Certification and traceability in the Nunavut seal market: Implications for Inuit rights

By

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Table of Contents

List of Tables

List of Figures

Abstract

Vanderkaden, S. L. (2019). Certifications and traceability in the Nunavut seal market: Implications for Inuit rights [graduate project]. Halifax, NS: Dalhousie University.

As recognized in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), to which Canada is a signatory, Inuit have the right to food, culture, and economic opportunities. Seal hunting is a long-standing cultural practice for Inuit, and is therefore at the centre of these rights. However, anti-sealing campaigns targeting the commercial seal hunt in Newfoundland have resulted in international bans that have collapsed the market for sealskins and imposed hardships on communities across Inuit Nunangat. To improve market access for Inuit seal products, the Canadian Government established the Certification and Market Access Program for Seals (CMAPS), which is creating certification and tracking systems for Inuit seal products in European Union markets. In 2015, the Government of Nunavut became an Attestation Body under the EU Indigenous Communities Exemption, which enables the Government to certify Nunavut seal products for export into EU markets. As such, this research explored the suitability of certification and traceability in supporting the Nunavut seal market and Inuit rights. Through an assessment of the existing traceability system and focus group discussions (n=5) with value chain actors in Iqaluit and Qikiqtarjuaq, this research has demonstrated that while many opportunities remain in supporting the seal hunt, there are limitations when servicing a global market. Some limitations come from the influence of government, some are trade-offs in supporting the local economy, and others are in retaining Inuit values in a certification or traceability system. Collectively, these findings have revealed the need to reconcile retaining cultural value in an economy so heavily influenced by external factors.

Keywords: seal market, traceability, certification, Inuit rights, credence, values

Abbreviations

API	Application Program Interface
CMAPS	Certification and Market Access Program for Seals
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CSA	Canadian Standards Association
DFO	Department of Fisheries and Oceans Canada
EDI	Electronic Data Interchange
ERP	Enterprise Resource Planning
EU	European Union
FTS	Fur Tracking System
IFAW	International Fund for Animal Welfare
ISO	International Organization for Standardization
IUU	Illegal, Unreported and Unregulated
MMR	Marine Mammal Regulations
MSC	Marine Stewardship Council
NACA	Nunavut Arts and Crafts Association
NSA	Nunavut Settlement Area
NWMB	Nunavut Wildlife Management Board
RFID	Radio Frequency Identification
QR	Quick Reference
TAC	Total Allowable Catch
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
WTO	World Trade Organization

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Positionality Statement

I am a white settler living in Mi'kma'ki, the unceded homelands of the Mi'kmaq. As part of my graduate studies, I was fortunate enough to spend nine weeks in Iqaluit, where I interned with the Fisheries and Sealing Division of the Government of Nunavut. During this time, I was able to travel to Pangnirtung and Qikiqtarjuaq for internship requirements and field work. Throughout this experience, I spent a lot of time reflecting on what it means to be a settler doing research on Inuit homelands. As Chilisa et al. (2017) ask, what is the role of non-Indigenous researchers in Indigenous-centred research? While my desire to undertake this research is grounded in my curiosity to learn and wanting to positively contribute towards reconciliation, I, as a white settler, have to acknowledge that I inherently approach this research process from a Eurocentric worldview, one that is deeply rooted in my Western upbringing.

With an acknowledgement that I, as a non-Indigenous person, cannot fully comprehend the Indigenous worldview by which knowledge shared in this research transmits, I approach my role as a researcher as a vessel for knowledge sharing, with a responsibility to respectfully communicate this work in a manner that will ultimately benefit those knowledge holders who so kindly chose to share their insights with me. Given the deep connections between the Inuit seal hunt and global markets, my background in fisheries economics and marine management places me in a unique position to address the complex intersections in which this research is situated. As such, I took great responsibility in developing my research questions and objectives in an iterative manner based on many conversations with local community members and Nunavummiut who are directly involved in the seal market. While attempts to be the 'helping other' come with its own set of challenges, it was the ultimate goal to develop research questions and objectives that reflect the needs and desires of communities taking part in the seal market.

1.0 Introduction

Across the world, Indigenous peoples have undergone immense change through colonial legacies, globalized economic forces, social acculturation, advancing technologies, and expanding urbanization (Peredo et al., 2004). These forces have created a situation where Indigenous peoples must 'walk in two worlds" to participate in the global economy while maintaining traditional livelihoods (Bar and Reid, 2016). This participation, however, largely depends on the desire for Indigenous peoples to build local economies that can reflect traditional and cultural contexts (Anderson, 2002). With an increasing awareness of the long-standing infringement of Indigenous rights, the development of Indigenous business practices grounded on social values is not merely a symbolic gesture, but rather a requirement based on the inherent rights of Indigenous peoples. As such, the realization of Indigenous rights to land and resources is seen as critical to build capacity for economic development (Anderson et al., 2006). The direction this takes, however, remains poorly understood and requires a great deal of inquiry and reflection.

The Inuit seal hunt in Canada is exemplary of the external drivers and challenges that come with participating in a global economy. The hunting of seal has been a long-standing cultural practice of Inuit for thousands of years. Additionally, Inuit have long taken part in the commercial trade of sealskins since the first trading posts were established across the Arctic by the Hudson's Bay Company (Government of Nunavut, n.d.c). As colonialism ensued throughout the mid-20th century, this trade allowed Inuit to transition into the cash economy while still carrying out traditional and cultural activities. However, this market was disrupted when anti-sealing campaigns began protesting the commercial seal hunt off the coast of Newfoundland and Labrador in the 1960s. Such campaigns had a large influence in persuading numerous governments across the world to ban the trade of seal products, which combined with shifting societal values away from animal fur, collapsed the market for sealskins (Foley, 2018; Routledge, 2018). This loss of economy undermined the ability for Inuit to participate in the global economy and imposed hardships across Inuit Nunangat (the collective Inuit homelands in what is now Canada) (Lennon, 2010).

While Inuit rights were not taken into consideration in decisions regarding seal trade bans, the more recent acknowledgement of Indigenous rights begets the need to reconcile these past hardships and develop strategies to support the seal market and acknowledge the rights of Inuit to

participate in the global economy while maintaining desired cultural traditions. With recent trade exemptions for Indigenous communities has emerged the opportunity to renew marketing and branding strategies for Inuit seal products, with federal and territorial governments looking at market-based tools, such as certification and traceability, as a useful tool in facilitating this resurgence (DFO, 2017). Of course, the question remains as to what direction these market tools could or should take in supporting the seal market and benefitting Inuit rights.

1.1 Nunavut seal market

In 1993, after more than 25 years of negotiation between Inuit and the Government of Canada, the Nunavut Agreement was signed, giving the Inuit of Nunavut progress towards self-government and a new territory, the first of its kind in Canada. Nunavut, meaning *Our Land* in Inuktitut, came into existence on April 1, 1999 (Fenge and Quassa, 2009). The Nunavut Agreement, which includes 42 articles and nearly 300 pages of a comprehensive land claims agreement, meant that in exchange for the rights and benefits as defined in the agreement, the Inuit of Nunavut ceded their land to the Government of Canada (Fenge and Quassa, 2009). Through the creation of Nunavut emerged the Government of Nunavut, which is the responsible authority for supporting the seal market across the territory. As such, the Fisheries and Sealing Division of the Government of Nunavut has been focused on growing external markets for Nunavut sealskin products.

A renewed branding and marketing strategy for Nunavut seal products may facilitate growth in external markets and thereby protect the seal market and support Inuit rights in Nunavut. However, such a strategy requires an in-depth analysis on the suitability of market tools, such as certification and traceability in supporting the Nunavut seal market. Recent demand for market tools also presents a novel opportunity to better understand the challenges and opportunities that arise in applying external market tools into a traditional economy.

1.2 Research goals and objectives

The general goal of this research project is to explore the suitability of certification and traceability in the Nunavut seal market, and if, or how, such initiatives can support Inuit rights to food, culture, and economic opportunities. To fulfil this objective, this research project focused on three sub-objectives: 1) assess the current traceability system for Nunavut sealskins, 2) identify credence qualities of the Nunavut seal hunt that must be considered in the development of certification and traceability systems and 3) document the existing value chain for Nunavut

sealskins and identity barriers, bottlenecks, and challenges that occur as a sealskin moves from an Inuk harvester to its eventual point of sale. Collectively, these findings seek to inform best practices for supporting the Nunavut seal market in the context of Inuit rights and contribute to a growing field of academic literature surrounding Indigenous entrepreneurship.

Background information on the history and significance of the Nunavut seal market, along with the Government of Nunavut's role in facilitating the trade of sealskins and promotion of the market will be provided. The first sub-objective will then be addressed through an assessment of the current Fur Tracking System administered through the Sealskin Purchase Program, using Future of Fish's 'Five Core Functions of Seafood Traceability' as an analytical tool. Next, findings from focus group discussions with Inuit value chain actors involved in the Nunavut seal market will be shared to inform a discussion of retaining cultural value in a certification or traceability system and fulfill the third sub-objective. Finally, methodologies from the two previous analyzes will be used to detail the barriers, bottlenecks and challenges in the Nunavut seal market and provide recommendations for potential ways forward.

1.3 Background

1.3.1 Canadian seal hunt

Seals have been used by Indigenous peoples and northern communities for thousands of years. Atlantic seal hunting dates back to early Dorset culture, where early evidence suggests seal harvesting by the Thule Inuit and Labrador Innu, as well as by early European settlers as far back as the 16th century (Lafrance, 2017). While the commercial seal hunt is generally known as taking place across Newfoundland, in the Gulf of St. Lawrence and the Front ice east of Labrador, across the Arctic, sealing has sustained countless generations of Inuit, where seals provide food, clothing, and heat. The Canadian seal industry, in both Newfoundland and across Inuit Nunangat, is managed as a fishery through the Department of Fisheries and Oceans (DFO). The Minister of DFO is granted such authority through legislation of the *Fisheries Act*, the *Oceans Act*, the *Species at Risk Act*, as well as through Canada's *Marine Mammal Regulations* (MMR) (DFO, 2011). This fishery is also managed in accordance with the 2011-2015 Integrated Fisheries Management Plan for Atlantic seals, which applies to all six seal species in Canada (DFO, 2011). While only harp, hooded, and grey seals are harvested commercially, subsistence harvests still take place for harbour, ringed, and bearded seals (Lafrance, 2017). The Canadian seal hunt is managed under three divisions, the Arctic, Front, and Gulf of St. Lawrence, which are further divided into 33

Sealing Areas (Figure 1) (DFO, 2011). Created under the authority of the *Fisheries Act*, the Commercial Fisheries Licensing Policy for Eastern Canada governs the issuance of seal licences. While seal harvesters require a commercial or personal use license to harvest seals in the season from November to June, subsistence harvests, defined by DFO as "fill[ing] a need for food purposes" do not require such a license for year-round harvesting (Lafrance, 2017). The seal fishery is continuously monitored through stock assessment that relies on the precautionary approach (DFO, 2011).

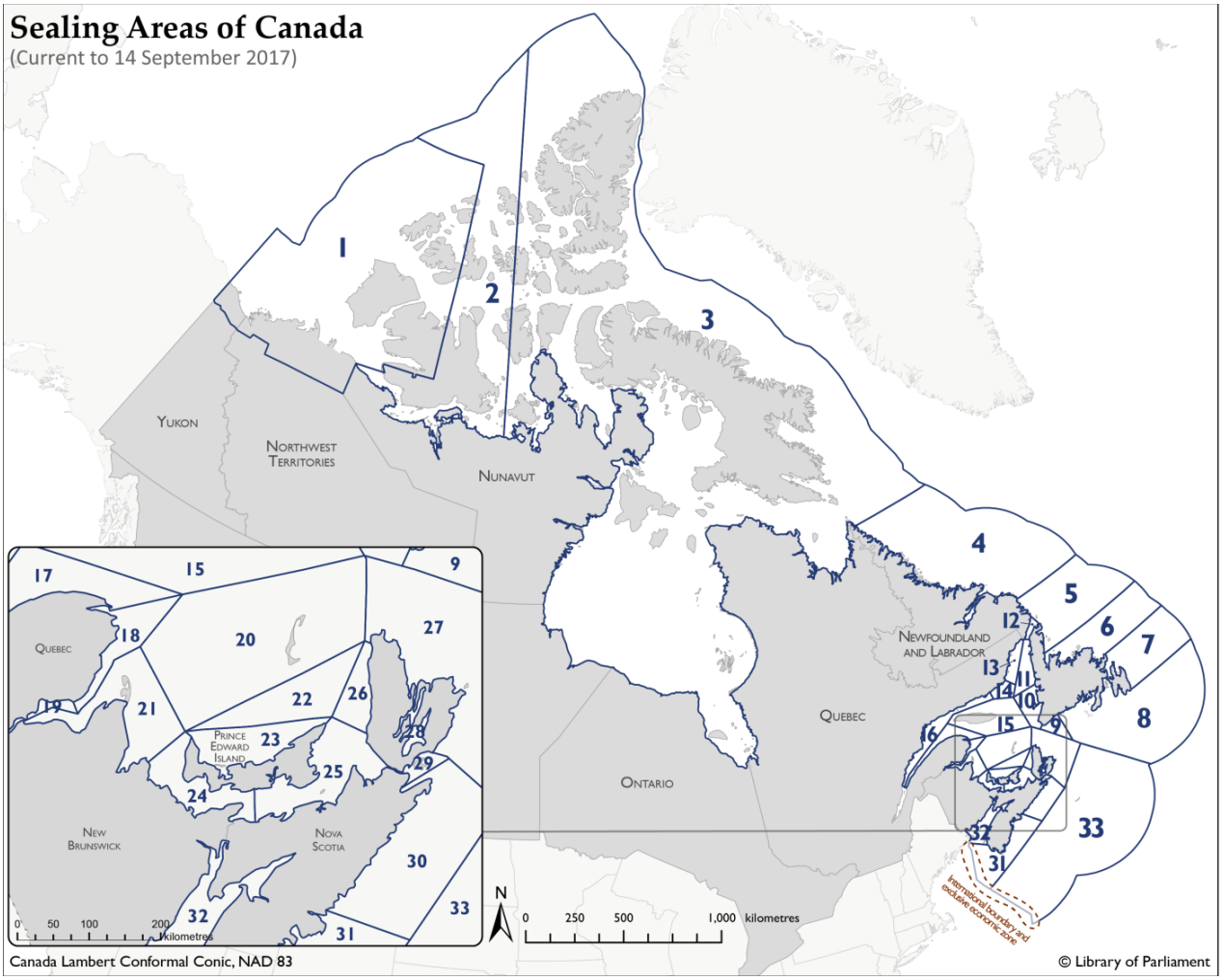

Figure 1. Sealing Areas of Canada as managed by the Department of Fisheries and Oceans (DFO). The Arctic Region across Yukon, the Northwest Territories, and Nunavut covers Sealing Areas 1-3, the Front across Newfoundland and Labrador covers Sealing Areas 4-11 and 33, and the Gulf of St. Lawrence across Quebec, New Brunswick, Prince Edward Island and Nova Scotia covers Sealing Areas 13-32 (Lafrance, 2017).

