

## Taking stock of beginnings and endings: commercial fisheries in Nunatsiavut

Morgon Mills<sup>1</sup>, Aaron Dale<sup>2</sup>, Justin Chen<sup>2</sup>, Ashlee Cunsolo<sup>1</sup>, Paul Foley<sup>3</sup>, Charles Mather<sup>4</sup>, Alex Saunders<sup>5</sup>, Jamie Snook<sup>2</sup>

1. Labrador Institute, Memorial University; Department of Geography, Memorial University of Newfoundland; 2. Torngat Wildlife, Plants & Fisheries Secretariat; 3. Grenfell Campus, Memorial University; 4. Geography Department, Memorial University; 5. Inut Research Associate

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Research funding was provided by the Ocean Frontier Institute, through an award from the Canada First Research Excellence Fund.

## **Background**

This research is a case study of fisheries in and adjacent to the Labrador Inuit Settlement Area in Nunatsiavut, Labrador, exploring themes around Indigenous access pre- and post- land claims. Sometimes commercial fisheries in Nunatsiavut have persisted for generations and created meaningful employment, while building and perpetuating facets of cultural identity. In other cases, commercial fisheries have been short-lived, with few or no benefits for adjacent users, and very little connection to society or culture. We turn our attention to the broader systems within which fisheries thrive or fail. By focusing on the beginnings and endings of commercial fisheries, our research will strengthen decision-makers' capacity to develop long-term plans that can anticipate failures and accurately identify future opportunities. Importantly, in taking a long-view of the rise and fall of multiple fisheries through time, this research provides a contextualized and nuanced understanding of the Northern Cod and other moratoria, and their impacts on Inuit. The goal of this research is to understand the social, cultural, economic, ecological, and political antecedents for fisheries that develop and persist, with benefits accruing to adjacent Inuit in Nunatsiavut, and antecedents for fisheries that do not persist, and do not benefit adjacent users, or do so to a lesser degree.

The project also forms part of a strategic partnership with Module I of the Ocean Frontier Initiative (OFI), Informing Governance Responses in a Changing Ocean, which aims to: 1) do a regulatory appraisal of resource, industry and regulatory changes, 2) consider current status, vulnerabilities and opportunities, 3) research key challenges, 4) consider alternative governance responses, and 5) inform dialogue around a safe and sustainable future.

#### Methods

This research reviews diverse existing literatures in order to characterize the commercial fisheries adopted in Nunatsiavut to date, with particular attention to the circumstances of each fishery's beginning and ending. It considers existing literatures as broadly as possible, in order to capture the diversity of current and historical expertise in the area, including in communities, Indigenous organizations, government, academia, and elsewhere. The research also emphasizes Inuit and traditional knowledges as a central component, and in addition to including Inuit and traditional accounts within the reviewed literatures, also includes detailed consultation with Inuit experts on Nunatsiavut's commercial fisheries.

The literature review approach is pragmatically designed to realize some of the advantages of a protocol-based approach while also recovering some of the advantages of a traditional literature review. Traditional reviews are often preferred in historical studies, and can also be successfully applied in fisheries research (e.g. Schuhbauer & Sumaila, 2016). Traditional reviews are also well-suited to exploring issues, developing ideas, and identifying knowledge gaps, while protocol-based reviews are typically better-suited to answering more specific research or policy questions (Jesson, Matheson, & Lacey, 2011, p. 76). Protocol-based methodologies also support balanced and comprehensive synopsis of existing literature and facilitate cross-disciplinary applications of study results. Systematic realist reviews, for example, have recently been applied successfully to matters of Indigenous environmental management (Castleden et al., 2017; Stefanelli et al., 2017; Snook et al., 2018). These methodologies adopt replicable, systematic approaches to finding relevant

literature, and then unite statistical and quantitative methods with qualitative interpretations to arrive at deeper understandings and connections across the literature.

The wide-ranging historical and topical scope of the present research, as well as the diversity of the literature and repositories, suggests an intermediate approach, which is described below according to the standard scoping review framework proposed by Arksey and O'Malley (2005). This framework is a flexible, descriptive system, which is broadly familiar across several disciplines and therefore supports cross-disciplinary interpretation, while remaining readily adapted to the particular needs of individual research projects. The framework is suitable for comparatively broad research questions with diverse literatures, because it de-emphasizes "strict limitations on search terms, identification of relevant studies, or study selection at the outset" (p. 22), as "the whole point of scoping the field is to be as comprehensive as possible" (p. 23). It also explicitly provides for a "consultation exercise" that can support the incorporation of Inuit fisheries expertise. Our implementation of the Arksey and O'Malley framework will emphasize transparency, documentation, and explicitness as mechanisms for increasing reliability (2005, p. 4; Mays, Roberts, & Popay, 2001), while seeking to preserve the ability of traditional literature reviews to be accommodating, inclusive, and responsive to researchers' analytical judgement and subjectivity. Our belief is that the latter are not only inevitable in a broad historical study of this kind, but properly exercised, can also help to position the study within the context appropriate to its authorship.

The Arksey and O'Malley framework includes six stages, which inform one another non-linearly and may be iteratively revisited:

- 1. Identifying the Research Question
- 2. Identifying Relevant Documents
- 3. Source Selection
- 4. Charting the Data
- 5. Collating, Summarizing and Reporting the Results
- 6. Consultation Exercise

Our implementation of each of these stages is described in detail below. Because of the iterative nature of the process, some discussion of aspects of our results is included within the description of our methods, particularly for the early stages of the research.

## Stage 1: Identifying the Research Question

Our research question initially emerged from preliminary discussions amongst the study proponents, and was revisited and refined multiple times throughout the research process, based on preliminary findings and discussions within the team: based on existing literature and the expertise of consulted Inuit experts, what are the principal characteristics of current and former commercial fisheries in Nunatsiavut?

Our approach to interpreting and answering this question is understood to particularly emphasize the contexts of fishery beginnings and endings. It was decided to focus on the 13 commercial fisheries thought to be most significant, as identified in Table 1. The exact geographical area was settled less precisely, given variations in species-, fishery-, and source-specific boundaries, but extends approximately from Hamilton Inlet north to Cape Chidley.

**Table 1: Species Groups Considered** 

Species group	Included common names	Included species, by scientific name
Char	Char, charr, Arctic char, Arctic charr, iKaluk	Salvelinus alpinus
Cod	Cod, Atlantic cod	Gadus morhua
Crab	Snow crab, putjoti	Chionoecetes opilio
Redfish	Redfish, Deepwater Redfish, Labrador Redfish, Atlantic Redfish, Acadian Redfish	Sebastes spp. (e.g. mentella, fasciatus, marinus, norvegicus)
Rock cod	Rock cod, Greenland cod	Gadus ogac
Salmon	Salmon, Atlantic salmon	Salmo salar
Scallop	Scallop, Iceland scallop	Chlamys islandica
Seal	Seal (any)	Pagophilus groenlandicus, Cystophora cristata, Halichoerus grypus, Phoca hispida
Shrimp	Shrimp, northern shrimp	Pandalus borealis
Trout	Trout, brook trout, lake trout, namaycush	Salvelinus fontinalis, Salvelinus namaycush
Turbot	Halibut, turbot, Greenland halibut, Greenland turbot	Reinhardtius hippoglossoides, Scophthalmus maximus
Walrus	Walrus, aivik	Odobenus rosmarus
Whale	Whale (any)	e.g. Megaptera novaeangliae, Balaenoptera acutorostrata, Physeter macrocephalus, Orcinus orca, Globicephala melaena, Delphinapterus leucas, Lagenorhynchus albirostris, Lagenorhynchus acutus, Phocoena phocoena

Stage 2: Identifying Relevant Sources

Separate searches were conducted for 13 species groups in 11 repositories, for a total of 143 repository searches. These repositories are identified in Table 2. They include academic databases, local bibliographies, and institutional web sites.

