest in one's own boat and gear stemmed in part from the fact that quota allocation from the Government to beneficiaries was done annually. In other words, the quota did not act like an asset that would allow beneficiaries to seek out loans in support of a fishing enterprise development. In 2021, the Nunatsiavut Government changed the policy to a multi-year quota designation process to give beneficiaries an asset with which to secure the capital needed to purchase boats (Nunatsiavut Government, 2021).

The participatory scenario planning method allowed us to make some significant strides in articulating a desirable future for the commercial fishing industry in Nunatsiavut. While scenario planning has become an increasingly popular method for articulating possible or desirable futures, the literature lacks reflective reporting on the process (Nalau & Cobb, 2022). In participatory research, it is often necessary to adjust the objectives, methods, and outputs of the research program in response to input from participants (Malmborg et al., 2022), and therefore it is particularly important to provide reflexive reporting of the process to contribute experiential knowledge to the literature (Franco-Trigo et al., 2019; MacLeod et al., 2021).

Scenario planning in an Indigenous context has unique features that go beyond regular "participatory" methods. This is because Indigenous Peoples hold unique rights and responsibilities on their traditional territories, including particular treaty and constitutional rights of access and use of natural resources that affect the way that the visioning process progresses (Coombes et al., 2011; Latulippe & Klenk, 2020). Importantly, the colonial history of Canada must also inform partner-driven research between Indigenous and non-Indigenous partners as it affects power dynamics and trust within the group, as well as how Indigenous Knowledge is taken up into governance. While the methods employed for this scenario planning process largely fulfilled the project goals, we faced some issues that limited its effectiveness. As part

of the partner-based research process, and in the spirit of working towards reconciliatory relationships in research, it is essential to reflect on lessons learned during the research and the ways in which the method could be improved in the future (Held, 2020).

We reflect on our experience with a participatory scenario planning process through the dual lenses of "participatory" and "partner-driven" research to better understand the effectiveness of this method for eliciting collectively held visions of the future, and the suitability of the process for Indigenous governance planning. To do this, we explain our process for creating the research design, our methods of data collection and analysis, and highlight some key results from the study in order to discuss the strengths and limitations of target seeking scenario planning at each stage of the research process.

Before Beginning: Data Sharing Agreement

We started this partner-driven process with a data-sharing agreement to outline the terms of the relationship before the work began. Partner-driven research is one way of meeting the guidelines set out in the National Inuit Strategy on Research (2018). The guide outlines how researchers must engage with Inuit throughout all stages of their research: project design, data collection, data analysis, and reporting. Each phase must be carefully considered to promote ethical behavior, authentic relationships, and trustworthy results. Before the project itself was discussed, we acknowledged that power was distributed disproportionately among the group, a potential source of conflict. To help level the power dynamic among the partners, we created a data-sharing agreement. Notably, data are owned by all three partner organizations and will be stored at the Torngat Secretariat office following the completion of the project. Project partners are authorized to use the data for outputs, and any interested party can request access, with discretion to share being held by the Secretariat. Academic facilitator Cadman has been given permission to use the data towards her doctorate research including this paper, with writing contributed by the Torngat Secretariat and editing from other partners.

Research ethics approval was received through the Nunatsiavut Research Advisory Committee and Dalhousie University. Data collection was delayed due to COVID-19 but began in July 2020 in accordance with Nunatsiavut's COVID guidelines.

The creation of a data-sharing agreement was essential because data use and governance is a central issue in research undertaken by Indigenous and non-Indigenous partners. There is a long history in Canada of harmful and extractive research that has disproportionately benefitted settler researchers and has disregarded the needs and priorities of Indigenous Peoples (Inuit Tapiriit Kanatami, 2018; Kovach, 2009; Tuck & Yang, 2014). McGrath (2018) refers to this practice as "mining for treasure," where "crude" information is unearthed from the community and "refined" by the researcher into something precious, without returning anything of value to the community

(McGrath, 2018, pp. 342–343). Frequently, Indigenous Peoples have no control over data once it has been collected, which can leave them dependent on the state and perpetuates the colonial project (Carroll et al., 2019). This has prompted Indigenous activists and non-Indigenous allies to call for the "repositioning of authority over Indigenous data back to Indigenous Peoples" (Carroll et al., 2019, p. 1). Data-sharing agreements like ours can be used to formalize partnership arrangements to ensure that data sovereignty is upheld both during the research process and once the research has ended.