The majority of the commercial seal hunt in Newfoundland is comprised of harp seals. Harp seals are the most abundant pinniped species in the North Atlantic, where adults summer in

Arctic waters before migrating south to breed in the Gulf of St. Lawrence and on southward drifting Arctic ice near the east coast of Labrador (Roff, 1983). The commercial seal hunt capitalizes on this annual breeding pattern, with harp seals hunted at about 25 days or older, once they have shed their first fur and are living independently (DFO, 2016). The harvesting of harp seal pups, known as whitecoats, and hooded seal pups, known as bluebacks, has been illegal in Canada since 1987.

In many ways, the importance of seals in delivering food security, maintaining cultural traditions, and providing a source of economic livelihood mean that the seal hunt can help to support Inuit rights to food, culture, and economic opportunities. Seal hunting has sustained Inuit for millennia, where highly nutritious seal meat remains an important country food in a traditional diet, sealskins are made into garments and footwear, and oil is used to light *qulliq* lamps. Beyond these physical benefits, seal hunting is an important cultural activity for passing on Inuit way of knowing through generations, referred to as *Inuit Qaujimajatuqangit.* In addition to the social and cultural importance of sealing, Inuit also participate in the commercial market for seal products. This economic activity was introduced in the late 1800s when the Hudson's Bay Company began to trade sealskin with Inuit (Government of Nunavut, n.d.c). Since then, seal harvesting has remained a vital component of the informal and formal economy in Nunavut, where sealskins are sold to government officers and taken to international markets (Peter et al., 2002). In many cases, income derived from the sale of sealskins is used to offset the costs associated with harvesting (equipment and snowmobile repairs, etc.). Inuit mainly hunt ringed seals through breathing holes in the winter, however, harp and bearded seals are also an important component of the seal harvest in summer months when mature seals migrate up north to summer feeding grounds (Wenzel, 1991). In summary, while Inuit have a subsistence seal hunt, they also participate in the commercial market through the trade of seal products.

1.3.2 Factors affecting seal marketing

Despite the importance of the Inuit seal hunt, shifting societal values away from animal fur, particularly seen in anti-sealing campaigns, have had a large influence on the international market for seal products. As one of Canada's oldest and most historically significant industries, the fur trade contributes nearly $1 billion to the Canadian economy on an annual basis (Fur Institute of Canada, 2019). However, animal rights and anti-fur movements have influenced consumers to consider animal welfare before purchasing animal products. These movements have led to a shift

in societal values, as seen through a number of states banning fur farming, including the United Kingdom, Australia, the Netherlands, and Norway, as well as high-end fashion designers vowing to go fur-free (Ell, 2019). In response to these trends, the fur industry has developed new marketing strategies to educate consumers on animal fur, as seen through the Truth About Fur campaign (Truth about Fur, n.d.) and the new FurMark certification program (International Fur Federation, n.d.). Nevertheless, connections between Inuk harvesters and international markets through the trade of sealskins has meant that shifting societal values away from animal fur have had a large impact on the economy prosperity of the seal market across Nunavut.

Central to the animal rights and anti-fur movements was the focus by animal activist groups on the sealing sector in Canada. In the 1960s and 1970s, animal activist groups such as Greenpeace and the International Fund for Animal Welfare (IFAW) began protesting the commercial seal hunt in Newfoundland. The emergence of anti-sealing campaigns saw images of whitecoat seal pups being clubbed to death distributed across popular media outlets, which were influential in shaping the social construction of the seal and its plight as the victim of an inhumane slaughter (Guevara et al., 2008). High publicity events, such as the 1977 Paris Match cover of French actress Brigitte Bardot cuddling a whitecoat, or the famous front-page photo of a whitecoat being clubbed to death in the British newspaper, The Mirror, spread the message of anti-sealing campaigns across Europe and North America (Dauvergne and Neville, 2011; Fitzgerald, 2011) Such approaches mobilized members of the public, with over three million letters and postcards being written to members of the European Parliament calling for a ban on the import of whitecoats (Dauvergne and Neville, 2011). This lobbying was successful and eventually resulted in numerous international bans on seal products.

Anti-sealing campaigns have been successful in collapsing the trade of sealskins, with the United States banning the trade of sealskin in 1972, followed by the European Union (EU) banning whitecoat products in 1983 through the Council Directive 83/129/EEC (Government of Nunavut, n.d.c, Hossain, 2013). Even though the 1983 EU ban targeted only one type of sealskin and included an Indigenous Communities Exemption, anti-sealing campaigns had ruined the reputation for all sealskin types and ultimately collapsed the market. Following the 1983 EU ban, the average price of a sealskin fell to $13, half of what it was the previous year (Garvey, 1984; Dauvergne and Neville, 2011). This market collapse undermined the Inuit economy and imposed hardships on communities across Inuit Nunangat (Lennon, 2010). At a time when Inuit were already living with

the legacies of colonialism, the international market collapse for seal products exacerbated socioeconomic conditions across Inuit Nunangat. The collapse of the seal market, in conjunction with rising costs of harvesting, pushed Inuit further into the wage economy and increased reliance on social assistance as cultural links to the land-based economy began to erode (Routledge, 2018).

The seal hunt in Nunavut is a small-scale hunt, however, the volume of the seal market in the territory has fluctuated widely over the years in response to external market pressures. The Nunavut Wildlife Harvest Study estimated a 5-year annual mean of 25,086 ringed seals from 1996 to 2001, however, the true harvest level is thought to be closer to 35,000 seals per year (Priest and Usher, 2004; Government of Nunavut, 2010). Although population surveys are dated, this harvest is estimated as coming from a population in excess of 1 million (DFO, 2011). These estimates, however, have changed in accordance with broader changes in demand for seal products, demonstrating how connected the Nunavut seal market is to the commercial global market. Prior to the 1983 EU ban, an estimated 60,000 seals (majority ringed seals) were harvested annually in the late 1970s, of which 65 percent were sent to market (Reeves, 1998). The ban and subsequent market collapse for seal products resulted in sealskin sales dropping from 50,000 in 1977, to fewer than 1,000 in 1988 (Government of Nunavut, 2010). These market conditions remained for many years, however, a resurgence in the seal market was seen in the mid-1990s as consumer demand for fur products resurged. In the late 18th century, European lamps had fueled the demand for seal oil, which was replaced by whitecoat pelts following World War II. However, given Canadian and EU bans for whitecoats, this renewed demand had turned to silvercoats, the pelts developed on harp seals once they shed their first whitecoat (Gregoire, 2009). During this time, sealskin prices (including ringed seals) steadily climbed and resulted in a higher number of Nunavut sealskins entering the commercial market. However, this rebound was short-lived, with the EU passing a proposal to ban the trade of seal products in 2008. In 2009, Regulation (EC) No 1007/2009 was adopted by the European Parliament and the Council, which banned the trade of seal products in the EU (European Commission, 2019). While the legislation includes an Indigenous Communities Exemption, the overall impact of this more recent ban has been similar to the 1983 EU ban, with the global market for sealskins remaining low. Despite the Government of Nunavut applying the same market support to hunters in response to the EU ban, the number of Nunavut sealskins sent to the commercial market was reduced by half, from about 8,000 per year to less than 3,000 after the EU ban (CBC News, 2013). In summary, the 1983 and 2009 EU seal bans have not only

prevented products from entering markets, but effectively removed the market for sealskins altogether.

1.3.3 Government of Nunavut

The Fisheries and Sealing Division of the Government of Nunavut is largely responsible for encouraging the sealing and fur sectors across the territory, as well as representing Nunavut's sealing interests on international, national, provincial and territorial levels (Government of Nunavut, n.d.b). As such, the Division is involved in a number of efforts to revitalize the Nunavut seal market. In response to market pressures on seal products, the Fisheries and Sealing Division has expended numerous resources into creating a marketing strategy that promotes the cultural, social, and economic significance of seal harvesting. A number of educational materials have been developed, along with the creation of a Nature's Edge Program, which includes an educational booklet, a Nunavut Sealing website, and a branding logo that identifies Nunavut sealskin products for sale in local and external markets (Government of Nunavut, n.d.c). The Nature's Edge logo emphasizes that the Nunavut seal hunt is humane and part of a subsistence economy to support sustainable Indigenous livelihoods.

One of the key seal product management tools the Division uses is the Seal and Fur Programs Policy. The goal of this policy is to support the traditional fur economy in Nunavut by providing financial compensation for furs and sealskins, as well as equal and fair market access (Government of Nunavut, 2017). A number of programs operate from this policy, including the Fur Assessment and Advance Program, the Sealskin Purchase Program, and the Dressed Sealskins for Nunavummiut Program (see Chapter 2). Such programs have a long history in supporting the fur trade across the Canadian Arctic and remain an important tool for supporting the sealskin market in Nunavut.

The Sealskin Purchase Program is the medium through which the basic seal value chain is managed. Through this program, the Government of Nunavut is heavily involved in the sealskin commodity industry, which in addition to the Northwest Territories, is the only jurisdiction in Canada where trappers are supported in this manner. In other regions, government intervention occurs through a crown corporation, where trappers are responsible for getting their furs to market. As a result, the Government of Nunavut's role in supporting the seal market presents a unique example of a combined public and private value chain.

2.0 Assessment of sealskin traceability system

2.1 Introduction

The Government of Nunavut has been facilitating the trade of sealskins since the creation of the territory through the Sealskin Purchase Program, which connects an Inuk harvester to global markets. As such, the Government of Nunavut's Fisheries and Sealing Division has been focused on rebuilding the market for Nunavut sealskins since the 2009 EU ban, when the export value of a sealskin had fallen from $11.7 in 2004 to $0.80 in 2010 (DFO, 2011). A large part of these efforts has been centred around working with the EU to allow Inuit seal products entry into EU markets, in addition to increasing public awareness on how sealing is carried out in Nunavut.

In 2015, the Government of Nunavut became an Attestation Body under the EU Indigenous Communities Exemption, which enables the Government to certify Nunavut seal products for export into EU markets. However, the Nunavut exemption requires full traceability for seal products entering EU markets. To assist Indigenous communities in meeting these traceability requirements, the Department of Fisheries and Oceans (DFO) established the Certification and Market Access Program for Seals (CMAPS) in 2015, which allocates $5.7 million in funding to create certification and tracking systems for Inuit seal products in EU markets (DFO, 2017). Since the ban, the local market for sealskins has improved within Nunavut, however, international markets have yet to recover.

2.1.1 Seafood traceability

With the Indigenous Communities Exemption came a requirement to differentiate Indigenous and non-Indigenous seal products. Such differentiation is verified via traceability systems, involving the structured flow of information throughout a value chain. Traceability systems have become an increasingly important tool to address concerns over illegal, unreported, and unregulated (IUU) fishing as well as seafood mislabeling and fraud (FAO, 2018b; Pardo et al., 2015). But in addition to supporting legality, it can be used to differentiate or categorize products based on so-called credence qualities. Without traceability systems in place, consumers are unable to verify the authenticity of the various claims on their sea(food) products (Figure 2).

Seafood traceability can vary from internal business operations where products are tracked one step forward and one step backwards, to full chain consumer-facing electronic traceability systems where product authenticity is communicated directly to consumers (Bailey et al., 2016). The varying nature of traceability systems means that its forms, requirements, and benefits also

differ. For instance, traceability systems can exist as simple paper-based systems where product information and attributes are recorded throughout the supply chain, to a full chain of custody with technology such as Quick Reference (QR) codes and Radio Frequency Identification (RFID) tags attached to products to assist in tracking efforts (Howard et al., 2012; Peterson & Green, 2004). Additionally, such systems can function as internal or external traceability, where internal traceability tracks products within a company or production facility, while external traceability has the ability to trace products once they are outside of a company's production line (Petersen & Green, 2004).