**Table 2: Repositories Searched** 

	unic 20 Itely obligates Seutened						
EBSCOhost	EBSCOhost Database (all databases selected, via Memorial subscription)						
FSL	Federal Science Library						
GS	Google Scholar						
LI-LGTB	Labrador Institute-Labrador Graduate Theses Bibliography						
LI-LIAFA	Labrador Institute Archival Finding Aid						
LI-OPAC	Labrador Institute Library Catalogue (via MUN OneSearch)						
MUN-CFER	Centre for Fisheries & Ecosystems Research Publications (via website—manual browsing)						
MUN-CSAR	Centre for Sustainable Aquatic Resources Publications (via website—manual browsing)						
MUN-OPAC	Memorial University Libraries Catalogue (via OneSearch)						
NL-Fish	Newfoundland and Labrador Department of Fisheries and Aquaculture publications (via website)						
PQCentral	Proquest Central Database (all databases selected, via Memorial subscription)						
TWPFS	Torngat Wildlife, Plants & Fisheries Secretariat publications (via website)						

Preliminary findings using standardized search strings indicated that effective search strategies vary by species and repository. Therefore search strings were customized to species and repository by an iterative process.

As a secondary search strategy or snowball sampling, when knowledge gaps remaining after preliminary data charting in stage 4, document reference lists were revisited to identify additional sources, and sources independently known to the researchers or partners but not identified by the above processes were also included as necessary.

## Stage 3: Source Selection

Source identification and selection were closely inter-connected processes, with preliminary source selection processes typically occurring after each repository search, rather than as a distinct phase after source identification was complete. This was made necessary by the search strings

used, which were generally designed to cast a wide net and thereby to identify far more sources than would ultimately prove relevant to the research, erring on the side of inclusiveness. Repeated searching with similar terms within and across repositories also resulted in large numbers of repeated search results. It was therefore neither relevant nor practical to capture full initial search results for a single, separate source selection phase.

The preliminary source selection involved a preliminary review of source metadata contained within the repositories searched, conducted by one researcher (Mills), for relevance to the inclusion/exclusion criteria described below. Selected sources were then obtained in physical or electronic format, if possible, and subsequently reviewed for relevance in further detail, principally by reading abstracts, tables of contents, or other front matter, or for non-standard document forms, such limited perusal as was supported by the form of the document.

Sources were selected if they appeared to substantially discuss one or more commercial or subsistence fisheries in Nunatsiavut, or some aspect of governance or other matter explicitly linked by the source to the prosecution of commercial or subsistence fisheries in Nunatsiavut. Additional exclusion criteria emerged during the identification and selection processes, largely because of a poor ratio of relevance to reading burden. The following sources were therefore not selected:

- technical or biological studies;
- quantitative reports on stocks, landings, or catch limits, such as stock assessments, exploratory surveys, and co-management recommendations, unless they were of a summary nature, including qualitative assessment or description of regional fisheries or associated policy;
- news or general interest items of one or two pages;
- sources focusing on recreational fisheries by non-residents; and
- sources focusing on aquaculture.

Beyond its immediate utility for this project, the list of sources selected in Stage 3 is intended to be a valuable knowledge product in itself. It is available as Appendix B.

## Stage 4: Charting the Data

Data charting began with a preliminary analysis of key sources identified and selected in early iterations of Stages 2 and 3 by one researcher (Chen), and this experience was used to refine approaches to searches and analysis in Stages 2-4. Subsequent data charting targeted sources in descending order of ready availability and apparent relevance, extracting data for each commercial fishery discussed in the source, to the degree of qualitative or quantitative detail provided, until the fisheries were deemed satisfactorily described. Additional sources were consulted in cases of where additional information, detail, or corroboration was required; and remaining data gaps were addressed, whenever possible, through the recruitment of additional sources by snowball sampling. The objective of data charting was to obtain high-level indications of fishery characteristics, rather than to summarize extant knowledge; therefore not all sources were necessarily analyzed, particularly for fisheries where one or two high-quality sources were sufficent for characterization. For this reason, not all sources selected in stage 3 contributed directly to the outcomes of stages 4-6.

Fisheries were delineated on a case-by-case basis, with modern fisheries typically distinguished by species; but substantially overlapping fisheries for multiple species were also considered. Subsistence and commercial fisheries were not consistently differentiated in source documents, particularly for traditional fisheries; in cases of unclear or intermediate status, fisheries were included in data charting.

For each commercial fishery identified, the following data were captured, in tabular form:

- Species;
- Duration (years of opening and closing);
- Impetus for the fishery's beginning;
- Cause of the fishery's closure;
- Significant events;
- Governance (e.g. traditional, co-management, federal, provincial, other);
- Type (defining descriptor, e.g. inshore/offshore, gear type, fleet);
- Location (e.g. community, NAFO zone, other geographic identifier);
- Extent (landed catch, number of harvesters employed, processing plants, total value, etc.);
- Industry stages prosecuted locally (harvesting or processing/both/neither); and
- Degree and nature of Indigenous involvement and control.

## Stage 5: Collating, Summarizing and Reporting the Results

Results were reported in tabular form, summarizing the findings for each fishery identified in the documents. A timeline was also created of events documented in the analyzed sources as significant to Nunatsiavut's commercial fisheries in general. Finally, a detailed qualitative analysis was conducted to elucidate trends and gaps in the findings, as well as directions for further inquiry.

## Stage 6: Consultation Exercise

At the time of writing, the planned consultation exercise had not yet been carried out. All study results are therefore preliminary pending validation, amendment, and expansion through

consultation with Inuit experts on Nunatsiavut commercial fisheries. This consultation will take the form of sharing interim results and validating findings, as well as seeking guidance and insight into the study's methodology and analytical approach, as well as any additional knowledge that the experts may be able and willing to share. In particular, this will be an opportunity to address any gaps identified in Stage 4 and 5 or to clarify any areas where information is confliciting or ambiguous. It will also be an opportunity to enrich the discussion component of the report and verify its relevance and sensitivity to local Inuit perspectives.

## **Results**

## Stage 1: Identifying the Research Question

The research question as presented in our methodology was refined in light of preliminary results for Stages 2-4, leading to the final form presented in our methodology, and guiding the further implementation of Stages 2-6. This iterative approach successfully ensured that our research could respond effectively to preliminary findings, both expanding to address emergent opportunities and changing or contracting in light of revealed limitations.

## Stage 2: Identifying Relevant Sources

The first outcome of this iterative identification process was the determination and refinement of effective search strings. Challenges in selecting search strings varied by species and repository, and were too numerous to be listed here, beyond a few illustrative examples.

- Species-specific considerations:
  - False hits for common names in repositories requiring full-text searches (e.g. "char" finding "characteristic")
  - O Different degrees of inflection for common species names (such as "whaling" or "whalers" for "whale")
  - o Different degrees of complexity in disambiguating species (e.g. for cod/rock cod)
  - Different supplementary geographical identifiers based on specific fisheries (e.g. Hopedale Channel for shrimp)
  - O Different degrees of prominence relative to broader fisheries (e.g. the overwhelming number of sources on the provincial cod fishery)
- Repository-specific considerations:
  - Variable utility of "Inuit" as a proxy for geographical area in provincial versus national databases;
  - o Inconsistent uptake of "Nunatsiavut" as an indexed keyword
  - Variable difficulty of distinguishing "Labrador" from "Newfoundland and Labrador"
  - Variable advanced search capabilities
  - o Generally the variable structures and search capabilities of repositories themselves.

After iterative refinement, effective search strings were successfully developed to navigate these and other complexities. The number of distinct strings searched per repository per species varied from 1 to 18, with an average of 4.2. A total of 601 distinct string searches were executed, as shown in Table 3. A table of the search strings themselves is available as Appendix A.