Research Design

The project (hereafter referred to as the Visioning Project) emerged from several years of conversations among members of the partner organizations, the Torngat Joint Fisheries Board (TJFB), the Nunatsiavut Government's Department of Lands and Natural Resources, and the Torngat Coop. Members of these organizations recognized a need to consider the long-term future of the fishing industry. These project partners recruited academic researchers to facilitate a Visioning Project for the group.

The goals of the Visioning Project were largely established through a series of in-person and online meetings and workshops between May and November 2019. The initial brainstorming group included representatives of the partner organizations as well as visiting researchers from Dalhousie University. During those discussions, it became apparent that the vision itself was only part of what motivated partner organizations to participate. The group of stakeholders is diverse, and the partners knew there would be some disagreement about the outcomes. Instead, they saw the Visioning Project as an opportunity to enhance communication and provide insight into the way that other organizations, as well as communities, conceived of the fisheries in Nunatsiavut. In this way, the process of coming together to create the vision was as important, if not more so, as the specific vision itself. The partners also recognized that creating a coalition of Nunatsiavut-based fisheries stakeholders would provide some political advantages. Thus, through these discussions, three goals for the Nunatsiavut Fisheries Visioning Project were identified: 1) start a dialogue among the Nunatsiavut fisheries stakeholders to share information about their plans; 2) identify areas of agreement and overlap that would support better strategic collaboration among the partner organizations; and 3) create a long-term vision of the future that is based on the needs and priorities of Labrador Inuit. The Torngat Secretariat drafted a project description detailing the framing and goals of the project based on these conversations, which was signed by all partners.

During these initial discussions, it was agreed that project partners would participate in the Visioning Project as interviewees. Next, a list of names was created, centered around the TJFB's Annual Fisheries Workshop invitees. The workshop includes all designated fishers and fisheries managers in the region. The partners agreed that they wanted to extend participation to include the Nunatsiavut Government Department of Education and Economic Development and the Nunatsiavut Group of Companies. These groups each

Table 2. Participants in the Visioning Project

Representative Organization or Occupation	# of participants Step 1	# of participants Step 2
Nunatsiavut Government	5	5
Torngat Joint Fisheries Board	2	2
Torngat Coop	2	2
Nunatsiavut Group of Companies	1	1
Fishers	11	12
Processing Plant Managers	1	0
DFO Employees	2	0
AngajukKâks	4	0
Total	28	22

hold a direct stake in commercial fisheries, either through personal investment, jurisdictional authority, or management responsibilities. The names of employees from these organizations who work on fisheries were added to the list. To a lesser extent, the project partners also wanted to receive feedback and insights from the broader Nunatsiavut communities and from the federal government. Partners recognized that hearing from a broad list of stakeholders would be strategic to their vision formulation. The names of federal government employees working in Nunatsiavut fisheries were added to the list.

Following these discussions, a list of potential participants was created by the academic researchers and circulated to the partners. Partners provided feedback, and occasionally contact information, until a complete list of desired participants was approved by all partners. In total, 37 people were contacted as potential participants and 28 agreed to be interviewed. A breakdown of participants follows in Table 2. AngajukKâks are elected leaders of their communities and were asked to act as community representatives in the interviews. At least one fisher was interviewed for each species harvested commercially in the region. In 2021, there were a total of n=23 people designated as fishers operating in northern Labrador, and during this research, we were able to speak to 75% of them (n=17, with some overlap in Steps 1 and 2). While many participants have played multiple roles in the fisheries over their careers (for example, serving on the TJFB while also being a fisher), their occupation is listed here based on how they primarily identified themselves in the interviews.

During each stage of the process, the researchers executing the work returned to the group of partner organizations to present research design, preliminary findings, and planning for next steps. Project partners were asked to provide comments and feedback at multiple points during the year through partner meetings, public presentations, group emails, and private conversations. Through these interventions, researchers were able to gain new insights into the questions and concerns that affected managers. They were also made aware of emerging problems that provided insight for data analysis.