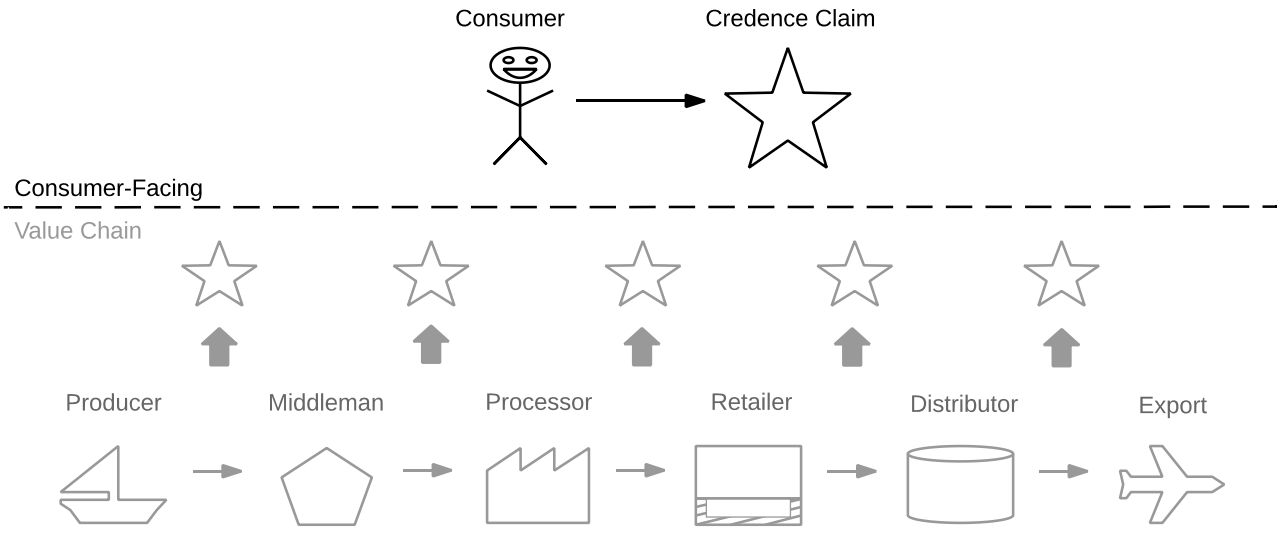

Figure 2. The role of traceability in verifying credence claims in seafood value chains. Consumers are presented with credence claims attached to a product, however, traceability functions as a verification of credence qualities along a value chain to establish provenance by ensuring the flow of credence information (arrows) accompanies the product throughout the chain.

The potential benefits of traceability systems can be widespread and include risk management and safety, control and verification, supply chain management and efficiency, provenance and quality assurance to consumer, as well as information and communication to the consumer (Callegari, 2017). Of particular interest in the Nunavut seal market is the ability for traceability to verify credence claims (an Inuit harvest and product) and the place of origin, or provenance (the territory of Nunavut). These claims can assist in creating a Chain of Custody for Nunavut seal products by documenting the parts of the value chain that are Inuit-controlled. If and

when these claims can be verified, Inuit seal products originating from Nunavut should be given priority access in the market.

2.1.2 Certifications and standards

Linked with the previous exposition on credence and provenance claims, is the rise of certifications and standard programs. The emergence of certification systems and sustainable standards has in part been due to growing concerns that public regulatory bodies are not achieving desired outcomes in terms of sustainability and responsible resource management (Bailey et al. 2018). As such, certification systems are a market-based tool aimed at rewarding firms that comply with the highest social and environmental standards in their production (Conroy, 2001; Cashore, 2003). Certification systems function through the provisioning of written assurance that a good, service, or product meets specific requirements (often a standard) set by an organization that develops the standard. In the best case, this occurs through a third-party accreditation body that is responsible for assessing a company, fishery, product, etc., against a given standard of interest. The rise of certification and standard programs is largely attributed to a lack of political will or ability to enact high sustainability standards as law, as well as the World Trade Organization (WTO) rules around the inability to block the importation of products that do not meet sustainability standards (Conroy, 2001). Since the 1980s, when ecolabels and standards were first introduced with organic foods, certification systems have become a vital component of many organizations and supply chains to improve branding and access new markets for sustainable and ethical products (Washington & Ababouch, 2011).

2.1.3 Fur Tracking System

As part of the Government of Nunavut's role in supporting the seal market, the Fisheries and Sealing Division operates the Fur Assessment and Advance Program, the Sealskin Purchase Program and the Dressed Sealskins for Nunavummiut Program. These programs all function to support traditional harvesting practices for Inuit and participation in the cash economy through the trade of fur and sealskins.

The Fur Assessment and Advance Program, applicable for furbearer species, has been in existence since before the Nunavut Lands Claim Agreement and the establishment of Nunavut, when the area was under the administration of the Government of Northwest Territories. Fur trading is one of Canada's oldest industries, dating back to when the first European settlers arrived in the North and began establishing trading posts to trade furs with Inuit in exchange for various

resources. Across the Arctic, the Hudson's Bay Company took on the role of government in many aspects and developed a dependent training relationship with Indigenous peoples. By the late 1800s, many Inuit were participating in the cash economy and began receiving financial compensation for the purchase of furs (Government of Nunavut, n.d.c). Of these furs, sealskin was a prominent source of income for Inuit at a time when few alternative economic livelihoods were available. This income was particularly instrumental during the centralization period between 1950 and 1970, when the federal government began relocating Inuit away from a traditional semi-nomadic way of life and into permanent, centralized communities (Government of Canada, 2016). This time of immense change pushed Inuit further into the case-based economy and more dependent on the economic profit that comes from selling sealskins. As such, the Government of Northwest Territories established the Fur Assessment and Advance Program, which is still in operation today. Through this program, harvesters sell dried furs at their local Wildlife Office and receive a one-time advance payment upon open grading by a Conservation Officer. Sealskins are graded based on size and quality, with defects, colour, stains, and ring patterns all taken into consideration in quality metrics. The Department pays for the shipping of the fur(s) to designated marketing agencies on behalf of the harvester, typically to the Fur Harvesters Auction in North Bay, Ontario, where furs are sold in international markets in auctions that occur two to three times a year. Upon sale, all additional proceeds are directed back to the harvester (Government of Nunavut, 2017). While this program applies to furbearer species, a different program is in place for sealskins.

The Department operates the Sealskin Purchase Program to recognize the particular importance of sealing to community food security and the traditional economy. The Program was established in 2002 in the wake of market collapses for sealskin products, where sealskins are purchased directly from harvesters instead of providing a one-time advance payment as in the Fur Assessment and Advance Program (Government of Nunavut, 2010). This one-time payment model is aimed at protecting harvesters from fluctuations in external markets. Upon sale, the sealskin becomes the property of the Department, where sealskins are either sold on behalf of the Department at the Fur Harvesters Auction, sold directly to buyers, or entered into the Dressed Sealskins for Nunavummiut Program (Government of Nunavut, 2017). Sealskins entering the Dressed Sealskins for Nunavummiut Program typically get shipped to a fur processing facility called Splendor in Montreal, Quebec, where they are professionally tanned and dyed. Upon

processing, dressed and/or dyed sealskins are sold to Nunavummiut at cost price in an effort to encourage the use of Nunavut sealskins for the value-added sealskin industry (Government of Nunavut, 2017).

The existing traceability system in place for Nunavut sealskins is operated through the Sealskin Purchase Program and the Fur Tracking System, which is the computerized data management system that records and tracks all payments, advances, export certificates, shipments, and harvester information that goes through the Program. As such, the Fur Tracking System functions as an information architecture for the Sealskin Purchase Program and is important for tracking sealskins that are purchased through the Program.

2.1.4 Certifications and traceability in the Nunavut seal market

While the need for traceability in seal value chains emerged from the Indigenous Communities Exemption in the EU seal bans that requires a linked attestation document issued by a recognized body (European Commission, 2019), these market tools could have additional benefits in rebuilding the reputation for Nunavut sealskin products. The current traceability system, conducted through the Fur Tracking System, was originally developed for administrative purposes in the Sealskin Purchase Program, however, there are now new opportunities to utilize this system to not only satisfy traceability requirements under the EU Indigenous Communities Exemption, but to verify provenance for Nunavut sealskins. These conditions can, however, only be achieved through a verifiable, end-to-end traceability system.

In order to understand how traceability systems can be applied to the Nunavut seal market, it is important to first understand: what is the current state of the traceability system for Nunavut sealskins, and what improvements can be made to develop a robust, end-to-end traceability system that could help to secure market access for Inuit products? A better understanding of these questions can inform the Government of Nunavut's Fisheries and Sealing Division on technical and practical measures that can be taken to build on the existing Fur Tracking System to meet traceability objectives from external markets, but also transform traceability into a branding tool for the seal market.

2.2 Methodology

In order to understand the Fisheries and Sealing Division's efforts thus far in supporting the seal market, and to document and analyze the Fur Tracking System, reviews of public records and internal Government of Nunavut documents were conducted. Public records included the

Nunavut Sealing Strategy (Government of Nunavut, 2010), while internal documents included internal technical government reports, meeting minutes, letters, and various sealing educational materials created by the Fisheries and Sealing Division of the Government of Nunavut. Fur Tracking System data were also assessed as part of the value chain analysis as well as to identify trends in the Sealskin Purchase Program that have taken place from 2010 to 2018.

During the summer, 2019, the researcher was stationed with the Fisheries and Sealing Division of the Government of Nunavut as an internship student. During that time, meetings with a number of government employees involved in the Sealskin Purchase Program and Nunavut sealing more broadly were carried out, to provide useful background information of the Nunavut seal market. Ethnographic observations were also noted during a field visit in Pangnirtung, where as an internship student with the Government, the researcher held an open house to speak with community members about challenges and opportunities in the Nunavut seal market. Although not directly part of this research project, these experiences were important in informing the research context, and contributed to decisions about research scope and execution.

As indicated above, traceability can take on many forms, meaning that there are many possible ways to evaluate traceability systems. In this project, Future of Fish's 'Five Core Functions of Seafood Traceability' were used as an analytical tool to assess the current traceability system that operates through the Fur Tracking System with the Government of Nunavut. Future of Fish is a not-for-profit organization creating business solutions in global fisheries challenges and is heavily involved in the development of innovative traceability system development (Future of Fish, 2016). The Functions were developed in 2016 to aid businesses and governments in developing robust end-to-end traceability systems (Future of Fish, 2016). As outlined in Future of Fish (2016), the Five Core Functions are: 1) Vessel-Dock Capture, 2) Product-Data Pairing, 3) Internal Traceability, 4) Supply Chain Visibility, and 5) Data Verification. A description of each function is provided in Table 1, along with key objectives that were used to assess the performance of each function in the Nunavut seal market. These Functions were designed to assist seafood companies on the path towards traceability adoption, however, the applicability for additional products, such as sealskins, make them a useful tool for the present analysis. Ultimately, this analytical exercise is to provide insight on current measures and opportunities for improvement in the traceability functions of the Fur Tracking System and the Sealskin Purchase Program.

Table 1. Overview of Future of Fish's 'Five Core Functions of Seafood Traceability' with objectives specific to the traceability assessment for Nunavut sealskins. Each function was assessed in accordance to the corresponding objectives.

Function	Description	Objectives
Vessel-Dock Capture	Capture of catch information at point of harvest	1. Recording of data 2. Point of harvest or first receiver documented
Product-Data Pairing	Physical attachment of product information to the product itself	1. Product information (i.e. barcode, QR code, RFID chip, etc.) physically attached to product 2. Attachment journeys with product through supply chain
Internal Traceability	Tracking of product within a particular operation of facility	1. 'One-up, one-down' product tracking 2. Consistent documentation of data
Supply Chain Visibility	Documentation and transparency of all actors along supply chain	1. All actors are visible along supply chain 2. All actors are in compliance with legal requirements
Data Verification	Cross-checking information to verify legitimacy of data	1. Cross-checking of data (i.e. data entry checks, prohibition of belated data deletions or modifications)

2.3 Results

Results are shared in two parts. In the first part, data from the Fur Tracking System are given. In the second part, the current traceability program for sealskin products is analyzed against the 'Five Core Functions of Seafood Traceability' (Future of Fish, 2016).

2.3.1 Fur Tracking System

Analysis of Fur Tracking System data allowed for quantification of trends in the Sealskin Purchase Program from 2010 to 2018. Of the 25 communities in Nunavut, 13 communities are located in the Qikiqtaaluk Region, formerly known as the Baffin Region, comprising the northernmost, easternmost, and southernmost areas of Nunavut (Figure 3). According to the Fur

Tracking System, sealskins were purchased by Conservation Officers in 20 of the 25 Nunavut communities (Figure 4).