Table 3: Search Strings per Repository Per Species

Repository	Char	Cod	Crab	Redfish	Rock cod	Salmon	Scallop	Seal	Shrimp	Trout	Turbot	Walrus	Whale	Total
EBSCOhost	12	6	18	6	9	3	3	3	8	9	12	9	3	101
FSL	9	6	3	6	2	3	3	3	3	6	8	9	3	64
GS	12	6	18	6	9	3	3	3	8	9	12	9	3	101
LI-LGTB	4	2	3	2	3	1	1	1	2	3	4	3	1	30
LI-LIAFA	2	1	1	1	2	1	1	1	1	1	2	1	1	16
LI-OPAC	2	3	1	1	3	1	1	1	1	3	2	3	1	23
MUN-CFER	2	1	1	1	2	1	1	1	1	1	2	1	1	16
MUN-CSAR	2	1	1	1	2	1	1	1	1	1	2	1	1	16
MUN-OPAC	12	6	18	6	9	3	3	3	8	9	12	9	3	101
NL-Fish	2	1	1	1	2	1	1	1	1	1	2	1	1	16
PQCentral	12	6	18	6	9	3	3	3	8	9	12	9	3	101
TWPFS	2	1	1	1	2	1	1	1	1	1	2	1	1	16
Total	73	40	84	38	54	22	22	22	43	53	72	56	22	601

A high degree of overlap in search results was observed across search strings and repositories, as well as across species, for sources dealing with multiple species or fisheries in general. In conjunction with the quality of the search results themselves, this overlap was thought to imply a generally consistent effectiveness in search string strategy, and in light of iterative selection processes in Stage 3, the total number of sources identified was thought to be sufficient for data charting and discussion purposes in Stages 4-5. Informal validation by checking known sources against the list of identified sources also indicated acceptably comprehensive results. The search methodology did not support meaningful reporting of total hits, and the comprehensivity of search results was not directly or quantitatively tested.

## Stage 3: Source Selection

A total of 200 sources were selected based on the inclusion criteria, resulting in a bibliography that may prove useful well beyond the immediate scope of this research. That bibliography is available as Appendix B. 67 selected sources dealt with multiple named species or with Nunatsiavut fisheries in general, while an additional 133 dealt explicitly with individual species. Counting only sources dealing primarily with a single species, an average of 10.2 sources were selected per species (median=10). 3 or more sources were selected for all species except redfish, for which no specific sources were found, but there was considerable variation in the number, types, and perspectives of sources selected across species. For some well-documented species, e.g. cod and crab, an arbitrarily larger number of sources could have been selected at the fringes of the inclusion criteria. For example, many sources on cod described the history of the Labrador fishery, and some included discussion of northern Labrador. Assessing the extent and relevance of this discussion for such a large number of documents was impractical and judged unlikely to answer gaps in the data of sources already selected. Similarly, many largely quantitative sources on crab, including primarily government reports, contained some qualitative discussion of fishery prosecution, but the time was not taken to assess the extent of this discussion. The threshold of relevance for source selection can therefore be considered to have varied somewhat by species, based on the number and apparent quality of sources already selected.

96 of the selected sources were audiovisual sources, including a majority for less well-documented species without current or recent large-scale commercial fisheries in Nunatsiavut, namely whales, trout, walrus, and rock cod. The audiovisual sources are therefore an essential inclusion. Many of the videorecordings in particular are also valuable as Inuit knowledge sources.

Table 4: Sources Selected per Species, by Source Type

Species	Sc	holarly sour	ces	Othe	er textual so	urces	Aud	liovisual sou	rces	Total
_	paper	chapter	thesis	gov	report	article	audio	photo	video	
Char	1	0	0	6	3	0	0	0	6	16
Cod	0	0	2	0	0	0	0	6	2	10
Crab	2	0	1	5	5	1	0	0	0	14
Redfish	0	0	0	0	0	0	0	0	0	0
Rock cod	0	0	0	1	0	0	0	2	0	3
Salmon	1	1	0	7	2	0	0	2	11	24
Scallop	0	0	0	4	0	0	0	0	0	4
Seal	2	0	0	0	2	0	0	10	6	20
Shrimp	0	0	2	5	8	0	0	0	0	15
Trout	0	0	0	1	0	0	1	4	0	6
Turbot	0	0	1	5	2	1	0	0	1	10
Walrus	0	0	0	0	0	0	0	6	0	6
Whale	1	0	0	0	0	0	0	2	0	3
Multiple	12	5	6	4	5	0	0	2	35	69
Total	19	6	12	38	27	2	1	34	61	200

For all searches, there was necessarily a very high ratio of irrelevant to relevant results. This outcome was an expected trade-off associated with the inclusivity that permitted the capturing of diverse literature types. The chief challenge associated with the large volume of manual screening and the impracticality of quantitative filtering was the possibility of sources being occasionally overlooked. However, volumes of search hits were typically highest for the repositories with the most similar search results (for example, Memorial University OneSearch, Google Scholar, and the Federal Science Library). Repetition of search results in these repositories likely served to mitigate the probability of human error in source selection.

## Stage 4: Charting the Data

Three sets of charts were created, including a summary list of identified commercial fisheries and approximate time-frames; a chronology of significant events for Nunatsiavut fisheries; and a detailed individual chart for each fishery identified in the summary list. These results are presented in condensed, visual form, for clarity. 1942 marks the beginning of government involvement in fisheries management.

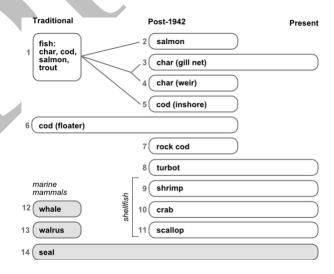


Figure 1. Summary List of Identified Commercial Fisheries in Nunatsiavut

**Table 5: Significant Events for Commercial Fisheries in Nunatsiavut** 

Table 3	Significant Events for Commercial Fisheries in Nunatsiavut								
Date	Event								
1918	Spanish influenza; closure of Okak								
1926	Moravian Mission withdraws from trading operations								
1941	Establishment of 5-Wing Goose Bay; out-migration of labour for construction work								
1942	Hudson's Bay Company closes northern Labrador posts; Newfoundland government takes over fisheries services through								
	newly created Northern Labrador Trading Operations (NLTO)								
1949	Confederation of Newfoundland (and Labrador) with Canada								
1952-1957	Many Inuit stopped fishing in favour of work building the radar station at Hopedale								
1956	Closure of Nutak								
1958	Establishment of Postville in Kaipokok Bay								
1959	Closure of Hebron								
1968	installation of walk-in freezer units at Nain, Hopedale, Makkovik								
1971	fish plant built in Nain								
1973	fish plant built in Makkovik; commercial char fishery restricted to northern Labrador residents								
1973	Labrador Inuit Association established								
1974	Royal Commission on Labrador recommends exploratory and development programs								
1976-1981	Labrador Resource Advisory Council operations								
1 <mark>981</mark>	creation of Torngat Fish Producers Co-operative Society Ltd								
1992	cod moratorium								
2005	Voisey's Bay mining begins								
2005	Nunatsiavut established; fisheries co-management begins								
* Only event	s affecting fisheries in general are included; see Table 6 for additional events relevant to particular fisheries								