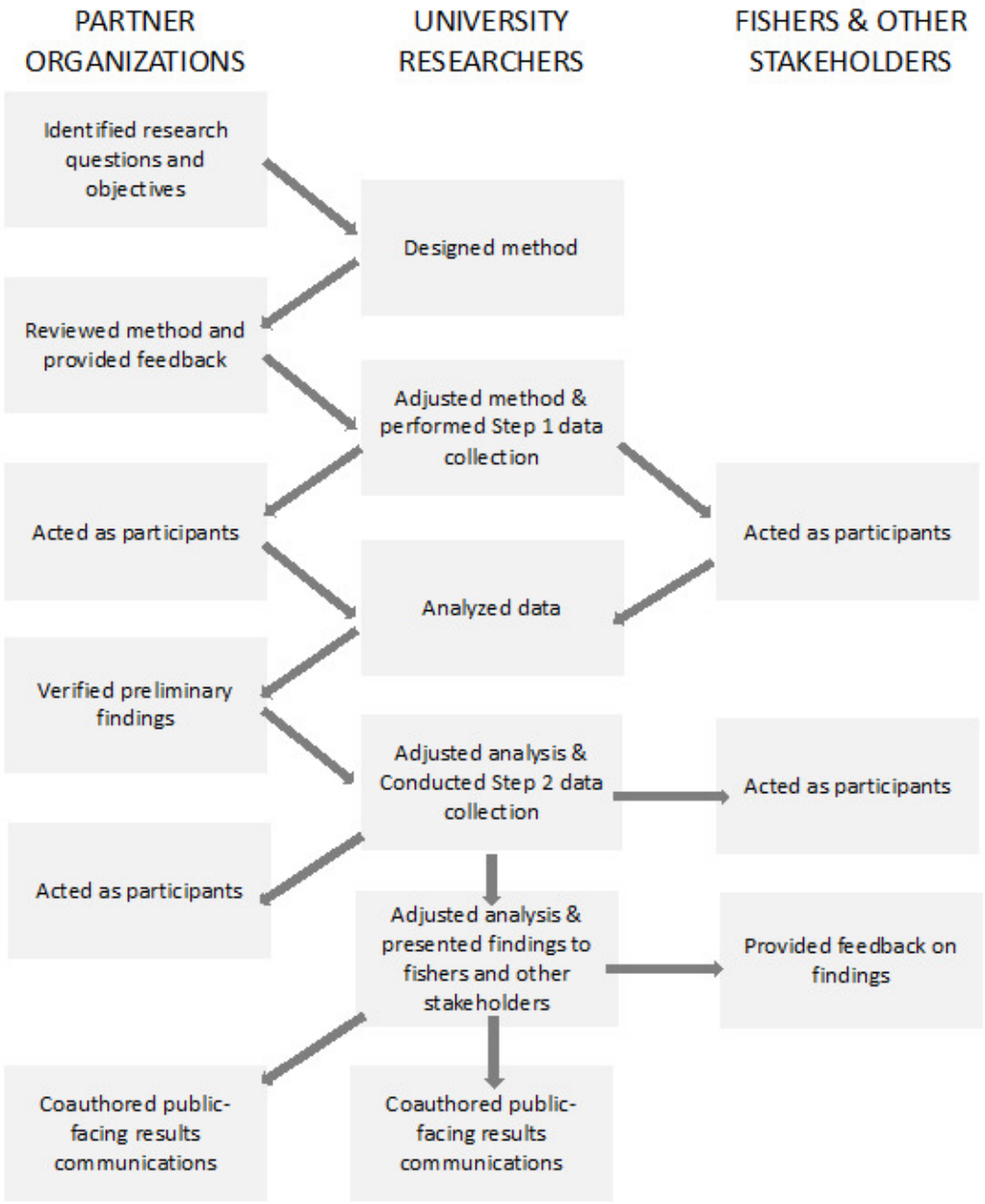

Figure 1. Contributions to the design and execution of the Visioning Project.

"Partner Organizations" refers to the representatives from the Torngat Joint Fisheries Board, the Torngat Coop, and the Nunatsiavut Government. "University Researchers" refers to the academic researchers who were invited by the partner organizations to facilitate the process. "Fishers and Other Stakeholders" refers to fishing designates, AngajukKâks, and other stakeholders who participated in the Visioning Project.

In addition to the partner feedback and consultation, the research questions, methods, and interim results were presented to the broader Nunatsiavut fisheries stakeholder community at the Annual Fisheries Workshop held in Happy Valley-Goose Bay in 2019, 2021, and 2022. These presentations were used to keep fishers in the region updated and to invite comments or feedback on the process. The way that partners, university researchers, and fisheries stakeholders participated in each step of this process is outlined in Figure 1.