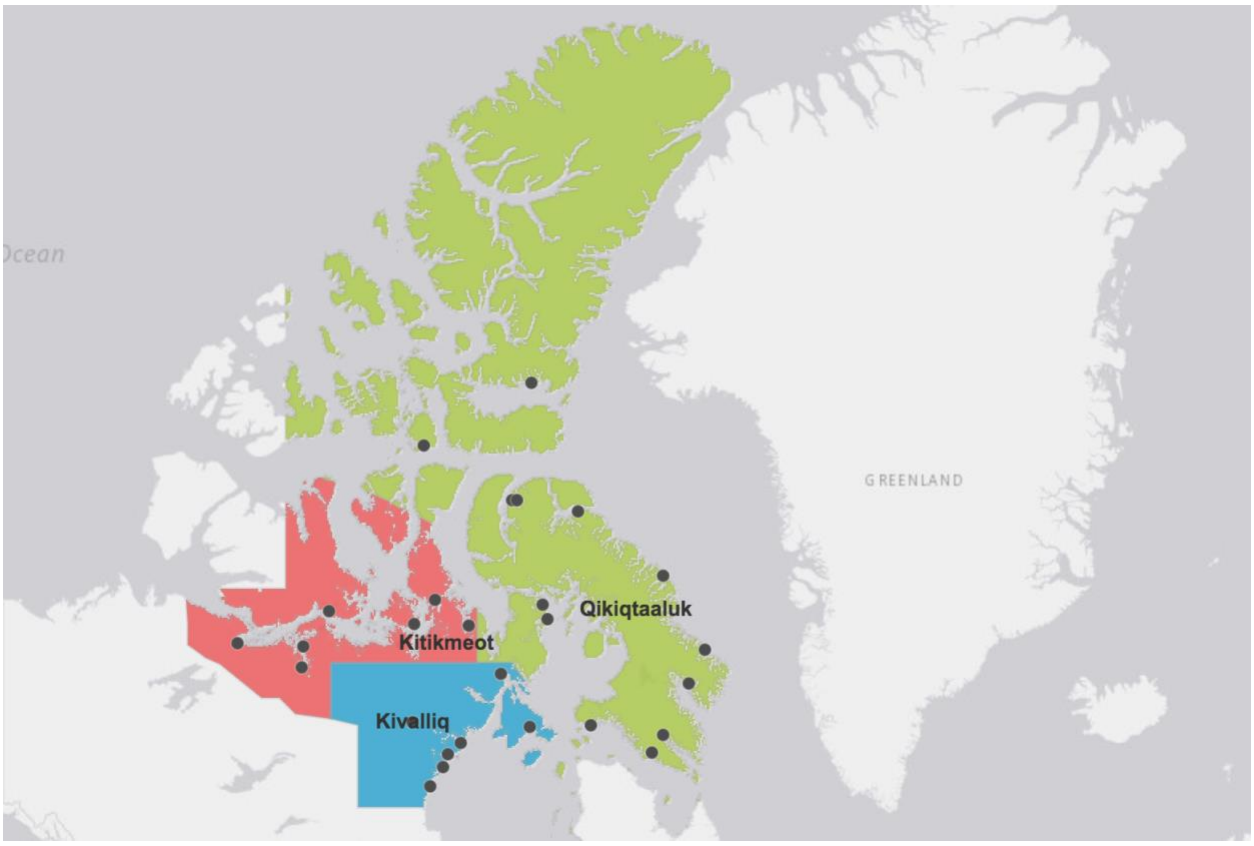

Figure 3. Map of Nunavut outlining 25 communities (black circles) across the Qikiqtaaluk (green), Kitikmeot (red), and Kivalliq (blue) regions.

Through the Sealskin Purchase Program policy, sealskins from these communities in the Qikiqtaaluk region are to be shipped to the fur processing facility, Splendor, in Montreal, due to high quality and quantity, while sealskins from the remaining Nunavut communities are to be shipped to the Fur Harvesters Auction in North Bay, Ontario, for sale into external markets. However, data show that of the 12 communities in the Qikiqtaaluk Region with sealskins purchased into the Program, sealskins from only 8 of these communities were shipped to Splendor for professional tanning and dying (Figure 5). Over this time period, Resolute was the only Qikiqtaaluk community with no recorded sealskin purchases entering the Program.

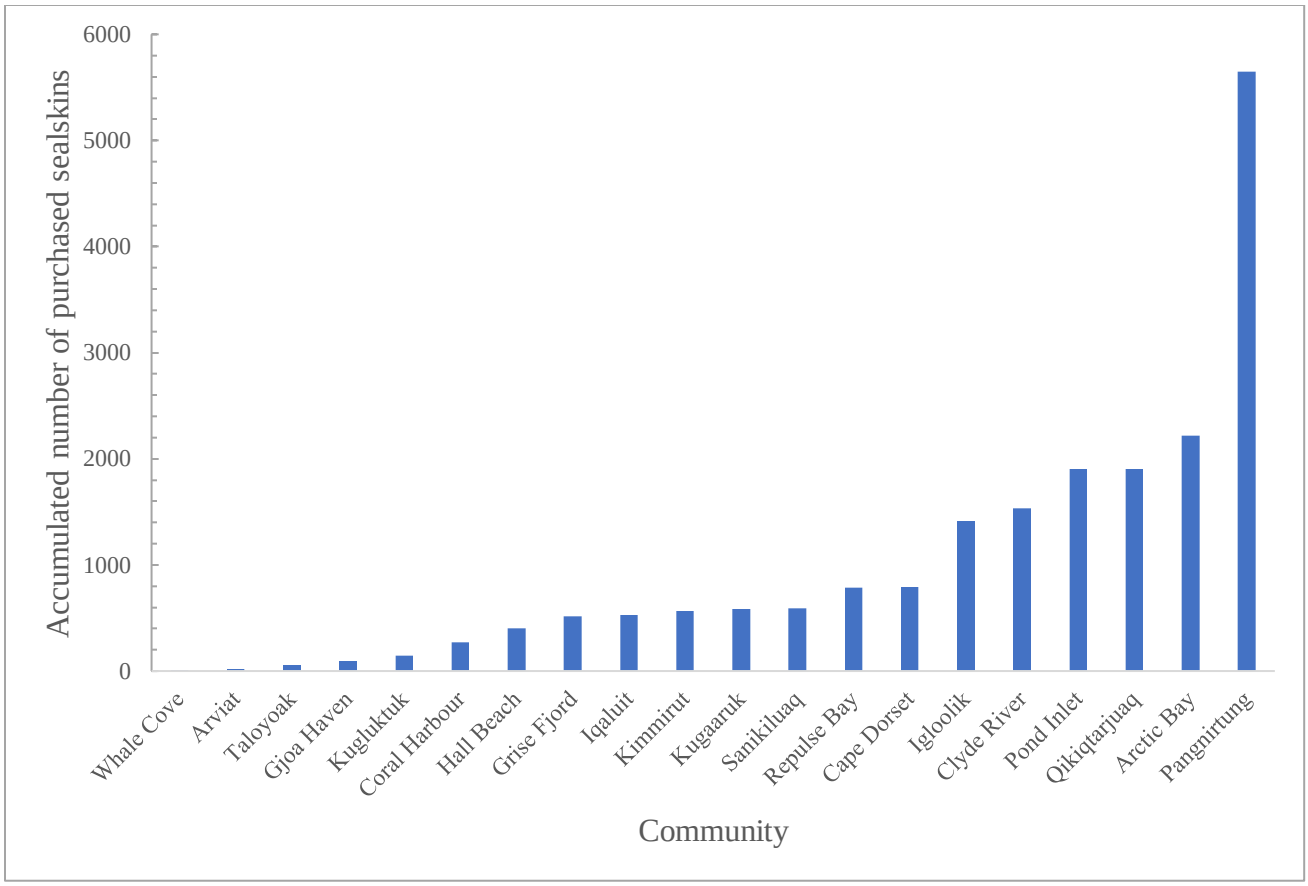

Figure 4. The accumulated number of sealskins purchased through the Sealskin Purchase Program by community, from 2010-2018.

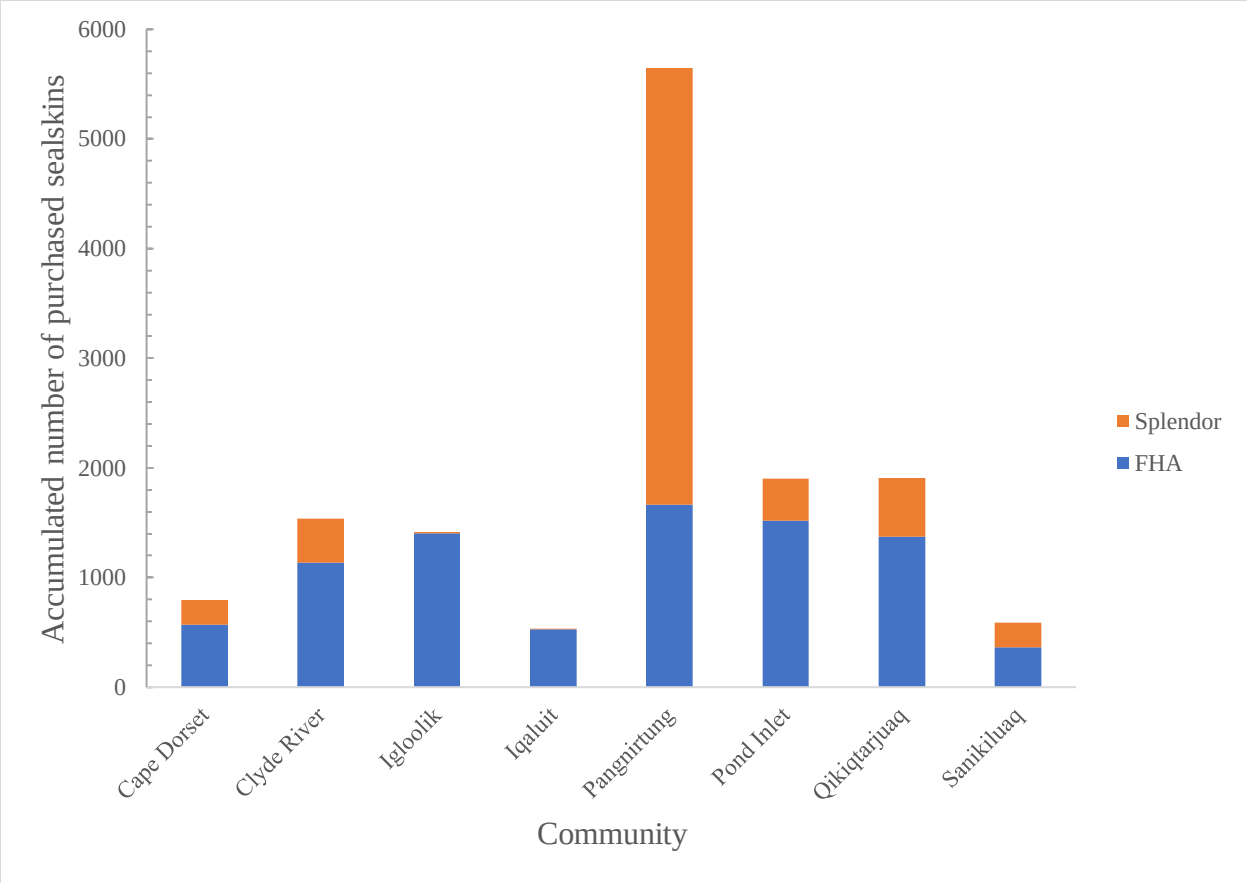

Figure 5. Accumulated number of sealskins purchased through the Sealskin Purchase Program from 2010 to 2018, by shipment to Splendor (orange) for professional tanning and dying or to the Fur Harvesters Auction (FHA, blue) for sale into external markets. Sealskins began being shipped to Splendor in 2012 and have continued each year since.

2.3.2 Five Core Functions of Seafood Traceability

Data collected from document reviews and the FTS were used to assess the current traceability system for sealskins purchased through the Sealskin Purchase Program at the Government of Nunavut against the 'Five Core Functions of Seafood Traceability' as outlined by Future of Fish (2016). Results were assessed individually for each Core Function (Figure 6).

Vessel-Dock Capture

As outlined by Future of Fish (2016), vessel-dock capture is the first step in creating a supply chain where data gets recorded, and in many cases uploaded to a database, at the point of harvest or with the first receiver. Through the Sealskin Purchase Program, harvesters or women that have prepared sealskins bring their dried sealskin to the Conservation Officer. The Conservation Officer assesses the quality of the sealskin and measures the sealskin size, then enters this information into the Fur Tracking System. Based on these metrics, the Fur Tracking System

determines the value of the sealskin and subsequent price that the seller will receive. Once the payment value has been determined, the Conservation Officer administers a cheque for that value to the seller, at which point the sealskin is owned by the Government of Nunavut. Additional information uploaded into the Fur Tracking System through this process includes the harvester name, community, species, and number of sealskins purchased. These metrics can then be tracked through the Fur Tracking System as the sealskin moves through the supply chain.

Despite data inputs into the Fur Tracking System, this does not meet vessel-dock capture requirements due to the first point of data entry taking place after initial processing. When individuals bring dried sealskins to the Conservation Officer for sale, there is no provenance for where or when the seal was initially harvested. This means that the Fur Tracking System cannot verify that a sealskin, for instance, was not imported from outside the community and then brought to the Conservation Officer for sale. In order for vessel-dock capture requirements to be fully met, there should be some form of tag administration that identifies a seal at the point of harvest, rather than after it is initially processed.

While the Fur Tracking System contains important information regarding the nature of sealskin purchases, this data cannot be documented in cases when the database is not operational. In Nunavut, where remote communities often deal with inconsistent connections and faulty internet services, technical challenges with the Fur Tracking System are commonplace. In the event that the Fur Tracking System is down, Conservation Officers use a Promissory Note to facilitate payment to the seller. This information must then be manually uploaded back into the Fur Tracking System in order to be recorded for traceability purposes.