## **Table 6: Characteristics of Identified Nunatsiavut Commercial Fisheries**

Fishery	Early post-contact	2. Government-managed	3. Government-managed	4. Saglek weir fishery		
	commercial fishery	salmon fishery	c <mark>har</mark> fishery			
Species	char, cod, salmon, trout	salmon	char	char		
Duration	1800s-1942	1942-1998	1942-present	1990s <sup>(1)</sup>		
Impetus for	subsistence fishery	upon HBC withdrawal,	formation of NLTO in	1989 experimental fishery		
beginning	commercialized by	government formed	1942 <sup>(a)</sup> ; fishery expanded	by Labrador Inuit Assoc.		
0 0	Moravian missions and	Northern Labrador Trading	due to decline of cod in	and federal government(m)		
	Hudson's Bay Co.(a,b)	Operations <sup>(a)</sup>	1960s <sup>(i)</sup>	led to fishery in 1991 <sup>(l,m)</sup>		
Reason for	withdrawal from trade of	declining stock <sup>(c,d)</sup> ;	still operating	[knowledge gap]		
closure	Moravians in 1926 and	1998 moratorium due to				
	HBC, due to low fur	"conservation concern" (d)				
	demand, in 1942 <sup>(a)</sup>					
Governance	traditional	federal (also provincial in	federal quotas from 1979 <sup>(g)</sup>	provincial		
		fresh water)				
Type	inshore, varied gear; fish	predominantly gill nets; mair	nly fresh and frozen product	weir fishery		
	usually salted or pickled	since 1970s; also smoked(a,e)		-		
Location	entire coast	SFA 1 (northern Labrador	since 1971 mainly	Southwest Arm Brook in		
		south to Fish Cove Point,	Voisey's Bay to Okak	Saglek fjord <sup>(1)</sup>		
		including Hamilton Inlet)(c)	Bay <sup>(e,h,i)</sup>			
Extent	limited; "Although [] the	minimal before 1950s:	relatively consistent; e.g.	all the fish in the river are		
	early fishery was not as	"little effort is made to fish	roughly 200,000 lbs/yr	caught, and quota is swiftly		
	lucrative as hoped, it was	salmon from Hopedale	average, 1960-2003 <sup>(a,k)</sup>	filled; e.g. 5,000 lbs in		
	[] maintained as a	south to Hamilton Inlet" (f);		1996 <sup>(1)</sup> and 7,000 lbs in		
	valuable asset to the	substantial from late 60s to		1997 <sup>(m)</sup>		
	Labrador trade."(a)	early 90s (c)				
Significant		1968: freezers at Nain, Hope	dale, and Makkovik <sup>(a)</sup>			
Events		1971: plant at Nain(a); concen	trates char fishing locally <sup>(e,h,i)</sup>			
		1973: plant at Makkovik <sup>(a)</sup> ;				
		1973: commercial char restric	cted to residents(a);			
		1981: creation of Torngat Fis	sh Co-op			
Local Stages	harvesting and	harvesting and processing	harvesting and processing,	harvesting and processing		
_	salting/pickling(a)		some sales			
Indigenous	conducted by Inuit,	conducted by Inuit	conducted by Inuit; co-	Inuit/federal government		
Control	managed by non-Inuit(a)	-	managed since 2005	collaboration		
Sources	<sup>a</sup> Coady, 1974		<sup>h</sup> Coady & Best, 1976			
	<sup>b</sup> Arendt, 2010		<sup>i</sup> LeDrew, 1980			
	<sup>c</sup> Working Group on the Labr		<sup>j</sup> Felt & Natcher, 2011			
	d Fisheries and Oceans Canad	la, 1999	<sup>k</sup> Dempson, 2004			
	<sup>e</sup> Dempson, Shears, Furey, &	Bloom, 2008	<sup>1</sup> Thornhill, 1996			
	f Sollows, 1954		<sup>m</sup> Evans & Kalleo, 1997			
	g Fisheries and Oceans Canad	la, 2001				

## Table 6 (cont.): Characteristics of Identified Nunatsiavut Commercial Fisheries

Fishery	5. Government-managed inshore cod fishery	6. Cod floater fishery	7. Lake Melville rock cod fishery	8. Turbot fishery
Species	cod	cod	rock cod	turbot
Duration	1942-early 1970s	mainly 1860s-1960s	1979	1960s-present
Impetus for beginning	upon HBC withdrawal, government formed Northern Labrador Trading Operations <sup>(a)</sup>	Newfoundland schooner fishery expanded north 1860-1875 <sup>(a)</sup>	1974 "no market exists" (d); but 1978 provincial experimental fishery (e) and appearance of market (Canadian Saltfish Corp.)	no traditional Inuit fishery; commercial fishery made practical by development of synthetic gillnets in 1960s <sup>(f)</sup> ;
Reason for closure	declining catch; increased emphasis on salmon <sup>(a)</sup>	decline of stocks in late 1960s <sup>(a)</sup>	loss of market: 87% price drop between 1979-1980 <sup>(e)</sup>	still operating
Governance	federal, but "effectively dece	ntralized"(b)	provincial	federal
Туре	mainly traps <sup>(c)</sup>	seining, gillnet, longline <sup>(b)</sup>	mainly boats under 20 ft. (e)	deepwater fishery mainly by Nfld and foreign vessels; in-shore mainly small vessels gillnetting <sup>(f)</sup>
Location	whole coast	entire coast (2G, 2H, and northern portion of 2J NAFO areas)	Lake Melville (mainly Rigolet, but also Upper Lake Melville)	coastal deepwater channels and bays (whole coast) <sup>(f)</sup>
Extent	limited commercial catch: "Recently [1960s] only the southern one-third of the coast has been fished to any great extent, with minor contributions from Eskimo communities further north."(b)	peaked in 1910s; declining thereafter; minimal after 1960s <sup>(b)</sup>	330,000 lbs in 1979 [Rigolet's portion] <sup>(e)</sup>	minimal in 1975, due to limited capacity; (Royal Commission on Labrador cited in f) nonetheless "excellent potential"; (d) expansion under Northern Turbot Development Program in 1990s <sup>(f)</sup>
Significant Events		1950s "the fleet had all but disappeared [] loss of traditional markets [for salt fish]" (b) 1963 "minor revival of the floater fishery" (b) late 1960s declining catch (a,b) 1992 moratorium		1990: 750t turbot quota allocated to each of Labrador Inuit Development Corp. and Torngat Fisheries Coop <sup>(f)</sup> 1994: adjustment of quotas by zone boundaries; <sup>(f)</sup> 1996: quotas reduced to 70t for LIDC and 160t for Torngat; <sup>(f)</sup> 2010: TJFB recommended creation of 650mt Nunatsiavut allocation <sup>(f)</sup>
Local Stages	harvesting and processing	harvesting and processing	harvesting only; processing by Bay Roberts Fisheries Ltd (FCR, 1980)	harvesting and processing
Indigenous Control	conducted by Inuit, in practice without regulation	mainly prosecuted from Newfoundland <sup>(b)</sup>	conducted by locals, including mainly Inuit	conducted by local Inuit, managed by federal government; co-managed since 2005
Sources	<sup>b</sup> May, 1966	Brothers, 1974 Fishermen's Committee of Rigol Forngat Joint Fisheries Board, 2		cy Committee, 1980

## Table 6 (cont.): Characteristics of Identified Nunatsiavut Commercial Fisheries

Fishery	9. Shrimp fishery	10. Crab fishery	11. Scallop fishery	12-14. Marine mammal fisheries
Species	shrimp	snow crab	scallop	seals, walrus, whales
Duration	mid 1970s-present	mid 1980s-present	1980s-present	1700s-present
Impetus for beginning	developing fishery in west Greenland in early 1970s; federal programs encouraging diversification from groundfish, positive exploratory surveys (a)	northward exploratory excursions from established fishing areas in the south	federal initiatives and surveys, 1974-1982; (c.d.e) Nain scallop beds "never commercially fished" before 1978 (d)	evolved from traditional subsistence fishery; as with other fisheries, was commercialized by outside agencies such as the Moravians <sup>(h,i)</sup>
Reason for closure	ongoing	ongoing	ongoing (intermittent)	walrus largely extirpated in 1800s <sup>(i)</sup> ; whaling mostly ended in 1800s for