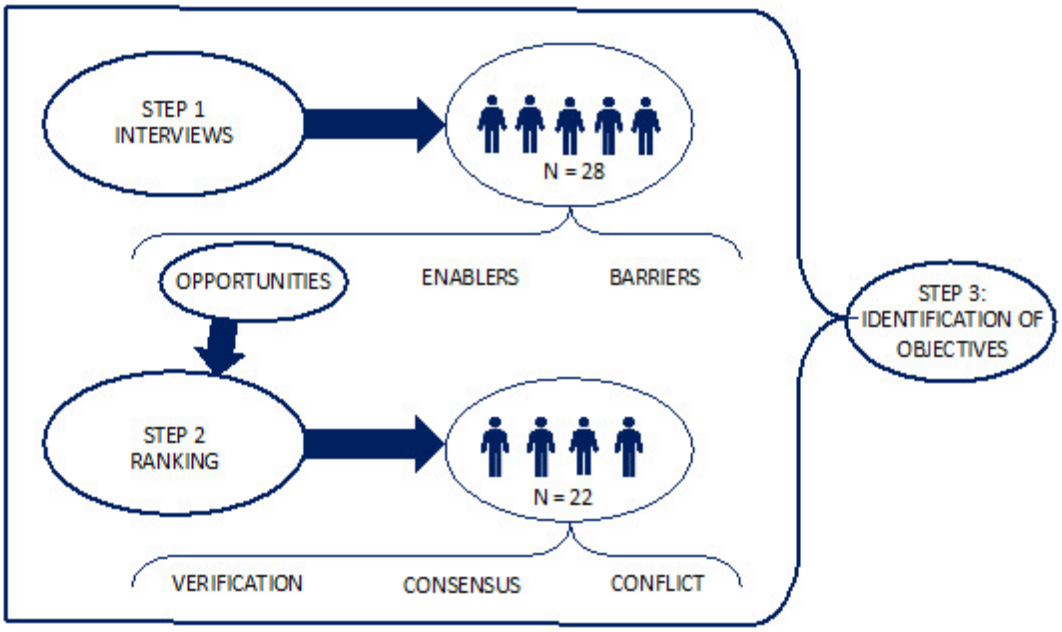

Figure 2. The process of data collection and analysis used in the Visioning Project.

In Step 1, interviews were conducted with 28 participants. The data were analyzed using a deductive analysis to identify opportunities, enablers, and barriers. Opportunities identified in this analysis are then returned to 22 participants for Step 2, who were asked to rank the opportunities. This process is used to verify the preliminary results, induce dialogue between participants, and identify possible areas of conflict and consensus. In Step 3 all the data collected were analyzed using inductive thematic analysis to reveal high level objectives shared by the participants.

Methods

The methods for collecting data for this Visioning Project were composed of three steps (Figure 2). The first round of data collection (Step 1) consisted of a semi-structured interview with all participants. Interview scripts were initially composed by academic facilitators and then shared with project partners, who provided feedback on the questions. The interviews focused on understanding the state of commercial fisheries today and asked participants to identify the strengths, weaknesses, opportunities, and threats facing the industry, as well as the role fisheries play in life.

Following the completion of these interviews, the data were analyzed by academic researchers using a deductive template analysis to identify all the ideas for changes participants wanted for the industry. First, *a priori* broad categories were drawn from the interview scripts to address the research questions (Crabtree & Miller, 1992; Fereday & Muir-Cochrane, 2016). The following broad categories formed the basis for the codebook: opportunities for the future, enabling factors (strengths), and barriers faced (weaknesses, threats). All statements coded as "opportunities," "enabling factors," and "barriers" were subsequently analyzed a second time and grouped into similar statements inductively. The opportunities identified in the analysis formed the basis of the second round of interviews.

In Step 2, a core group of organizational participants was asked to review the opportunities and discuss applicability and appropriateness for Nunatsiavut's commercial fisheries. Ten individuals from partner organizations participated in these interviews. Participants were asked to rank the statements in order of importance. During the ranking process, participants were asked to provide feedback on the results by commenting on the accuracy of the opportunity statements, the challenges they encountered through the process, and the rationale behind the order of ranking. Interviews were recorded and transcribed.

It was agreed that asking fishers and other interviewees from Step 1 to return for a second interview was an unnecessary burden for these participants. Instead, the same opportunity statements were brought to a Fisheries Workshop hosted by the Torngat Secretariat in March 2022. Fishers attending the event were asked to review the statements and discuss them with a facilitator. Fishers ranked the statements by choosing their top five (most important) and bottom five (least important) statements and shared their thinking with the facilitator, who took notes of the discussion. Statements that were ranked neither most important nor least important were interpreted to be neutral statements. Twelve fishers participated in this process. The data gathered through Step 2 were used to verify and refine the analysis from Step 1, and to gain insight into which potential points of consensus or conflict could arise during the Visioning Project.