Product-Data Pairing

In order to maintain data accuracy, product information, such as a barcode, QR code, or RFID chip should be attached to the product itself and journeys with the product as it moves throughout the supply chain (Future of Fish, 2016). Product-data pairing takes place through the Sealskin Purchase Program as the Conservation Officer prints a barcode that gets put on a tag with the sealskin. Sealskins are then bundled and either shipped directly to the Fur Harvesters Auction or to Splendor for professional tanning and dying. For sealskins getting shipped to the Fur Harvesters Auction, the barcode remains attached to the sealskin until the point of sale. However, sealskins being shipped to Splendor must have the tag and barcode removed for processing. In these cases, sealskins are tracked according to batches that get shipped on the same waybill. This

tag removal prevents complete product-data pairing along the entire value chain, but rather tracking back of a batch to the community from which the sealskin was shipped from. While this community often corresponds with the community of harvest, some Conservation Officers will bundle sealskins from different communities in a single shipment, offering potential for lower resolution of origin.

Internal Traceability

Traceability can be divided into two types: internal and external traceability. While internal traceability refers to the tracking of a product within a particular business or production facility, external traceability includes the documentation of the entire value chain. According to Future of Fish (2016), internal traceability is a core function of robust traceability, but not sufficient on its own. The Fur Tracking System includes internal and external traceability, as one-up, one-down product tracking takes place as sealskins move in and out of the Government of Nunavut's influence.

The Fur Harvesters Auction and Splendor assist the Government of Nunavut in one-up, one down product tracking of sealskins. The Fur Harvesters Auction documents sealskin sales based on corresponding barcodes in a report that gets forwarded to the Government of Nunavut for input back into the Fur Tracking System. Due to the disruption of product-data pairing for sealskins that get processed at Splendor, tanned and dyed sealskins get sent back to the Government of Nunavut office in Iqaluit according to the batch and corresponding waybill. Once sealskins have arrived back in Nunavut, they are available for sale to local artists and designers through the Dressed Sealskins for Nunavummiut Program. As of spring 2019, the Nunavut Arts and Crafts Association (NACA) administers the grading, pricing, and sales of this program, thereby transferring documentation responsibility from the Fur Tracking System onto NACA administration.

Supply Chain Visibility

Although not directly involved in the traceability system itself, supply chain visibility is a key aspect in proof of compliance to ensure that all parties involved in handling the product are indicated and transparent. While supply chain movements between the harvester, point of processing, or sale at the Fur Harvesters Auction are recorded in the Fur Tracking System, there are key parties in the supply chain that are not accounted for in the current traceability system. To start, women or other community members that prepare a sealskin for sale to the Conservation

Officer are not included in the Fur Tracking System in cases where a harvester sells a sealskin to the Conservation Officer. As a result, the current traceability system does not have the ability to document the role of individuals that prepare sealskins before sale to the Conservation Officer. In addition, while the shipment of sealskins to Splendor and the Fur Harvesters Auction is documented in the Fur Tracking System, offering a degree of transparency, these movements are inconsistent and do not appear to be shipped according to the strategic plan set out for these shipments, whereby sealskins from Qikiqtaaluk communities are to be shipped to Splendor, while sealskins from the remaining communities are to be shipped to the Fur Harvesters Auction. As such, these inconsistencies implicate transparency along the supply chain if movements are not in compliance with existing plans.

Another aspect of supply chain visibility relates to the assurance that businesses or government are operating under legal licenses and practices (Future of Fish, 2016). Article 5.6.1 in the Nunavut Land Claims Agreement states that "an Inuk has the right to harvest in the Nunavut Settlement Area (NSA) up to the level of his or her economic, social, and cultural needs (NTI, n.d.). As such, it is the inherent right for Inuit to harvest seal and sell sealskins. The Nunavut Wildlife Management Board (NWMB) is the co-management body responsible for wildlife management in the NSA (NWMB, n.d.). For species at risk such as the polar bear, walrus, and caribou, the NWMB has a large responsibility in the development of management plans, however, ringed seals have been classified as 'not at risk' by the Committee for the Status of Endangered Wildlife in Canada (COSEWIC) since 1989 (DFO, 2019). As such, there are no quotas or licenses in effect for harvesting seals in Nunavut. There are no commercial licenses issued to Inuit in Nunavut, with all seals harvested through a subsistence hunt. The subsistence hunt, however, is regulated under the *Wildlife Act*, which reflects the values and principle of Inuit through *Inuit Qaujimajatuqangit* (Government of Nunavut, n.d.d.). Conservation Officers are responsible for enforcing the Wildlife Act as well as facilitating the purchase of sealskins through the Sealskin Purchase Program, resulting in an efficient and legal purchase of sealskins. However, in the event that a conservation concern arises with ringed or harp seals, modifications to the program may be required to meet any legal conditions as advised by the NWMB or under the *Wildlife Act*.

Data Verification

The fifth and final function of robust end-to-end traceability involves the cross-checking of product information along the supply chain to verify data legitimacy and avoid traceability fraud

(Future of Fish, 2016). While data gets uploaded into the Fur Tracking System at numerous points along the value chain, data entry errors create difficulties in data verification and accuracy. For example, the Fur Tracking System documents the date a seal was harvested as well as the date a sealskin gets shipped south. The manual entry of data into the Fur Tracking System increases the likelihood of transposing purchase and shipment dates (personal observation). Sealskins get bundled and shipped following purchase, meaning that shipment date will occur at a later date than the date harvested. However, data transposition between these two dates can reduce the legitimacy of data in the Fur Tracking System.

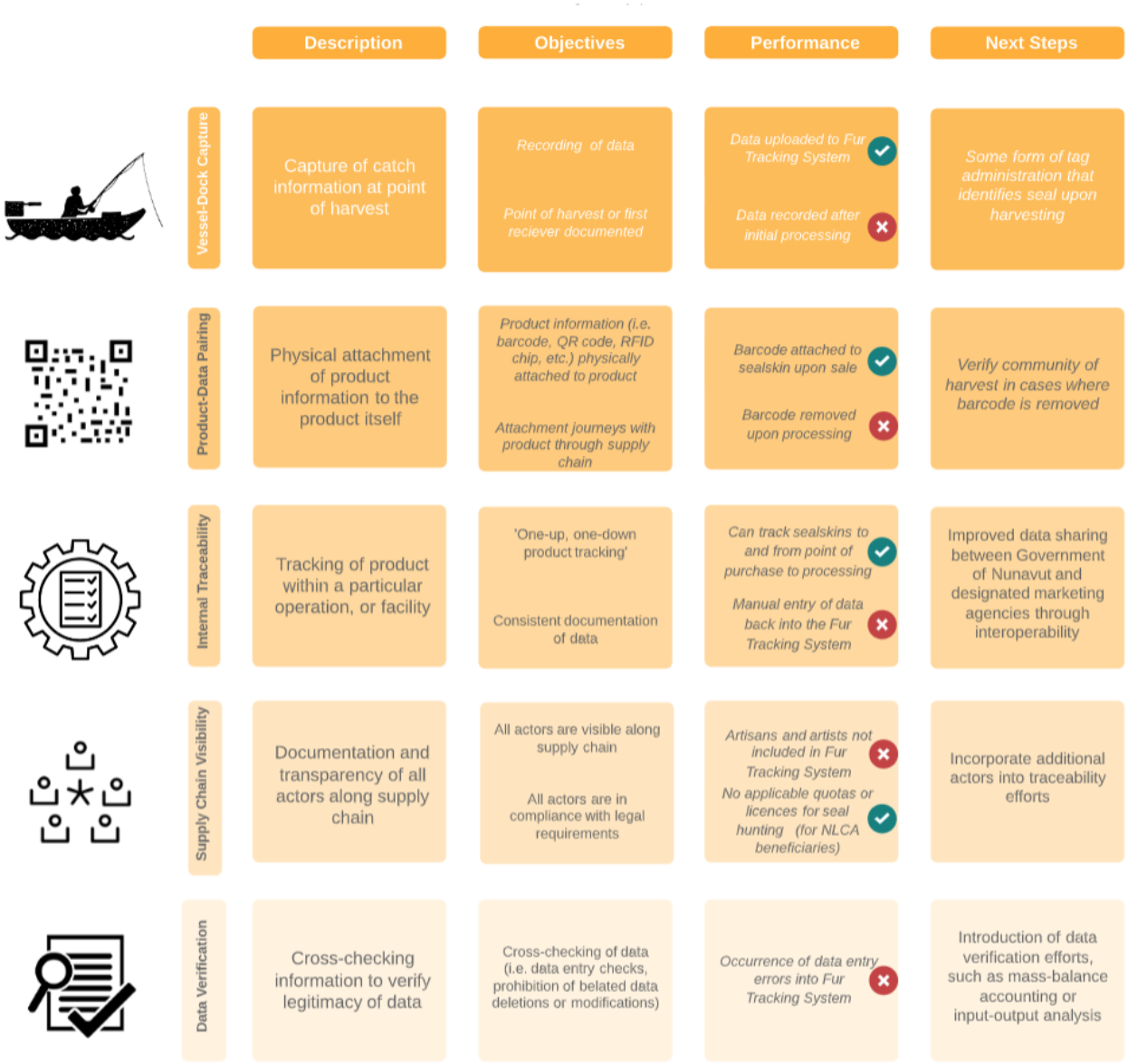

Figure 6. Summary of traceability system assessment for Nunavut sealskins using Future of Fish's 'Five Core Functions of Seafood Traceability' as an analytical tool (Future of Fish, 2016). Green checkmark indicates high performance of corresponding objective, while red X indicates incomplete performance of corresponding objectives.

2.4 Discussion

As the results indicate, the current traceability system administered through the Fur Tracking System partially follows four of the 'Five Core Functions of Seafood Traceability'. This suggests that the Fur Tracking System appears to address some of the traceability requirements under the EU Indigenous Communities Exemption, however additional efforts can be made to expand the system into a robust end-to-end full-chain traceability system as key limitations and

opportunity for product mixing are evident. While a number of minor changes can be made to improve performance with the 'Five Core Functions of Seafood Traceability', there are many changes that would require altering the current systematic framework through which the Fur Tracking System is operates. Nevertheless, the current traceability system run by the Government of Nunavut satisfies many, but not all of the factors that contribute to effective and robust traceability, as necessary to meet EU traceability standards.

With growing awareness and adoption of seafood traceability systems, many businesses are undergoing similar processes as the Government of Nunavut in meeting traceability requirements. While the Fur Tracking System is different in that it does not track a food product, many lessons can be drawn from current efforts and challenges in seafood traceability systems. In a 2015 workshop with 15 of the world's leading seafood traceability technological vendors, no single vendor performed all 5 functions, despite each function being performed by at least 1 of the vendors (Hardt et al., 2017). This inconsistency means that learning of traceability best practices, different types of traceability services, and lessons from other initiatives is an important first step to approach traceability improvement (FishWise, 2016). Given the diversity in business sectors that are looking towards traceability, particularly in the case for Nunavut sealskins, it is important to acknowledge that there is no one-size-fits-all approach to traceability (Lewis and Boyle, 2017). Instead, an in-depth look at various barriers and constraints to developing full-chain traceability can aid the Government of Nunavut in best practices for improving the current system (see Chapter 4).

The results demonstrate that there are currently a number of barriers and constraints in developing full-chain traceability for the Nunavut sealskin market. According to the Fur Tracking System data, the Nunavut seal market is comprised of a small-scale hunt that takes place across most communities in the territory. Since sealing is largely a traditional and subsistence-based hunt, often a part of people's daily lives, it is particularly difficult to organize and obtain additional data that can be required for traceability initiatives. Unlike seafood sectors which employ vessel monitoring technologies or electronic logbooks to document catch numbers (Lewis and Boyle, 2017), such strategies are not applicable in a small-scale practice such as seal hunting in Nunavut. Remoteness in the territory creates additional complexities for implementing various traceability technology systems, with higher costs, connection issues, and longer time requirements all contributing factors. As indicated in Figure 5, sealskins from 8 of the 12 Qikiqtaaluk communities

with sealskins being purchased through the Sealskin Purchase Program have been sent to Splendor for processing since 2012. Sealskins from the Baffin region are meant to get shipped to Splendor due to their higher quantity and quality, while the remaining sealskins get shipped directly to the Fur Harvesters Auction for sale into external markets (Fisheries and Sealing Division employee, personal communication, July 2019). However, the number of sealskins shipped to Splendor on an annual basis remains unclear. Development of a strategic plan for shipments of sealskins to Splendor may assist traceability efforts in reducing the risk of lost or undocumented sealskins as they get shipped South for processing. Despite these challenges, the Government of Nunavut has successfully developed the Fur Tracking System to not only facilitate the Sealskin Purchase Program, but also to meet traceability requirements under the EU Indigenous Communities Exemption.