				complex of reasons <sup>(j)</sup> ; seal fishery still ongoing
Governance	federal	federal; quotas since 1986; co-managed since 2005	federal	federal
Type	mobile gear		dragging from small boats	spring hunt on ice; fall open-water hunt <sup>(k)</sup>
Location	mainly Hopedale Channel and Makkovik Trench		Hopedale, Nain <sup>(c,d)</sup>	full coast
Extent	in many ways the most valuable fishery for Labrador Inuit <sup>(a)</sup>	in early 1990s, snow crab comprised 79% of landed value for <65' fleet based in 2GHJ (b)	limited and intermittent(e)	long-term downward trend in seal harvest <sup>(k)</sup>
Significant Events	Early 1970s: surveys mid 1970's: fishery began in SFA 5, Hopedale and Cartwright Channels 1978: 3 offshore shrimp licences issued to Labrador interests 1987: LIDC acquired 50% of an additional offshore shrimp licence through a Pikalujak Fisheries 1997: Inshore access by temporary allocations (a)	1985: exploratory fishery 1986: quotas established 1992: snow crab management plan; north of 54'40" reserved for Nunatsiavut-based interests 1996: management plan explicitly gives special consideration to northern Aboriginal peoples 1997: Torngat Coop issued an exploratory licence of 100t for 2GH and J north of 54'40" 1999: 500t communal licence to LIA (b)		1960s adoption of snowmobiles and outboard engines <sup>(k)</sup>
Local Stages	some harvesting inshore; most transferred offshore	harvesting (though often through non-local charters), processing at Makkovik since 1997 <sup>(b)</sup>	harvesting, processing <sup>(g)</sup>	harvesting and processing
Indigenous Control	limited involvement; some access to decision-making through participation in larger forums, facilitated by the LILCA; total allocations to Nunastiavut interests and Torngat Coop proportionally small	heavy reliance on southern vessels/crews; co-managed since 2005	prosecuted by Inuit, co- managed since 2005	prosecuted by Inuit, co- managed since 2005
Sources	<sup>a</sup> Coombs, Coffey, Dale, & Si <sup>b</sup> Coombs, Coffey, Dale, & Si <sup>c</sup> Harnum, 1975 <sup>d</sup> Barney, Chaffey, & Collier, <sup>e</sup> Brothers, 1974	nook, 2010b <sup>g</sup> Labrador Ea h Arendt, 2010	st Integrated School Board, n.d.)	<sup>i</sup> Elliott, 2017 . <sup>j</sup> Taylor, 1988 <sup>k</sup> Richling, 1989

Stage 5: Collating, Summarizing and Reporting the Results

The charted data generally sufficed to characterize the major commercial fisheries in Nunatsiavut, and to reveal trends both in specific fisheries and in Nunatsiavut's commercial fisheries in general. Data charting tended to rely heavily on key sources for particular fisheries—for example, turbot (Torngat Joint Fisheries Board, 2010) and early cod fisheries (May, 1966)—while in two cases the persistence of knowledge gaps after preliminary data charting required additional source recruitment—the saglek weir fishery (Evans & Kalleo, 1997) and the scallop fishery (Watts, 2012).

The high level of the analysis meant that tangentially relevant sources were often useful, and many sources contained information relevant to fisheries that they did not discuss at length. However, in general sources tended to be very specific in focus, and relatively few of them provided long-term overviews of particular fisheries (e.g. Coady, 1974; Torngat Joint Fisheries Board, 2010). The absence of high-level treatments of Nunatsiavut's fisheries may indicate either flaws in the

source selection methodology, or gaps in the available literature, but underscores the relevance of this research.

While the charted data was sufficient overall, the abundance of relevant information was uneven, with some well-documented fisheries and time periods, and other substantial knowledge gaps. The early development phases of recent fisheries tended to be well-documented, while data on challenges or closures was not as consistently available. The scallop fishery and the char weir fishery are two cases where additional data beyond the development phase would be useful. At the time of writing, this weir fishery is the principal gap remaining in the charted data, with no data currently available to document the date or reason for the fishery's closure.

The categorization of findings for individual fisheries reveals several trends with respect to particular characteristics. There were clearly identifiable trends in eight areas, as follows.

## Fishery beginnings:

For seven identified commercial fisheries, the initial impetus was local. These fisheries emerged from traditional fisheries for various species, including finfish (char, trout, cod, and salmon) and marine mammals (seals, walrus, and whales). For the remaining seven fisheries, the initial impetus was external, coming either from the arrival of harvesters from outside (e.g. the cod floater fishery), the northerly expansion of more southerly commercial fisheries (e.g. crab and shrimp), or government initiatives targeting economic development (e.g. Saglek weir fishery, rock cod, turbot, and scallops). In general, the former seven all began prior to governmental involvement in 1942, and the latter seven all began in the 1960s or later, with the exception of the cod floater fishery, which dates back to the 19<sup>th</sup> century in northern Labrador waters.

## Fishery endings:

Six of the identified commercial fisheries are ongoing: char, turbot, shrimp, crab, scallop (intermittent), and seal. Of the remaining eight, two ended or transitioned to other structures because of social change (whales in the 19<sup>th</sup> century and the early post-contact fishery prior in 1942); four ended due to declining stocks or productivity (salmon, inshore cod, cod floater fishery, and walrus); one due to market collapse (the brief rock cod fishery); and one for unclear reasons.

### Governance:

Charting fishery governance was found to be somewhat complex, because of the intricate and temporally variable management systems in place for various fisheries. However, May's use of the term "decentralized" to describe the northern Labrador cod fisheries (1966) provides a useful means of categorizing fisheries according to the locus of operational decision-making, if not formal governance or regulation. A key question is whether a particular fishery is carried out by a centralized, coordinated entity (or a small number of such entities), or distributed amongst largely independent decision-makers. According to this criterion, six of the identified commercial fisheries are or were centralized (the Saglek weir fishery, Lake Melville cod rock fishery, and the turbot, crab, shrimp, and scallop fisheries). Three others have been largely decentralized in terms of harvesting, but increasingly centralized in terms of processing,

particularly from the installation of freezers in 1968 and the construction of processing plants in the early 1970s (the char, salmon, and inshore cod fisheries). The five remaining fisheries are or were entirely decentralized (the early post-contact fishery, cod floater fishery, and fisheries for seals, walrus, and whales). The trend here is clearly towards increasing centralization over time, with the notable exception of the seal fishery.

## Type:

The identified commercial fisheries exhibited great variety in gear and fleet types, as well as in many other details of harvesting methodology. However, in broad terms, the harvesting components of ten fisheries can be distinguished as either shore-based (directly on shore or by short daily excursions in small boats) or offshore. Ten fisheries are or were shore-based, including the early post-contact fishery and later fisheries for char, salmon, rock cod, and scallops, as well as the marine mammal fisheries. By contrast, four fisheries are prosecuted offshore, including the cod floater fishery and fisheries for turbot, crab, and shrimp.

## Location:

The majority of identified commercial fisheries were not restricted to particular locations within Nunatsiavut. Ten fisheries are or were prosecuted along the majority of the coastline, while four are or were geographically restricted, including the weir fishery in Saglek, the rock cod fishery in Lake Melville, and the scallop fishery near Nain, as well as the broader char fishery, which has narrowed over time from the whole coast north of Hopedale (Coady, 1974) to the area between Voisey's Bay and Okak Bay after the fish plant was built in Nain in 1971 (Coady, 1974; Coady & Best, 1976; LeDrew, 1980), to being concentrated principally around Nain at the time of writing.

## Extent:

No attempt was made in this research to quantify fisheries by catch, quota, monetary value, or employment. Much of that work has been done elsewhere, and further, for the present purposes, useful quantitative comparisons are difficult to draw between fisheries and over time. In general the trend in sources consulted through this research was to describe commercial fisheries as qualitatively not very extensive, with the notable exceptions of the cod floater fishery, which peaked in the 1910s (May, 1966), and more recent fisheries for shrimp and crab. The char fishery has been relatively consistent over the decades at least since 1960 (e.g. Coady, 1974; Dempson 2004), while the salmon fishery was on average of a size comparable to the char fishery, from the late 1960s to the early 1990s (Working Group on the Labrador Salmon Fishery, 1997).