The interview data from Steps 1 and 2, as well as the detailed notes from Step 2, were compiled and an inductive thematic analysis was performed by academic researchers to identify the overarching objectives held by participants for the future of the fishing industry, as well as similarities and differences across the group, which indicates spaces of consensus and conflict (Fereday & Muir-Cochrane, 2016). Several stories told during the interviews were also pulled from the transcripts, which highlighted qualities or moments that participants had found "successful" — anything that made them feel pride, that they remembered fondly, or that helped them explain why fisheries were important to Nunatsiavut. These results were presented back to partners for feedback.

Results

In this section, we present the results of the scenario planning process. Through the data analysis of the interviews, a group of high-level objectives were found. Analysts also found several enablers and barriers identified by participants that they see as affecting the possibility of achieving those same objectives.

High-Level Objectives

Through this iterative data collection process, 28 opportunities that provided some insight into the projects and prospects that participants saw for the region were identified. In the second round, participants were asked to rank these opportunities while discussing their strategies for prioritization.

While individual rankings varied widely across the group, the accompanying interviews revealed an important finding for future planning: a shared set of high-level objectives for the commercial fisheries in the region. These high-level objectives are thriving communities, self-sufficient fishers, local governance, and sustainable harvests.

Thriving Communities

The first objective identified through this process was thriving communities. Many participants reflected on the fisheries as a communal benefit that kept the communities alive, bringing "pride," "life," and "industry" to these coastal villages. The fisheries were seen as an important economic opportunity that can be leveraged in a space with limited opportunity for economic development:

> The fishery is the one renewable resource that we have decent quota, we have the ability, we have the capability. If we wanted to develop this industry, we could. ... by God, we do have quite a lot of fish. (Participant 7)

Participants expressed a desire for commercial fisheries to be a key driver for the rejuvenation of their communities. They viewed the fisheries as something that not only provides economic support but is also embedded in Labrador Inuit culture and therefore should be a central feature of an independent, flourishing Nunatsiavut. For example, several participants celebrated the fact that commercial fisheries were contributing to food security in the region, providing access to wild food for community members:

> One of the biggest things that I've seen with the community freezer... it was Nunatsiavut Government who secured funding to bring in cod and scallops and shrimp to the community. Oh my gosh, what a big hit that was. People were so happy to get that... Especially if we have programs that fill up our freezers with fish — it's wonderful. I know it's very expensive, but people eat it more, because they don't have access to it, and they can't afford to buy it. (Participant 14)

Fisheries are an important opportunity to bring wealth and health to the communities, and participants emphasized that these benefits should be maximized so communities can thrive.

Self-Sufficient Fishers

In addition to the desire for communal benefits, participants also expressed the importance of individual fishers, and the need to ensure that they were generally stable and active participants in the industry. For many fishers, a desirable future was described as one that gave them access to sufficient quota to invest in their own vessels, as well as financial, infrastructure, and logistical supports such as boat storage facilities, processing plants, and fisheries-specific financing. For fishers and managers alike, economic success from the fisheries would provide individual fishers with the stability and self-sufficiency they

need to advance their enterprises. According to participants, financial gain through fisheries could be spread through the community via designated fishers, both because designates could hire community members as deck hands and keep the processing plants in business, and because the fishers would spend their income in the communities for a trickle-down benefit.

From the perspective of organizational participants, such as businesses and government, there was a desire to see motivated and invested fishers, who participated actively in developing the fisheries and took the initiative to explore new potential avenues. Almost all participants spoke about the importance of fishers sharing information on an ongoing basis, both to provide timely observations on the fishing season, as well as broader insights about fishers' well-being and their needs. A desirable future for participants is one where fishers benefit from the fisheries and collaborate on fisheries management and development.

Local Governance

As a pathway to gain economic success and cultural rejuvenation, many see the fisheries as an important place to advocate for increased political power for the people of Nunatsiavut. Many of the opportunities identified during the interviews were seen to contribute to greater autonomy for the region. The most popular statement in the ranking process was "federal and provincial governments should recognize the spirit of the land claim agreement," which was ranked positively by 77% of participants (n=17). In the debriefing interviews, several individuals noted that the interpretation of the LILCA has precedence over other possible opportunities because "it's all connected. If you [recognize the spirit of the land claim], then everything flows from there" (Participant 5). For participants, the intent of the LILCA was to establish a co-management board to provide balanced advice that would support Nunatsiavut's ability to govern itself, but they found that the federal government through DFO was not respecting that role. Specifically, participants wanted the federal government to "give more weight" to the TJFB and their powers under the land claim agreement (Participant 1). Interview conversations concerning the LILCA indicate that most participants believe that fisheries policy is an important site for the negotiation and interpretation of Labrador Inuit rights.