As outlined in the results, the Fur Tracking System is partially compliant with the product-data pairing traceability function. Barcodes and RFID technologies are increasingly being used in traceability systems due to their quick and inexpensive automation of data collection throughout the supply chain (Sênk et al., 2013). Similar to the Fur Tracking System, in a survey of 27 seafood companies with a traceability system in place, 59% of respondents reported using a form product-data pairing in their practices (Hardt et al., 2017). These results suggest that product-data pairing is an important element for developing traceability efforts, for both internal and external traceability systems. Despite the many benefits of technical systems, including barcodes and RFID technologies, these tools come with their own set of limitations. Such technologies require a degree of resources, database expertise, and IT staff in order to maintain functionality (FishWise, 2016). In settings such as Nunavut, where staff capacity and remoteness can complicate the aforementioned requirements, difficulties can arise. In addition, the removal of barcode tags during processing is a difficult limitation to avoid, given the necessity of processing sealskins for long term durability and use.

Interoperability, or the exchange of data and information through computer systems or software, is a critical component to achieving full-chain digital traceability (Hardt et al., 2017). Despite the underrealized potential of interoperability, research has shown that collaboration between suppliers and customers can strengthen the value of traceability in business models (Sterling et al., 2015). As demonstrated in the results, the Government of Nunavut demonstrates a degree of interoperability through data sharing with the Fur Harvesters Auction and Splendor. Both

clients share reports with the Government of Nunavut, which then gets manually inputted back into the Fur Tracking System. This is a crucial component of the traceability system, as the Fur Harvesters Auction connects the upstream supply chain with downstream buyers, and data from sealskins being processed at Splendor verifies provenance that Nunavummiut designers purchasing sealskins through the Dressed Sealskins for Nunavummiut program are in fact purchasing Nunavut sealskins. Despite the benefits of sharing data, manual data entry into the FHA can create a backlog of data entry as well as errors which can reduce the accuracy of traceability data (Fisheries and Sealing Division employee, personal communication, July 2019; personal observation). To assist with adoption of interoperability, there are a number of computer software programs increasingly being used in traceability systems. While Electronic Data Interchange (EDI) is an old and expensive software, Application Program Interface (API) interfaces and cloud-based Enterprise Resource Planning (ERP) systems are both recognized as useful tools. API systems allow for 2 or more distinct systems to share data seamlessly through a custom software interface, while cloud-based ERP systems are particularly useful for businesses with limited technological capacity, where data is entered into a browser and shared into a cloud-based database for data passage through the rest of the supply chain (Hardt et al., 2017). Adoption of one of these systems may provide benefits for the Government of Nunavut as it would remove the backlog of data entry and reduce transaction costs as well as the risk for data entry errors that undermine the legitimacy of traceability data.

As indicated above, the Fur Tracking System does not comply with the fifth and final traceability function: data verification. Interestingly, in the survey conducted by Hardt et al., (2017), only 22% of seafood businesses responded as having data verification measures. Of the Five Core Functions, data verification had the lowest performance rate (Hardt et al., 2017). As such, lack of data verification in the Fur Tracking System corresponds with broader trends in seafood traceability systems, suggesting data verification may be a secondary function that receives less attention than other functions such as vessel-dock capture and product-data pairing. Despite the many benefits of traceability, the method itself does not verify information about a given product is accurate, but rather acts as an infrastructure for improving transparency along a supply chain (Borit, 2016). This means that data verification is crucial in order for businesses to fully realize the benefits of such systems and to be credible purveyors of information. Yet, a lack of verification methods has been identified in the monitoring of seafood traceability practices

(Sterling and Chiasson, 2014). Although Nunavut sealskins operate independently from the seafood industry, the results demonstrate similar challenges may exist across both activities. Traceability experts have called for increased use of analytical methods in data verification efforts. Such methods include mass-balance accounting, which identifies data outliers in software systems, or input-output analysis, which detects discrepancies between input and output data entries across traceability platforms (Borit and Olsen, 2016). With regards to the sealskin traceability system, the input-output analysis may be particularly useful for detecting mismatches between harvest and shipped date in the Fur Tracking System The Government of Nunavut's software developer client, Strata 360, may be able to implement such verification approaches in order to improve the legitimacy of data being inputted into the Fur Tracking System, and thus improve compliance with the fifth Function.

The majority of current traceability efforts in the seafood industry is carried out by businesses, with technical or financial support from NGOs. While some states are developing national traceability systems, as seen in the United States (Lewis and Boyle, 2017) and across Southeast Asia (FAO, 2018a), the role of government in seafood traceability has been largely a regulatory and legislative one, indicating the needs for such systems, but not prescribing a set of practices (Sterling et al., 2015). In addition, scholars have asserted that the implementation of traceability systems does not fall within the control of a single actor within the supply chain (Bhatt, 2016). Collectively, these measures put the Government of Nunavut in a unique position in being the sole body responsible for tracking Nunavut sealskins. Despite collaborative data sharing with the FHA and Splendor, no other actors across the territory are involved in developing or implementing a traceability system for sealskins. While the authority of the Government of Nunavut in administering traceability efforts is not inherently negative, it is worth noting that there are different drivers, capabilities, and benefits that exist between governments and businesses in implementing traceability systems. Such reflection suggests it may be beneficial for the Government of Nunavut to incorporate other actors within the territory into traceability programs, such as Inuit artisans and designers involved in the sealskin market.

2.5 Conclusion

The present analysis sought to assess the current traceability system for Nunavut sealskins and identity opportunities for improvement towards a robust end-to-end traceability system. Given increasing interest and demand for certification and traceability in the Nunavut seal market (DFO,

2017), an understanding of the existing system is an important first step before moving forward on such initiatives. As such, this assessment has concluded that the existing traceability system as operated through the Sealskin Purchase Program satisfies many of Future of Fish's (2016) 'Five Core Functions of Seafood Traceability', however there are some key limitations that must be addressed before a full Chain of Custody can be achieved. Given that the Fisheries and Sealing Division operates to support the seal market, this presents an interesting example of a combined public and private value chain, which stands in contrast to much existing work on traceability systems. With an acknowledgement of this position and a better understanding of current strengths and limitations, the Government of Nunavut can work towards incorporating all actors and expanding the current system.

3.0 Inuit values in the seal market

3.1 Introduction

Canada has a large Indigenous population of First Nations, Métis, and Inuit, collectively comprising approximately 5% of the national population (Statistics Canada, 2016). After a long history of colonialism, Canada is now working to advance reconciliation with Indigenous peoples. As part of the Indian Residential Schools Settlement Agreement, the Truth and Reconciliation Commission of Canada was established in 2008 to document the lasting impacts of the Canadian Indian Residential school system on Indigenous students and families. In 2015, an Executive Summary was released outlining 94 Calls to Action for Canada to advance Canadian reconciliation (Truth and Reconciliation Commission of Canada, 2015). As one of the Calls to Action, Canada officially removed its objector status to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2016, almost a decade after the Declaration was adopted by the UN General Assembly (Fontaine, 2016). These events, in addition to the more recent National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG, 2019), have furthered discussion of Indigenous rights across the nation.

Inuit Nunangat (the collective Inuit homelands in Canada), encompass 35% of Canada's landmass and 50 percent of its coastline (ITK, 2018). Collectively, Inuit Nunangat includes the four land claim regions in the Inuvialuit Settlement Region (Northwest Territories), Nunavut, Nunavik (Northern Quebec), and Nunatsiavut (Northern Labrador). While Inuit continue to live with the legacies of colonialism, Inuit rights are becoming increasingly recognized. Recently, the signing of the Inuit Nunangat Declaration called for a renewed Inuit-Crown relationship "based on the recognition of rights, respect, co-operation, and partnership as part of its broader goal of achieving reconciliation between the federal government and Indigenous peoples" (Inuit Nunangat Declaration on Inuit-Crown Partnership, 2017, para. 2). This declaration, in conjunction with national advancements towards reconciliation, have furthered efforts to better understand and enable the recognition and attainment of Inuit rights.

Inuit rights are recognized on national, international, and regional scales. Aboriginal rights, including Inuit rights, are recognized and affirmed in Section 35 of the *Constitution Act* (Constitution Act, 1867-1982, para. 1). While the *Constitution Act* nationally recognizes Inuit rights, such inherent rights exist regardless of recognition in national legislation. More recently, the United Nations General Assembly adopted UNDRIP, representing the most comprehensive

international document on the rights of Indigenous peoples (UNDRIP, 2007). UNDRIP recognizes the right for Indigenous peoples to "maintain and strengthen their distinct political, legal, economic, social and cultural institutions, while retaining their right to participate fully, if they choose, in the political, economic, social and cultural life of the state" (UNDRIP, 2007). As such, Inuit have the right to food, culture, and economic opportunities. These rights are supported through regional land claim agreements throughout Inuit Nunangat: the Inuvialuit Final Agreement (1984) (IRC, 2019) the Nunavut Land Claims Agreement (1993) (NTI, n.d.), the Labrador Inuit Land Claims Agreement (2005) (Nunatsiavut Government, 2019), and the Nunavik Inuit Land Claims Agreement (2006) (Makivik Corporation, 2018). Despite national, international, and regional recognition of Inuit rights, Inuit remain at the bottom of numerous Canadian socioeconomic indicators, reporting the highest incidence of food insecurity in Canada and suicide rates ten times higher than the national average (Beaumier and Ford, 2010; Eggertson, 2016).

Given the importance of seals in Inuit society, in many ways, sealing is at the centre of Inuit rights to food, culture, and economic opportunities, and can therefore help to support each of these rights. This connection begets a better understanding of if, or how, market tools could support the seal market to increase the contribution of sealing in the realization of these rights. In order for certification and traceability to be applied to the Nunavut seal market, credence qualities along the seal value chain must be fully understood for such standards and approaches to meet the needs of Inuit harvesters, processers, and artists, as well as European regulators. That is to say, finding market-based systems and approaches that recognize Inuit rights and are credible in contemporary global markets is essential. An understanding of these credence qualities is also important in ensuring that the development of any certification or traceability system in the Nunavut seal market is done so in a manner that acknowledges the inherent rights of Inuit to food, culture, and economy.

3.2 Methodology

Analysis of the Fur Tracking System as discussed in Chapter 2 shows the current state of the traceability system for Nunavut sealskins. But on the ground, how do value chain actors view the Sealskin Purchase Program and the Fur Tracking System generally, and certification and traceability more specifically, in supporting the seal market and connections to Inuit rights? Focus group discussions were conducted in order to understand perceptions of the existing value chain for sealskins in Nunavut, as well as value chain actor's shared perspectives on the connections between sealing, market tools, and Inuit rights. Focus group discussions are a useful method for

eliciting a multiplicity of views within a group setting (Gibbs, 1997). Focus group discussions are particularly beneficial in inductive approaches to research, where the researcher has an open-ended set of questions but encourages participants to direct the discussion by exploring the issues of importance to them (Kitzinger, 1995). Due to the inductive nature of this research, focus group discussions were chosen as the data collection method to produce greater community-driven responses than individual semi-structured interviews. A focus group script was developed for each set of value chain actors, however, the focus group discussions were informal in nature and largely directed by participant interests (see Appendix A for focus group scripts).

During a nine-week field visit from June-August 2019, focus group discussions were conducted with three groups of participants – seal harvesters, woman involved with preparing sealskins, and artists and retailers working with or selling sealskin. Focus group discussions took place in Iqaluit, the capital city of Nunavut, and in Qikiqtarjuaq, on Broughton Island northeast of Iqaluit in the Davis Strait (Figure 7). The focus groups were comprised of four topics: (A) the role of participants in the seal harvest, (B) challenges and opportunities in working with, selling, or sourcing sealskins/benefits and challenges in the Sealskin Purchase Program (C) thoughts and perspectives on sealing as a sustainable livelihood, and (D) thoughts and perspectives on market tools in Nunavut sealing (Table 2).

Figure 7. Map of the territory of Nunavut (blue) with indication of the two communities where focus groups were conducted, Iqaluit and Qikiqtarjuaq.

Table 2. Overview of focus group participants and the topics discussed.

Technique	Actors	# of Subjects	Topic
Focus group discussion (n = 5)	Harvesters	8	A. Role in seal market B. Challenges and opportunities in working with, selling, or sourcing sealskins/benefits and challenges of Sealskin Purchase Program C. Thoughts and perspectives on sealing as a sustainable livelihood D. Thoughts and perspectives on market tools in Nunavut sealing E. Perceived connections between the seal market, Inuit rights, and market tools
	Processors and artisans	12	
	Artists and retailers	6	

For each focus group discussion, all members of each group were invited to take part in the event. Events were advertised (in English and Inuktitut) on Iqaluit's Facebook news group, on community posting boards, and on the local radio station in Qikiqtarjuaq. The discussions took place at the Elder's Qammaq in Iqaluit, and Council Chambers in Qikiqtarjuaq. Focus group discussions were conducted in English, by the researcher directly, or Inuktitut, with the assistance of an Inuktitut interpreter. Immediately following each focus group discussion, audio recordings were transcribed, and a content analysis was performed (Figure 8). Important responses and sample statements relevant to the research question were coded. Once codes were grouped together into categories, a list of keywords was developed to ensure rigor and replicability. With the review and modification of categories across all focus group discussions emerged three themes: quality and provenance trade-offs in sourcing sealskins, sealing as integral to Inuit culture, and the potential role for market tools. Preliminary findings were shared with participants for questions, comments or concerns, which were then incorporated into the findings.