### Stages Prosecuted Locally:

Both harvesting and at least preliminary processing were carried out locally for most of the identified commercial fisheries, although some harvesting (e.g. crab, shrimp, turbot) has involved chartering of external vessels and crews. The major exception is the cod floater fishery, which had minimal local involvement. Additionally, the Lake Melville rock cod fishery shipped its catch out for processing (Fishermen's Committee of Rigolet and Fishery Emergency Policy Committee, 1980).

## <u>Indigenous Involvement and Control:</u>

Assessing the degree of local, Indigenous involvement and control in Nunatsiavut's commercial fisheries over time was complicated by the same factors that affected the categorization of governance models. In general, Indigenous involvement seems to have correlated strongly with local involvement, and has therefore overall been strong for most fisheries; whereas control has been variable. In the early post-contact fishery, up to 1942 trading was conducted mainly by the Moravian Missions and Hudson's Bay Company, indicating that control was largely not in Indigenous hands; but the relative decentralization of the fishery also meant that harvesting decisions were somewhat shared. Similar conditions seem to have persisted after 1942 in most fisheries under the Northern Labrador Trading Operations and its successor departments in government (Coady, 1974), but increasing provincial and federal regulation beginning in the late 1960s led to more evident exercising of external, non-Indigenous control over the fisheries. However, control is difficult to assess and summarize, given the multi-faceted nature of the industry and the significant mobilizations within Nunatsiavut under the Labrador Inuit Association (LIA). Generally the LIA's management capacity grew over the same period as did government involvement, so that trends in control from the 1970s-2005 are complex (see Snook, 2010; Snook, 2018; and Snook, Cunsolo, & Morris, 2018 for a thorough discussion).

Table 7: Summarized Characteristics by Category and Identified Commercial Fishery

	tified Commercial			nning			_	Reason for I		
Fish	•	Date	;	In	npetus	Ongoing	Social	Declining	Market	Unclear
(sho	rt form)	1942 or earlier	post- 1942	local	external		change	stocks	collapse	
1	Early post-contact	X		X			X			
2	Later salmon	X		X				X		
3	Later char	X		X		X				
4	Saglek weir		X		X					X
5	Later inshore cod	X		X				X		
6	Cod floater	X			X			X		
7	Rock cod		X		X				X	
8	Turbot		X		X	X				
9	Shrimp		X		X	X				
10	Crab		X		X	X				
11	Scallop		X		X	X				
12	Whales	X		X			X			
13	Walrus	X		X				X		
14	Seals	X		X		X				

Table 7 (cont.): Summarized Characteristics by Category and Identified Commercial Fishery

1 a	DIC / (COIIC.)	,. Summ	arizeu ena	i acteristics	ucgory	anu ru	ichtmicu	Commic	Clai Fishery	
Iden	tified		Organization	l	Ty	pe	Geog	graphic	Local Stages	
Con	nmercial Fishery						Loc	cation		
(sho	rt form)	Centraliz	Centralized	Decentralized	Shore-	Off-	Most	Specific	Harvest	Processing
		ed	processing		based	shore	of the	area		
			(since 1971)				coast			
1	Post-contact			X	X		X		X	X
2	Later salmon		X		X		X		X	X
3	Later char		X		X			X	X	X
4	Saglek weir	X			X			X	X	X
5	Cod inshore		X		X		X		X	X
6	Cod floater			X		X	X			
7	Rock cod	X			X			X	X	
8	Turbot	X				X	X		X	X
9	Shrimp	X				X	X		~	~
10	Crab	X				X	X		~	X
11	Scallop	X			X			X	X	X
12	Whales			X	X		X		X	X

13	Walrus		X	X	X	X	X
14	Seals		X	X	X	X	X

Stage 6: Consultation Exercise

The planned consultation exercise has not yet been completed.

### Discussion

The source identification and selection phases of this search revealed uneven coverage of Nunatsiavut's commercial fisheries in the existing literature. While the basic characteristics of most fisheries were discoverable in the selected sources, fisheries were seldom documented directly in holistic descriptions—and the sources' tendency towards narrower focuses would be even more pronounced, had purely quantitative or technical sources also been included in the review. Overall, this may imply that source authors tend to assume that their readership is familiar with the general contexts and structures of Nunatsiavut's fisheries, or it may imply that social and historical contexts have been overlooked, in favour of more specifically focused investigations of isolated topics or issues. In either case, the result is a literature that, taken on its own, exhibits a relative lack of high-level or holistic treatments of individual fisheries over time, of Nunatsiavut fisheries taken together as an industry, or of Nunatsiavut's fisheries in broader social contexts.

Findings indicated increasing differentiation of fisheries by species during the 20<sup>th</sup> century, with increasing Newfoundland government involvement after the withdrawal of the Hudson's Bay Company from northern Labrador trading in 1942, and increasing fisheries regulation from the Canadian government particularly from the 1970s.

Of the 14 commercial fisheries identified (for 12 species groups), 6 are ongoing to some extent. Scallops are fished intermittently, and the seal fishery is highly decentralized and primarily motivated by subsistence needs and tradition rather than the commercial sale of seal products. Of the remaining four fisheries presently significant at an industrial scale (shrimp, char, turbot, and crab), at least two (char and turbot) face serious economic challenges. The char fishery is structured to deliver social value, and as such necessarily emphasizes other deliverables beyond direct revenue. As Keith Watts, the general manager of Torngat Fish Producers Co-operative Society, succinctly puts is "The current [char] fishery is a social fishery, not a money-making business" (cited in Beale, Dale, Snook, & Whalen, 2011, p. 14). Yet the char fishery is also a long-term, culturally significant activity arising from traditional practice and delivering diverse benefits. The turbot fishery is a different case study, emphasizing the intersectionality of management systems and local capacity. The resource is there; yet as Torngat Joint Fisheries Board has argued, "Nunatsiavut is not equipped to engage in the competitive turbot fishery under the current management regime" (2010, p.19).

Three broader points have emerged through this process that warrant further exploration, if not explanation. First, it seems that context matters. Despite this being a fundamental structural assumption input into our methodology at the design stage, the assumption has borne fruit. Fisheries do not exist in isolation from each other, nor indeed from the broader social, cultural, ecological and economic systems wherein they operate. These systems shift and change through time in emergent and often unexpected ways, even when analysed through a historical lens with

the benefit of hindsight (and how much more complex these systems must have appeared to contemporary actors). Second, it is apparent that fisheries for char and seal are different from other fisheries, at least in-so-far as they have persisted longer. Why should this be the case, and in what other ways are these fisheries distinct from those which have either not endured, or have come about more recently? These findings further obscure the distinction between what we have conventionally described as 'subsistence' fisheries and those we have described as 'commercial'. Third, and in light of these findings, we must reflect on implications for a fisheries governance model that has tended, in the broadest sense possible, to focus on year-over-year, species-specific management, with value assigned and forecasted based on landings, price, and employment hours. Does a holistic, long-term approach to understanding fisheries necessitate a corresponding shift in the ways in which we set goals, assign value, and manage fisheries?

Decisions taken, for whatever reason, echo through time and reverberate still in spheres we may be inclined to think of as discrete (see Table 5). The decision to close Nutak in 1956, for example, and to relocate its inhabitants, was not a fisheries management decision per se, but it certainly had a profound and enduring impact on the Nutak fishery. Likewise, the 1918 Spanish Influenza pandemic affected demographic and settlement patterns in ways that continue to shape the fishery. Of the 14 significant events that were identified to be common to all fisheries analysed, 9 are not explicitly related to fisheries management.