This was particularly true concerning rights to access adjacent fisheries. Another popular statement in the exercise was, "Nunatsiavut-based organizations should lobby for increasing access to adjacent quota," which was ranked positively by half of the participants, and only ranked negatively once. In general, access to adjacent quotas is seen as a way for the federal government of Canada to recognize Nunatsiavut's rights to their traditional territory.

Sustainable Harvests

Many participants spoke about the commercial fishery as an integral part of Labrador Inuit culture. Many of the fishers discussed how they began working in the commercial fishing industry as children with their parents, and their

interest grew from there. They expressed a desire to see fisheries remain an integral part of Nunatsiavut life and livelihoods. Participants noted concerns for the longevity of the industry, citing several environmental challenges that may limit the possibility of sustainable harvests. People emphasized that they want the long-term future of the fishery to include healthy fish stocks and sustainable harvests, even at the expense of more profits. For example, one interviewee, in reference to the Snow crab fishery, said, "The close eye right now needs to be focused on the crab fishery to protect that species. If it's to take a couple of years' break to do some studying on that crab, so be it" (Participant 13). Similarly, a char fisher said, "The resource is there. I mean, there's a lot of char there. If it was in trouble… I wouldn't be at it" (Participant 19). Participants emphasized that their priority is for healthy fisheries that can be sustained for years to come.

The research questions and research products from the scenario planning process emerged through strategic meetings between the partner organizations, which enabled the construction of a project with outcomes that would be highly relevant and useful in the region. The partner organizations identified three goals for the Visioning Project: to create a high-level vision of an ideal future, to commence a dialogue among the stakeholders, and to find out where the stakeholders overlap on their needs and priorities for the future. The methods and process were developed based on these goals.

Enablers and Barriers to Objectives

Once the 28 opportunities were laid out for participants, they were able to see the scope of ideas stakeholders had for improving the industry. This prompted many to discuss not only their priorities for advancing the industry but also their personal experiences with trying to improve the industry. During the ranking exercise, many participants ranked the opportunities based on perceived practicality. Opportunities that were perceived as being more easily achievable were often ranked higher. Through these conversations, we identified several major gaps that participants felt would need to be filled for their idealized future to unfold. In this section, we describe the main enablers and barriers to achieving the high-level objectives that were identified by participants.

For many, creating Inuit-led commercial fisheries is complicated by the apparent lack of science being done to manage the fisheries well. Partners and fishers both shared the concern that there is insufficient data being gathered in the Labrador Sea adjacent to Nunatsiavut. Participants called for more monitoring of the species, particularly Arctic char and Snow crab, which people felt are being ignored. Participants were also interested in monitoring the fishing practices themselves, and several discussed the introduction of observers to the Snow crab fishery: "In order to keep the industry clean and whole, we need to monitor more of what the fishers are doing themselves, in terms of their gear, not losing driftnets, they're not taking too much softshell crab" (Participant 5). In general, participants connected their vision of a sustainable commercial fishing industry with strong monitoring.

Participants also believed that advancing greater self-determination for Nunatsiavut would require better collaboration between fisheries stakeholders. Better communication between the Nunatsiavut-based stakeholders would have positive results for fisheries management:

> We [should] all get together and start discussing the fishery in Nunatsiavut. 'Cause at the end of the day, we're all in this together, right? I don't want to be doing something that doesn't make sense for the overall fishery. Increased control over decisions... comes with collaboration and discussion. (Participant 16)

Several participants noted that collaboration and communication have been a challenge to date, with some suggesting this was due to a lack of capacity or interest. One participant suggested that "mandating" more relationship building might encourage better communication.

Lastly, almost all participants mentioned issues to do with the remoteness of Nunatsiavut. Nunatsiavut communities are only accessible by plane or by ferry (the latter is only available when there is no sea ice), with no roads to transport goods. This leads to high costs and logistical issues that make it more difficult for certain infrastructural requirements to be met. For fishers, remoteness requires more travel time to get to processing plants and to boat storage facilities. For license holders like the Torngat Coop, it makes it more difficult to export their products. AngajukKâk participants mentioned that people must travel far outside the region for training and could struggle to get financial support because there are no banks in the region. Several participants noted that the remoteness of the region makes it easier for federal and provincial regulators to disregard the unique needs of the region.