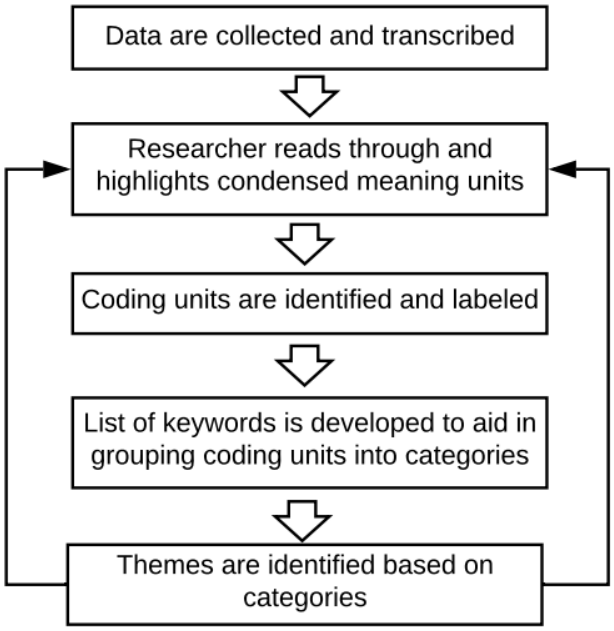

Figure 8. Overview of qualitative content analysis as performed with results of focus group discussions.

Ethics approval to conduct this research was obtained from both Dalhousie University and the Nunavut Research Institute (Appendix B and C). This research is positioned under the umbrella of current efforts being taken by the Government of Nunavut's Fisheries and Sealing Division to further develop branding and marketing strategies for Nunavut sealing and seal products. Throughout this research, the Fisheries and Sealing Division has provided direction and guidance towards the production of meaningful and respectful research.

3.3 Results

Three key themes emerged from the focus group discussions: (A) quality and provenance trade-offs in sourcing sealskins, (B) sealing as integral to Inuit culture, and (C) the potential role of market tools. These are explored below. The text represents interpretation of what was said and heard during focus group discussions, with explicit quotes used to reinforce messages.

3.3.1 Quality and provenance trade-offs in sourcing sealskins

Focus group discussions with harvesters, woman involved with preparing sealskins, and artists and retailers working with or selling sealskin allowed for a better understanding of the current value chain for Nunavut sealskins.

Several respondents explained the multiple steps that go into preparing a sealskin. Once a harvester has killed and skinned a seal, it is usually given to a woman in the community to begin the process of preparation. Harvesters who don't prepare sealskins themselves or have anyone to prepare sealskins for them will typically give it to other women in the community, sometimes for free or at a cost of about $30. A sharp ulu is used to remove the blubber, then the skin is washed with laundry soap and left to dry. Once the flipper cut-outs have been sewn, the sealskin is stretched out onto a drying frame and left outside to dry for 2-3 days, depending on weather conditions. Many women emphasized the immense care that is taken during this process to ensure a high-quality sealskin. For example, one respondent described how she soaks her skins overnight to prevent any blood or oil residues from remaining on dried sealskins, a common sign of inadequate cleaning. While most sealskins are prepared with fur on one side, several respondents emphasized there are actually three different types of sealskins, each with a different use. To prepare white sealskins with no fur, the skin is soaked in hot water and the fur is scraped, then dried outside for over a month. Black sealskins with no fur are prepared similarly, except for soaking in hot water. Both no fur variations are useful for waterproof *kamiks* (traditional boots).

> *"I like it like not too fresh, because when, working on it right away, and the blood is still on the skin, and it's kind of hard to repeat and repeat wash it, for me, I always want to clean my skins really nice, for me, I always have to wash it or just let it soak in the water to get the blood out, and the next day I wash it again, and put it in a frame, and the other one is when it's 1 or 2 days old it's a lot better, when the blood is not too dark to see on the skin"*

Several respondents conveyed that upon drying, the nicest sealskins are picked out and kept, and most of the remaining sealskins are sold to the Conservation Officer. Several respondents indicated that the Conservation Officer is not always available to purchase sealskins. For example, when the position is vacant, community members have to wait to sell their sealskins until a Conservation Officer comes from another community to sell their sealskins. This results in community members having to stockpile their sealskins, something not everyone can do if they are in more immediate need of income. Many respondents also sell sealskins to other communities, particularly to other women involved in teaching *kamik*-making. Many women subjectively agreed

> *"I notice it in town like you don't always have an officer in town and some local guys have to take over the spot for a while when they really need it"*
>
> *"We now have a wildlife officer finally, so it's easier for the harvesters now, we had to wait for somebody to come from Iqaluit to buy the sealskins"*

that Qikiqtarjuaq sealskins are in high demand due to their good reputation for high quality, black and silver sealskins that are particularly useful for *kamik*-making. Like the nicest sealskins are kept for personal use, they are also prioritized when selling to other communities. While the process of preparing a dried sealskin typically takes about two weeks, it takes much longer to sew a value-added product, such as parkas, mittens, or *kamiks*. These value-added products are typically sold on Facebook within Nunavut or kept for personal use. The factors influencing where sealskins are sold include the most efficient sale, if the Conservation Officer in town, if ladies in other communities are looking for sealskins, and the number of available sealskins.

Harvesters and preparers shared that young (three to four months) seals are the main targets of hunting due to their desirable meat and softer skin that is easier to work with. Ringed seals are the most common species hunted; however, some bearded seals are also hunted whose skin is used for waterproof soles of *kamiks*. Harp seals are not commonly hunted due to differences in meat and thickness of skin deemed harder to work with. With discussion of sealskin preferences emerged multiple comments about the importance of quality, particularly differences in quality between naturally processed and professional tanned and dyed sealskins. In Qikiqtarjuaq, many respondents prepare various sealskin products with their own sealskins that have been hunted in their community, however, some also commented on their experiences working with professionally processed sealskins. Several respondents described how the chemicals used in professional processing remove the quality and result in a heavy, rigid sealskin. These sealskins must be stretched out before they are sewn, since it is important for sealskins to be as thin as possible without removing the fur. One woman commented that she made her husband a parka with professionally tanned sealskins, however due to its uneven thickness, he cannot wear it out on the land hunting because it is not warm enough. Despite this, respondents did state that while professionally processed sealskins are not useful for warm clothing, they are still used for more decorative products, such as purses, wallets, and earrings.

> *"Some women prefer it dried on their own, it's not chemicals, none of that is used, [government processed sealskins], you can even blow through the fur … I mean, you need them up here if you're going to wear them up here going hunting, but if you want to wear them for decoration to look nice, then it doesn't matter if they're cleaned by the government"*
>
> *"Cleaned by government, I don't prefer to wear them because they're not too warm, like, they're kind of heavy and well, they're really nice and soft but they're really heavy and not too warm"*

Discussions of quality were raised in the focus group discussions with artisans and retailers. Respondents agreed that the professional processed sealskins sourced through the Dressed Sealskins for Nunavummiut Program are of low quality. Government sealskins were referred to as "horrible" and "very thick, clumsy, not classy", as well as having reduced durability and repellency compared to naturally processed sealskins. Artisans also commented on the high availability of colourful versus natural tanned sealskins, suggesting sealskins may be professionally dyed to mask the low quality. The low quality of Nunavut sealskins that get sold through the Dressed Sealskins for Nunavummiut Program results in many artisans facing a trade-off between supporting the local economy or working with low quality sealskins. Low quality of Nunavut sealskins results in some artisans sourcing sealskins from outside the territory, namely Newfoundland or Greenland. One respondent recalled a time when they used to think that harp and ringed sealskin process differently based on interspecies differences, however, over the years have found that ringed sealskins can be of the same quality as harp sealskins, it just depends on how they are processed. All respondents agreed it would be people's preference to support Nunavut sealskins if the quality was higher, however, some people do not have the luxury to risk reducing their profit if working with low quality sealskins. Some artisans take great pride in their products, and don't want to put their name on a product that is not of a high quality. For other artisans, supporting the local economy is an important factor when deciding where to source sealskins, with one respondent describing how they avoid working with harp sealskin to increase the likelihood of supporting an Inuk harvester, as the majority of harp sealskins are commercially hunted in Newfoundland.

> *"I'm the daughter of a harvester, all day long harvester, so I couldn't imagine not using Nunavut skins, I think that would be very insulting to my father and his relatives, so to me I try my best to use Nunavut skins"*
>
> *"I try my very best to keep away from harp, just because I know for majority of the time Inuit will hunt ringed, so that's pretty safe for me to know I'm supporting an Inuk harvester"*

When asked about where artisans sell their products, every respondent selling their value-added products commented on the importance of Facebook in their business. Sales through Facebook generally occur within Nunavut, while it is not as common to ship products internationally. The Fisheries and Sealing Division has supported Nunavummiut artisans to travel to Europe to raise awareness and sell their products. In these cases, respondents recalled marking up prices by 30-40%.

Several respondents agreed that they typically receive $60 to $75 per sealskin when selling to the Conservation Officer. Similarly, prices are not marked up when selling to other communities. However, value-added products offer a much higher price than a dried sealskin. One respondent described a time when they traveled to Northern Quebec for a music festival with 11 *kamiks* and received enough money to purchase a snow machine. This same respondent also recalled a time when they received $1,500 for a pair of *kamiks*.

3.3.2 Sealing as integral to Inuit culture

When discussing the seal market with respondents, it became evident that hunting seals and working with sealskin is integral to Inuit culture. Respondents described the numerous connections between the economic, social, and cultural contributions of sealing to their livelihoods.

In focus group discussions, harvesters emphasized that they hunt all year round. While many harvesters are men, women also hunt, in many cases hunting together as a family with their children. Several respondents described the importance of engaging youth in hunting and working with sealskin. One respondent recalled how youth engagement has changed through their lifetime, with children having less access to traditional hunting practices than in the past. For youth that do not have access to a boat to go out on the land, participants suggested there is more available time in the community to get into trouble.

"Nowadays they got technology like cellphones, like I don't see kids playing out with boats, in my younger days I would just play boat and collect cod fish, and every other day we would practice butchering seal meat"

"Inuit heavily rely on seal, like we're going to go sick if we don't have it for a week, we're going to go crazy"

"We're the seal people, we are the seal people. Without, we're not good"

"It's not just the market, it's our number 1 diet"

Seal meat was repeatedly identified as an important country food for local consumption. Several respondents emphasized that while working with and selling sealskins is important, seal meat is part of a traditional diet and important for food security. One respondent observed that some people prefer to solely eat country food, and don't eat fruit. However, due to the unaffordability of gas and bullets for hunting, elders are increasingly being forced to eat processed foods. Food sharing is still strong and commonplace, where community members are invited on the local radio to join with others to enjoy fresh seal meat.

The income from selling sealskins is often used to augment hunting costs, such as gas and bullets, which are very expensive in Nunavut. This income is particularly important to many community members, often times being people's only source of income. Besides social assistance, profit from selling sealskin products is the only source of income for artists and designers. In addition to feeding their family, the income from selling sealskin products allows people to stay at home and care for their children or grandchildren.

Discussions about the seal market also touched on elements of Nunavut sealing that are important to Inuit. When seal hunting, harvesters described that they only catch what they need, usually one or two seals at a time. Seals are targeted for desired size and kind, in many cases young and fat seals being the best for sealskins and meat quality. Several respondents also described how the whole animal is used for various purposes. The eyes, brain, liver, ears, and hands are all eaten, sealskins are used for clothing, and bones are either used for games or jewelry. Respondents indicated that another important element of the seal harvest that sets Nunavut sealskins apart from other placed skins is the strong support it provides to Inuk hunters, who are integral to Inuit society. Connections between family, friends, and the broader community result in a great pride for supporting the Nunavut seal market. One artisan emphasized the importance of sharing this pride with people, that seals are actually celebrated, and harvesters are actually revered.

"We prefer to catch what we want, what size and what kind, we don't just kill, we have respect. That's how we were raised, not to just kill animals"

"I don't think that everyone understands that there is a difference between Nunavut skins and other placed skins, because to me, people are like "oh sealskin, we're promoting sealskin, yay sealskin" but not all sealskins were hunted by a harvester, so there, that's the difference about Nunavut skins, that they're hunted by a hunter, so that to me is the social consciousness that I carry, because to me they're my neighbours, they're my relatives"

3.3.3 Potential role for market tools

Value chain actors shared their insights into the current state of the seal market, as well as their thoughts and perspectives on the suitability of market tools in supporting the Nunavut seal market. In Qikiqtarjuaq, no respondents were familiar with the Nature's Edge Program or the Dressed Sealskin for Nunavummiut Program, however many were interested to learn more. Public awareness also came up during the focus group discussion in Iqaluit, where one respondent observed that many Nunavummiut are not aware of the Government of Nunavut's programs, making it more difficult to market your product when you're not even aware of the options.

Respondents agreed it is the responsibility of the Government of Nunavut to communicate their programs and initiatives.

While artisans recalled having positive sale experiences in Norway, all respondents agreed that the Europeans are not buying sealskin products. Despite the Fisheries and Sealing Division's attempts to build the European market and have Nunavummiut artisans establish online profiles and shops, some respondents are hesitant to invest in these markets when the return on investment may not be worth it. Similarly, respondents in both Iqaluit and Qikiqtarjuaq agreed that tourists do not buy sealskin products. One respondent observed that at the museum gift shop in Iqaluit, the turnover rate of other animal products, such as ivory and baleen, is much higher than sealskin, despite many of these products having similar restrictions as sealskin. While the local demand for sealskin products is high, the respondent described this discrepancy as very apparent among tourists. Numerous comments about Greenpeace and the Newfoundland seal hunt came up during discussions surrounding American and European cruise ship tourists not purchasing sealskin products. Some respondents described that people thought they were killing seals the same way as the Newfoundland seal hunt, with governments only hearing from animal rights groups, including Greenpeace, instead of Inuit. Some respondents even described how Facebook ads selling sealskin products get blocked and removed. Respondents that were old enough to recall the seal market prior to the 1980s commented on how they used to receive as much as $400[1] from sealing sealskins to the Conservation Officer, before animal rights groups collapsed the market.