These are not obscure findings, but practical lessons for fisheries conservation and management today. Between 1952 and 1957 many Inuit abandoned the commercial fishery in favour of wage employment at the radar station in Hopedale. A similar shift away from the fishery and towards wage employment accompanied the establishment and construction of 5-wing Goose Bay ten years earlier in 1941. Mining at Voisey's Bay is a more recent example, and to this list, in years to come, we are likely to add a sectoral shift in employment away from fishing and towards industries better suited to employment at the Muskrat Falls Hydroelectric Project. A resource opportunity – expanding northern shrimp and snow crab resources in the 1970's and 1980's are a good example – is necessary but not sufficient for meaningful fisheries development, but must be paired with an enabling context, or failing that, a plan for the necessary infrastructure development, education, and transfer of knowledge and skills required to successfully convert an opportunity into a desired reality. The alternative can be a frustrating chicken-and-egg problem, where a lack of capacity and infrastructure justifies a lack of allocation of resources, which in turn justifies a lack of investment in capacity and infrastructure, and so on ad nauseum.

In its 1978 report 'Community Priorities for Development in Labrador', the Labrador Resources Advisory Council (itself a direct outcome of the 1974 Royal Commission on Labrador), highlighted pressing infrastructure needs and other challenges. Despite having advocated for access to northern shrimp for Labrador interests – the northern shrimp fishery was at that time burgeoning immediately adjacent - the committee never-the-less expressed trepidation when access was granted in the form of three offshore licences issued to Labrador-based interests in June of 1978:

"The decision to allocate three (3) shrimp licences to Labrador fishermen was admirable in the sense that Labrador for once was not forgotten. However, it was sprung on us from out of the blue and there was not time for the people of Labrador to prepare themselves on setting long term objectives as to what the shrimp fishery could mean to overall fishery development. Fishermen in Labrador were given no warning that they

would be allocated three licences therefore were not prepared for neither the catching nor processing. These kinds of decisions, while they may be made in good faith, are detrimental to our development. The LRAC, in this whole issue was caught in the middle with little or no expertise or resources on which to base any position. One thing we did know was that fishermen in Labrador were not ready to fish shrimp" (LRAC, 1979)

The Labrador Inuit Land claims Agreement (LILCA), ratified in 2005, is certain to stand-out as a break point in fisheries management in and adjacent to Nunatsiavut. As the first modern treaty in Atlantic Canada, and the first comprehensive tri-partite land claims agreement in Canada, the LILCA is a relatively recent phenomena. And although it can be demonstrated already to have increased Inuit access to traditional decision-making processes, and has almost certainly contributed to incremental increases in access to turbot and northern shrimp, the lasting impact of the LILCA on fisheries conservation and management in and adjacent to Nunatsiavut remains to be seen.

Char and Seals

Fisheries for char and seal warrant further exploration as they are so markedy SUBSISTENCE different from other fisheries, in that their origins predate contact, they are prosecuted for the most part on and near-shore in small boats, both have retained a great deal of Inuit involvement and control, neither require significinact capital investment in order to participate, both have persisted, and both have a significant commercial component operating alongside (within?) what might otherwise be considered a traditional subsistence system. Together, fisheries for char and seal blur the line between subsistence and commercial fisheries. Both char fishing and seal hunting are activities that would likely continue in the absence of a commercial component, in light of their enduring place in Inuit society and culture, and in light of their significant contribution to food security, livilihood strategies, and family economies across the region. Many people in Nunatsiavut now fish for char and hunt seals, but do not participate formally or directly in commercial fisheries for either. In much the same way the subsistence salmon fishery has continued (although not necessarily unaltered) since the commercial component of that fishery ended in moratorium in 1998. In the case of char, for example, subsistence and commercial fisheries may not, in fact, be very different things. It is, after all, the same resource, the same place, and the same people that have allowed a commercial fishery to operate from the start, and likewise the commercial fishery has re-enforced subsistence, by providing income to fishers and processors, and by contributing to community freezer programs and regional food security.

## Implications for Conservation and Management

These findings raise important questions. What does a successful fishery look like? Is the char fishery our standard of success – it has persisted for generations, with commercial and subsistence components actively building and re-enforcing culture and society, with minimal personal risk or capital investment. Or should we look to the northern shrimp fishery as a model – a fishery that has generated a great deal of revenue for the Nunatsiavut Government and Indigenous interests, but with comparatively little employment, no onshore processing, and little direct connection to food-security? When resource opportunities (or challenges) present, it will befall fishers, processors, managers, and the public to design fisheries that people want. It will not suffice to

presume that the goal is to maximize revenue with sustainable yield. Should we select for long-term sustainability? Short-term revenue? Food-security? Employment? Different actors may have very different goals, and different measures of success, and these findings, if nothing else, speak to a need for venues to discuss these goals, and select from amongst possible future states.

"Maybe we need to ask if a char weir fishery is sustainable instead of is it profitable. There's more to it than the bottom line." (Daryl Dibblee, then Director of Economic Development for the Nunatsiavut Government, cited in Beale, Dale, Snook, & Whalen, 2011)

"Why can't we go back up to Nachvak and Ramah and have a weir fishery? There's lots of fish up there and it's good for the family to go back to their home land." (Jacko Merkeratsuk in Beale\_2011)

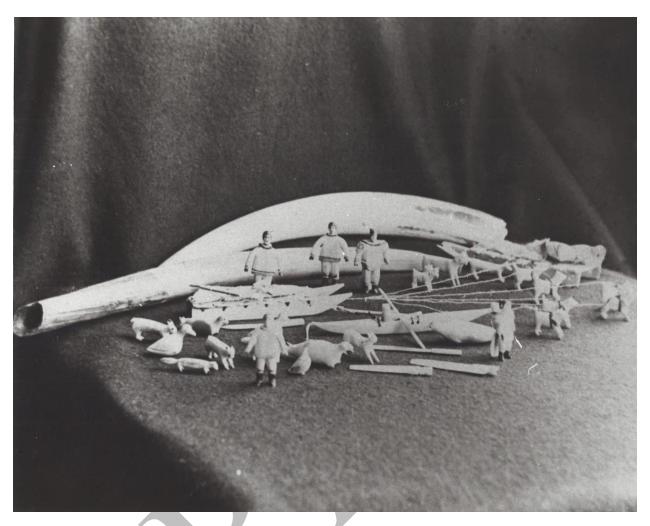
Moreover, in considering possible future states, these findings also speak to a need for actors at all levels to be aware of perturbations in 'non-fishery' spheres. There is a tendency to privilege ecological drivers as the most likely source of future change, and as a society we have invested heavily in mechanisms and institutions designed to monitor these indicators. In practice, ecological drivers have been the leading reason why fisheries in Nunatsiavut have failed or transitioned (4 of 8 fisheries which have ended), but they have not been the only driver of change. To what extent ought we as a society to invest in monitoring other drivers of change – demographics, labour force, education, et cetera?

### Conclusion

This study was ambitious. We have sought to briefly summarize and characterise all commercial fisheries in Nunatsiavut, past and present, with the intent to identify recurring patterns that influence success or failure. We have drawn some preliminary conclusions which have immediate relevance for decision-making, and we have raised many more questions that warrant attention. Success and failure are highly subjective, and they can mean different things to different people, at different times, and in different places. With the resources drawn together here, we hope we will have contributed to future discussions of vision and value.



Fishermen with split cod, Hopedale. Date unknown. Hettasch Family Collection, Labrador Institute Archive.



Walrus fishery products: tusks and ivory carvings from Okak. S.K. Hutton photo, Labrador School Board Collection, Labrador Institute Archive.



Walter Broomfield with large salmon. Date unknown. Donald and Miriam MacMillan Collection, Labrador Institute Archive. Courtesy of Peary-MacMillan Arctic Museum.



Pitsik (dried fish) curing in the sun, 1950s-60s. Hettasch Family Collection, Labrador Institute Archive.



William Kalleo harvesting a seal. Still from Labradorimiut, OkâlaKatiget Society Collection, Labrador Institute Archive.