Suitability of Target Seeking Scenario Planning in Action

Indigenous Peoples are increasingly self-organizing to conduct research themselves to inform community development and decision-making (McGregor, 2018), and there is a need for frameworks to support that inquiry. The iterative nature of the method employed through this process provided significant opportunity for dialogue among the participants. Though many scenario planning activities follow set frameworks for carrying out data collection and analysis, a literature review by Nalau and Cobb (2022) found that the majority of scenario planning researchers have used a more general approach without relying on a strict methodology to prompt future visioning. Particularly when it comes to participatory approaches, researchers have found that the process should be flexible and adjusted to meet the specific needs of the participants (Carlsen et al., 2013; Wesche & Armitage, 2014).

In this case, we designed each step of the process to emerge from findings of the previous step. For example, the interviews in Step 1 revealed the extent to which partners disagreed with or were unaware of the goals and priorities of other stakeholders in the region. Originally, the method had been designed to help isolate specific goals that would direct the next steps of the data collection.

Instead, it was clear that more transparency and communication was necessary to give partners a better understanding of the scope and future possibilities for the industry. We introduced a ranking exercise for Step 2 to prompt the partners to think beyond their own operations and stimulate dialogue. This helped clarify that partners did, indeed, agree on high-level priorities for the industry, even if their approaches differed. We found that this flexibility was essential throughout the project and was supported by iterative data collection.

By engaging in this iterative method, participants were introduced to a conversation with their fellow stakeholders and asked to think through and provide feedback on all the possible directions for the future. Participants provided practical and empirical insights into commercial fishing operations in Nunatsiavut that can help to develop recommendations and policy decisions in the future. Involving stakeholders in the planning process is important for linking visions of possible futures with their implementation in real-world situations (Keseru et al., 2021). When completing the ranking exercise, many participants weighed their answers based on their perceived practicality — opportunities that were more likely to be achievable were ranked more highly. Through this process, the group developed a high-level vision of the future that can be carried forward in strategic planning because it is informed by experience.

We found that for the partners, the fact that this project has practical implications for the lives and future of their communities prompted a high level of engagement and participation in the process. One partner called the project "one of the most important aspects of our work over the past four years" (Participant 2) and another asserted that the Visioning Project is "the only way to make effective change to the way the fishery of Nunatsiavut is managed" (Participant 6). This indicates the timeliness and importance of the research for local actors. The momentum of the Visioning Project provided an opportunity to channel a dialogue that had been haphazard in the region. While in the past, Inuit governance may not have explicitly considered long-term future planning (Howitt, 2010), in this context, Inuit partners approached the exercise with enthusiasm as something that had been missing and needed for their work. By grounding the project in stakeholder objectives, we were able to instigate important dialogue for the fishing industry.

The vision that we created through this target seeking process is only the first step in a longer process. Some scenario planning exercises include "backcasting" as part of the activity, which involves creating potential pathways toward ideal visions of the future. This first step allowed the group to develop collectively held, high-level objectives, and now it is important to consider how these goals can be implemented. Due to increased attention on Indigenous governance in the past few decades and the rise in new legal and political structures, Indigenous Peoples and communities are frequently preoccupied with the mammoth task of building entirely new governance systems that combine their cultural governance regimes within a Western settler paradigm. This includes performing administrative duties, conducting research, and

dealing with immediate issues, which can make long-term planning or overhauls of existing policy very difficult (Snook et al., 2018; E. Wilson et al., 2018). Without providing practical suggestions for pathways, visioning exercises of this nature may simply be asking Indigenous partners to contribute to conceptual, scholarly outputs without providing concrete value in return and thus perpetuate a cycle of extractive research (Mosurska & Ford, 2020). It is important that non-Indigenous partners emphasize practical outputs to ensure that the work is relevant and useful for local actors to move forward in enacting the results. In the case of this Fisheries Visioning Project, the Indigenous partners who prompted and own the work will dictate how to move beyond the high-level objectives to practical action.

Though the project was focused on developing idealized versions of the future, many participants still struggled to think beyond practical, deficiency-based and short-term needs. Loring & Hinzman (2018) argue that when asked to sort future priorities, participants may organize their thinking based on what is needed, rather than what is "right." That means that depending on their cultural or philosophical outlook, participants may look for solutions that solve the immediate problems, a "deficiency-driven" way of valuing opportunities, or they may prioritize "dependency-driven" actions that need to happen quickly in order for more ideal opportunities to happen down the road (Loring & Hinzman, 2018). We would add that trust in the system played an important role in the ability to imagine ideal futures. Most participants prioritized those opportunities that were achievable by their fishing sector because they did not trust the Canadian federal or provincial systems to contribute to creating a future driven by Labrador Inuit. As Snook et al. (2022) note, a long history of dispossession of marine resources has made Inuit in Labrador wary of new policies and has limited the ability of stakeholders to imagine desirable futures.