Joshua Obed, at work processing char in Nain, c1963. Still from Labrador, Atlantic Films Collection, Labrador Institute Archive. Courtesy of Library and Archives Canada.



Tossing salt onto stacked and dried split cod, northern Labrador, c1963. Still from Labrador, Atlantic Films Collection, Labrador Institute Archive. Courtesy of Library and Archives Canada.



Packing char, northern Labrador, c1963. Still from Labrador, Atlantic Films Collection, Labrador Institute Archive. Courtesy of Library and Archives Canada.

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# **Appendix A: Search Strings**

Repository	Char	Cod	Crab	Redfish	Rock cod	Salmon
EBSCOhost	(char / charr / salvelinus / ikaluk) + (nunatsiavut / labrador / inuit)	(cod / gadus) + (nunatsiavut / labrador / inuit)	(crab / chionoecetes / putjoti) + (nunatsiavut / labrador / makkovik / 2h / 2j / inuit)	(redfish / sebastes) + (nunatsiavut / labrador / inuit)	("rock cod" / "greenland cod" / "gadus ogac") + (nunatsiavut / labrador / inuit)	salmo* + (nunatsiavut / labrador / inuit)
FSL	(char / charr / "salvelinus alpinus") + (nunatsiavut / labrador / innit)	("atlantic cod" / "gadus morhua") + (nunatsiavut / labrador / inuit)	"chionoecetes opilio" + + (nunatsiavut / labrador / inuit)	(redfish / sebastes) + + (nunatsiavut / labrador / inuit)	("rock cod" / "greenland cod" / "gadus ogac") + (nunatsiavut / labrador / inuit)	salmo* + (nunatsiavut / labrador / inuit)
SS	(char / charr / salvelinus / ikaluk) + (nunatsiavut / labrador / inuit)	(cod / gadus) + (nunatsiavut / labrador / inuit)	(crab / chionoecetes / putjoti) + (nunatsiavut / labrador / makkovik / 2h / 2j / inuit)	(redfish / sebastes) + (nunatsiavut / labrador / inuit)	"rock cod" / "greenland cod" / "gadus ogac") + (nunatsiavut / labrador / inuit)	salmo* + (nunatsiavut / labrador / inuit)
LI-LGTB	char / charr / salvelinus / ikaluk	cod / gadus	crab / chionoecetes / putjoti	redfish / sebastes	"rock cod" / "greenland cod" / "gadus ogac"	salmo*
LI-LIAFA	char / charr	cod	crab	redfish	"rock cod" / "greenland cod"	salmo*
LI-OPAC	char / charr	cod / gadus	crab	redfish	"rock cod" / "greenland cod" / "gadus ogac"	salmo*
MUN-CFER	char / charr	poo	crab	redfish	"rock cod" / "greenland cod"	salmo*
MUN-CSAR	char / charr	poo	crab	redfish	"rock cod" / "greenland cod"	salmo*
MUN-OPAC	(char / charr / salvelinus / ikaluk) + (nunatsiavut / labrador / inuit)	(cod / gadus) + (nunatsiavut / labrador / inuit)	(crab / chionoecetes / putjoti) + (nunatsiavut / labrador / makkovik / 2h / 2j / inuit)	(redfish / sebastes) + (nunatsiavut / labrador / inuit)	"rock cod" / "greenland cod" / "gadus ogac") + (nunatsiavut / labrador / inuit)	salmo* + (nunatsiavut / labrador / inuit)
NL-Fish	char / charr	cod	crab	redfish	"rock cod" / "greenland.cod"	salmo*
PQCentral	(char / charr / salvelinus / ikaluk) + (nunatsiavut / labrador / inuit)	(cod / gadus) + (nunatsiavut / labrador / inuit)	(crab / chionoecetes / putjoti) + (nunatsiavut / labrador / makkovik / 2h / 2j / inuit)	(redfish / sebastes) + (nunatsiavut / labrador / inuit)	("rock cod" / "greenland cod" / "gadus ogac") + (nunatsiavut / labrador / inuit)	salmo* + (nunatsiavut / labrador / inuit)
TWPFS	char / charr	cod	crab	redfish	"rock cod" / "greenland cod"	salmo*

Repository	Scallop	Seal	Shrimp	Trout	Turbot	Walrus	Whale
EBSCOhost	scallop + (nunatsiavut / labrador / inut)	seal + (nunatsiavut / labrador / inuit)	(shrimp / pandalus) + (nunatsiavut / labrador / inuit / "hopedale channel")	(trout / namaycush / "salvelinus fontinalis") + (nunatsiavut / labrador / inuit)	(turbot / halibut / scophthalmus / reinhardtius) + (nunatsiavut / labrador / inuit)	(walrus / odobenus / aivik) + (nunatsiavut / labrador / inuit)	whal* + (nunatsiavut / labrador / inuit)
FSL	scallop + (nunatsiavut / labrador / inut)	seal + (nunatsiavut / labrador / inuit)	"pandalus borealis" + (nunatsiavut / labrador / inuit)	("salvelinus namaycush" / "salvelinus fontinalis") + (nunatsiavut / labrador / inuit)	(turbot / scophthalmus / reinhardtius / halibut) + (nunatsiavut / labrador)	(walrus / odobenus / aivik) + (nunatsiavut / labrador / inuit)	whal* + (nunatsiavut / labrador / inuit)
SS	scallop + (nunatsiavut / labrador / inut)	seal + (nunatsiavut / labrador / inuit)	(shrimp / pandalus) + (nunatsiavut / labrador / inuit / "hopedale channel")	(trout / namaycush / "salvelinus fontinalis") + (nunatsiavut / labrador / inuit)	(turbot / halibut / scophthalmus / reinhardtius) + (nunatsiavut / labrador / inuit)	(walrus / odobenus / aivik) + (nunatsiavut / labrador / inuit)	whal* + (nunatsiavut / labrador / inuit)
LI-LGTB	scallop	seal	shrimp / pandalus	trout / namaycush / "salvelinus fontinalis"	turbot / scophthalmus / reinhardtius / halibut	walrus / odobenus / aivik	whal*
LI-LIAFA	scallop	seal	shrimp	trout	turbot / halibut	walrus	whal*
LI-OPAC	scallop	seal	shrimp	trout	turbot / halibut	walrus / odobenus / aivik	whal*
MUN-CFER	scallop	seal	shrimp	trout	turbot / halibut	walrus	whal*
MUN-CSAR	scallop	seal	shrimp	trout	turbot / halibut	walrus	whal*
MUN-OPAC	scallop + (nunatsiavut / labrador / inut)	seal + (nunatsiavut / labrador / inuit)	(shrimp / pandalus) + (nunatsiavut / labrador / inuit / "hopedale channel")	(trout / namayeush / "salvelinus fontinalis") + (nunatsiavut / labrador / inuit)	(turbot / halibut / scophthalmus / reinhardtius) + (nunatsiavut / labrador / inuit)	(walrus / odobenus / aivik) + (nunatsiavut / labrador / inuit)	whal*+ (nunatsiavut / labrador / inuit)
NL-Fish	scallop	seal	shrimp	trout	turbot / halibut	walrus	whal*
PQCentral	scallop + (nunatsiavut / labrador / inut)	seal + (nunatsiavut / labrador / inuit)	(shrimp / pandalus) + (nunatsiavut / labrador / inuit / "hopedale channel")	(trout / namaycush / "salvelinus fontinalis") + (nunatsiavut / labrador / inuit)	(turbot / halibut / scophthalmus / reinhardtius) + (nunatsiavut / labrador / inuit)	(walrus / odobenus / aivik) + (nunatsiavut / labrador / inuit)	whal* + (nunatsiavut / labrador / inuit)
TWPFS	scallop	seal	shrimp	trout	turbot / halibut	walrus	whal*

## **Appendix B: Selected Sources**

#### Char

#### Scholarly sources

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Photos

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