To help prompt creativity and thinking beyond immediate needs, some scenario planning facilitators have used visual or narrative methods. A study by Amazonas et al. (2019), for example, used participatory drawing to elicit participant conceptualizations of the "good life" in the Tumucumaque Park and Eastern Paru River Indigenous Lands, Brazil, which they found helped participants think outside of conventional framings and rely more on their intuition for what was most important. This was also significant for working across knowledge systems. Another team, based in British Columbia, created a video game to help participants visualize possible climate change futures (Dulic et al., 2016). They found that visualization and play were important elements in helping participants understand trade-offs and force decisions. A plethora of arts-based and creative methods exist for eliciting desirable futures and would have been helpful for moving beyond the many barriers of the current system.

Critics of futures research with Indigenous communities warn that long-term planning may be antithetical to Indigenous ways of knowing and to their role in the "management" of lands and resources (Howitt, 2010). Escobar (1992) warned that futures research was bound up with the discourse of "development," and therefore remains entrenched in Western colonial

assumptions about the present and future. Further, some anthropologists working in the Arctic have suggested that Inuit dismiss the possibility of long-term planning in the face of great uncertainty, opting instead for governance systems designed to allow for quick response and adaptation (Bates, 2007). These works help to frame futures research, including scenario planning, as a political activity that is always already bound in a Western cultural paradigm, and that engaging with it cannot move a People beyond a settler colonial paradigm.

Rather than being a decolonial project, this target-seeking scenario planning process is more accurately referred to as an anti-colonial act, in which imagining desirable futures opened space for fisheries stakeholders to articulate the next step towards self-determination. Over the past 60 years, Inuit have driven what Ken Coates referred to as a "comprehensive process of re-empowerment" (2015, p. 28). This work has led to the establishment of land claim agreements across the north and the development of Inuit governance bodies including the Nunatsiavut Government and the TJFB. Implicit in this work is the fact that Inuit have long been imagining what their futures should look like (see, for example, Pedersen et al., 2020). This has been important work on the path to self-determination for Inuit, but the path is not yet complete. Natan Obed, President of Inuit Tapiriit Kanatami, has said:

> If you dream about the way the universe fits, and you think about it as an Inuit universe...there's no reason to think that we cannot make as big a difference today and tomorrow as our parents did creating land claims and creating representational organizations. (Obed, 2020, pp. 30–31)

The process of re-empowerment is ongoing, and target seeking scenario planning provided a useful framework to begin thinking about the next step down the path.

Conclusion

Target seeking scenario planning provided a useful framework for facilitating futures research in support of Inuit fisheries in Nunatsiavut. There is a need for research frameworks that can guide Indigenous and non-Indigenous research partners through co-designing and executing a process to articulate desirable futures for Indigenous Peoples. However, as many researchers have pointed out, the relative success of co-producing research depends heavily on the context in which it is carried out, and this remains true for target seeking scenario planning (Malmborg et al., 2022). Reflecting on the process that we undertook provides important, experience-based knowledge for future projects. Through the scenario planning process, we identified fundamental goals that can guide fisheries decision-making in the future, but we also were successful in encouraging dialogue and knowledge exchange among diverse stakeholders, which lent rigor and relevance to the process and is

an important step towards further collaboration. The elevation of Inuit voices makes this vision specific to the region and reframes fisheries as a tool for cultural and political rejuvenation.

Data Availability Statement

Ethical approval for this research study was granted by Dalhousie Research Ethics Board and the Nunatsiavut Government Research Advisory Committee. In support of Inuit data sovereignty, data collected in this study is owned by the project partners in the Torngat Wildlife Plants, and Fisheries Secretariat (TWPFS), the Nunatsiavut Government, and the Torngat Cooperative. None of the data are publicly available because they may contain information that could compromise the privacy of research participants. The data may also contain Inuit Traditional Knowledge, which, while it has been collected for the purpose of this research, will continue to be owned and controlled by the individual Knowledge holder. Raw data collected in relation to this project is maintained by the TWPFS and are available on request, at the discretion of the project partners.

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Statement of Interest

The authors declare that they had no competing or conflicting interests in this study and that the research grant funding agency had no role in the design of the study, data collection and analysis, decision to publish, or the preparation of the manuscript.

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