When prompted about the potential role of market tools in supporting the seal market, respondent's reactions were mixed. All respondents in Qikiqtarjuaq agreed that they would like to receive a higher price from the Conservation Officer to account for all the hard work and time that goes into preparing a dried sealskin for sale. Others also stated that they would like to see a tag showing the community of origin. In Iqaluit, where respondents were more familiar with existing branding tags such as Authentic Nunavut[2] and the Igloo Tag[3], many thoughts and perspectives were discussed. A retailer who sells a wide variety of arts and crafts, including sealskin products, commented that numerous tags get confusing and lose their value due to a lack of enforcement to maintain product authenticity. Others commented on the blurred cultural understanding created when market tools

[1] Note that corrected for inflation, $400 CAD in 1980 is the equivalent to $1,200 in 2018

[2] The Authentic Nunavut logo was created by the Department of Economic Development and Transportation of the Government of Nunavut to promote authentic Inuit arts and crafts products

[3] The Igloo Tag Trademark is a branding tag developed by the Inuit Art Foundation attached to Inuit art products

are not specific, as in the case of the Authentic Nunavut tag not as specific as Inuk made. Here, respondents agreed that as long as sealskins are harvested by Inuit, they can be Authentic Nunavut, even if the products are designed and sold by non-Inuit, which confounds the notion of 'Authentic' Nunavut.

> *"We use one that says "Nunavut Authentic" which is just like things made in Nunavut, like that's the one I have, but people come in and they ask for an Igloo Tag… No enforcement, right, like it's not doing what it says it is, so now you're sort of miss-marketing what is happening, and then from the Nunavut Authentic one, if people confuse it with the Igloo Tag"*
>
> *[Consumer-facing traceability systems] would be for the very conscious consumers, right, a huge system to be made for those one or two people who are actually going to make an effort"*

Another respondent commented that many Nunavummiut artisans don't sell their products in a retail setting, and therefore aren't exposed to the various branding tags. Many respondents agreed on the importance of supporting education and consumer awareness regarding Nunavut sealskins, with one respondent suggesting that tourists be encouraged to ask questions about where products come from. Respondents related this idea to building a Chain of Custody for Nunavut sealskins to let tourists know that they are supporting a harvester. This Chain of Custody idea could work for multiple products beyond sealskins and become more popular than existing tags. When asked about their thoughts on consumer-facing traceability systems, respondents stated this would be a large investment for few people interested in using it, the very conscious consumers. Respondents emphasized that some problems can be addressed with the same approach, therefore it makes sense for promoting education and public awareness as a common solution to issues surrounding fake Inuit art and markets for sealskin products, for instance. With promotion of individual artists, one respondent argued that you cannot fake an artist's name if there is enough public information about the artist.

> *"We get enough tourists to come see us, and so it's that promotion of like "hey tourists, do you know sealskins here are actually celebrated, that harvesters are actually revered?" right and putting all that energy into that and so that that way, and I think part of it for me uhm as an Inuk, is just building that pride on people, because when a community is happy, when a community has that pride, then I think we can uhm, support each other more, right, and hopefully we don't always need to export things"*
>
> *"It would be interesting maybe, and maybe would impact, if sealskin has a sustainable, or it's what supports what not just the artist, but the harvesters, right, like that chain idea, maybe tourists would be like oh great , right, like I'm buying into that, right, and maybe then it would be more popular"*

Respondents in both Iqaluit and Qikiqtarjuaq shared their thoughts on a potential Nunavut tannery. Many agreed that a Nunavut tannery would have both advantages and disadvantages, with some respondents being more in favour of the idea than others. Some respondents suggested that a Nunavut tannery would help to build local capacity and reduce having to send Nunavut sealskins outside the territory to be professionally tanned and dyed. However, others pointed out the lack of disposal infrastructure from the chemicals needed to process sealskins, as well as many infrastructure priorities in Nunavut besides a tannery. Some respondents expressed concern that chemical pollution could get dumped into the ocean due to insufficient disposal infrastructure. When Qikiqtarjuaq respondents were asked about the tannery that was once in their community, many described how chemicals had to be shipped out to be properly disposed of, a service too expensive to be feasible and keep the tannery in business.

3.4 Discussion

While the results from focus group discussions provide many insights into the potential suitability of branding tags and traceability in the Nunavut seal market, the following discussion will focus on the need to incorporate Inuit values into a certification framework in the context of Inuit rights. Results from focus group discussions and provide specific recommendations for best measures moving forward will be expanded on in discussion of the barriers, bottlenecks, and challenges in the Nunavut seal market (Chapter 4).

Increasing recognition of Inuit rights is of particular importance in the promotion of economic development. While anti-sealing campaigns failed to address the role of Inuit in the commercial seal market, the acknowledgement that Indigenous peoples have the right to participate in the modern economy of the state, as stated in UNDRIP, presents new opportunities to support the seal market in a manner that reflects these rights. As Bellier and Préaud (2012) state, Indigenous peoples are not inherently opposed to development, but rather seek their own self-determination in business development through the integration of social, cultural, and economic objectives. Through such approaches a new wave of Indigenous entrepreneurship has emerged, defined by Hindle and Lansdowne (2005) as the "creation, management, and development of new ventures by Indigenous peoples for the benefit of Indigenous peoples". Indigenous entrepreneurship models have created a paradigm shift towards a 'hybrid economy' where traditional subsistence activities are interwoven into the market economy (Bellier and Préaud, 2012). Framing the Nunavut seal market as a 'hybrid economy' permits a discussion on how to

incorporate credence qualities, or values, of the seal hunt into market tools that facilitate this connection with external market forces. As such, the following discussion builds on existing models of Indigenous entrepreneurship to understand how the Nunavut seal market can achieve a 'hybrid economy' in a manner that appreciates a growing landscape for Inuit rights.

Results from focus group discussions demonstrate the rich value of seals and sealing in Inuit culture. While the driving forces for certifications and traceability in the sealskin market come from servicing a global market, these ideals of Western-style market tools often conflict with Inuit values towards land and resource sharing (Dana et al., 2005). Given the history of Inuit participating in the cash economy through the trade of sealskins and other furs, these often-conflicting value systems create a need to reconcile retaining cultural value in an economy that has been so heavily influenced by external factors. Much of this disconnect arises from the differing worldviews between Inuit, like many Indigenous peoples, and Western societies. In contrast to Western ontologies that situate humans at the top of a hierarchical structure, relational ontology acknowledges the relations between all aspects of life, where an ecocentric worldview emphasizes stewardship and connections in time and space (Ranjan, 2015; Tikina et al., 2010). For Inuit, seals represent more than economic profit, and rather are seen as food, community, clothing, connection to land, and a way of passing on culture throughout generations. Considering the role of certification and traceability through this lens presents a different understanding of how such market tools may support the Nunavut seal market.

Despite conflicting value systems between Inuit culture and Western market tools, Indigenous entrepreneurship has gained momentum in recent decades. Through colonialism, Indigenous peoples have undergone immense cultural change through shifting economic forces, land dispossession, and social acculturation (Peredo et al., 2004). While such forces have and continue to have a large impact on Indigenous livelihoods, there is a growing desire among many Indigenous peoples for an integration of community values with modern economic development (Anderson, 2002). However, remaining questions, which are relevant to the discussion on certification and traceability in the Nunavut seal market, entail the direction that Indigenous entrepreneurship should, or does take. As argued by Peredo et al., (2004), this largely depends on the historical, economic, and cultural context of each community.

Existing case studies on the barriers and opportunities in Indigenous entrepreneurship offer useful insights into the discussion of market tools in the Nunavut seal market. Across the world,

Indigenous peoples are becoming more involved in a multiplicity of business enterprises, from We'koqma'q First Nation in Cape Breton recently partnering with Cooke Aquaculture to assist in obtaining third-party certification from the Best Aquaculture Practices (BAP) program (Latimer, 2019) to interest in developing third-party certification for bush products in Australia (Cunningham et al., 2009). While each development presents a different set of barriers and opportunities, through such partnerships have emerged a number of innovative approaches to pursuing Indigenous economies in a manner that retains the cultural context and social values of importance.

Through focus group discussions with people involved in the value chain, numerous values of seals and sealing emerged. Inuit spoke of the importance of strengthening family ties through the sharing of seal meat or teaching of sealskin preparation, as well as the importance of respect when out on the land hunting. The cultural connections between selling sealskins, eating seal meat, and being out on the land were also emphasized. Values surrounding food, respect, and community demonstrate how integral sealing is to Inuit culture, however, they stand in sharp contrast to the ideologies often surrounding certification systems. Third-party certifications are referred to as the highest standard for certification as they are independent, objective, and obtained through an external Accreditation Body (Washington and Ababouch, 2011). Given these requirements, there appears to be a lack of certification infrastructure to incorporate the rich and holistic values present in the Nunavut seal market; values that perhaps should not be evaluated from outside the worldview in which they are embedded. Critics of third-party certification have argued that the basis of a science-based governance system privileges Western knowledge systems while marginalizing others (Konefal and Hatanaka, 2011). These potential incompatibilities between Indigenous value systems and Western-driven market tools are commonplace in Indigenous business development, as observed by Tikina et al., (2010) with First Nation communities involved in forest certification in Canada revealing the difficulty in translating traditional ecological knowledge into technical indicators present in certification systems. As for Maori in New Zealand, failure to fully integrate the traditional relationship between *rangatira* (elders) and *potiki* (youth), referred to as *rangatiratanga*, undermines the success of commercial entrepreneurship ventures (Tapsell and Woods, 2008). Despite the many challenges in reconciling Indigenous value systems in a Western business setting, it is important to first address such disconnections in how they may apply to the Nunavut seal market.

Despite the many disconnects between Indigenous value systems and those present in certification standards, there remains many opportunities for creating novel approaches in ensuring positive outcomes for Inuit value chain actors, while developing a system that is compatible with external business practices. For Samoan micro-enterprises in the Pacific Islands, the degree to which fa'aSamoa (Samoan way of life and culture) is incorporated into business models has been strongly linked to the success and sustainability of ventures (Cahn, 2008). Such findings consider dual-approaches to Indigenous entrepreneurship as a 'win-win' situation, where the notion of 'social embeddedness' embodies non-economic institutions and activities such as culture, societal values, and politics into more formal economic systems (Granovetter, 1985). The Ngāi Tahu tribe in New Zealand has developed a unique business model for achieving such 'social embeddedness', where the Ngāi Tahu tribe was able to incorporate values of the tribe into the development of the Anikā Kai business system (Bar and Reid, 2016). While the Ngāi Tahu tribe initially turned to certifications processes used for organic food, such mainstream approaches were resisted after being found to poorly suit the cultural contexts of the Ngāi Tahu tribe, instead adopting a more tailored certification approach through an internal accreditation system (Bar and Reid, 2016). Results such as this suggest that the path forward for the Nunavut seal market may not be a total rejection of external market tools, but rather careful consideration in how marketing strategies for Nunavut sealskins may simultaneously promote the seal market while reflecting the value of the hunt.

3.5 Conclusion

The sale of sealskins is an important economic contribution to harvesters and women who work with sealskin. Therefore, despite challenges that may arise in adopting market tools, the benefits of supporting the Nunavut seal market cannot be discounted. It is, however, not within the scope of this research project to assert the correct form of business development going forward, but rather offer insightful reflections on what it means to apply "Southern solutions to Northern problems" – a concept all too familiar to Nunavut Inuit as the territory pursues economic development and self-determination. While Western-driven market tools such as certification and traceability may count as a Southern solution for a Northern problem, it can also be argued that anti-sealing campaigns and subsequent market collapses for sealskins were never an Inuit problem, but rather a Southern problem, albeit one that Inuit had, and still have to deal with.

With an acknowledgement of the potential limitations in applying a certification or traceability system that cannot fully appreciate values in the Nunavut seal market, it should also be noted that there are a number of opportunities to support the market in a manner that can reflect the social and cultural context of the seal hunt and benefit Inuit rights to food, culture, and economy. The current model for resource management of sealing is based on *Inuit Qaujimajatuqangit* and reflected through the three key principles of sustainable harvest, complete use, and humane harvest, that guide the seal hunt in Nunavut (Government of Nunavut, n.d.c). As such, there is opportunity to work with communities to expand on these principles and determine what values of *Inuit Qaujimajatuqangit* could be incorporated into a market tool that can satisfy Inuit harvesters, processers, artisans and designers, as well as external consumers. Of utmost importance, however, is that such an approach involves these actors from the onset to ensure that actions produce tangible benefits for the seal market and Inuit.

4.0 Discussion and Synthesis: Moving forward in the Nunavut seal market

4.1 Introduction

Results from document reviews, the Fur Tracking System, and focus group discussions provide useful insights into value chain improvements and a renewed marketing strategy for the Nunavut seal market. When considering the suitability of market tools in the Nunavut seal market, there are a number of technical as well as conceptual ways of approaching this inquiry. An assessment of the current traceability system can provide the Government of Nunavut an in-depth look at current strengths as well as areas for improvement when needed, however limitations in the Government of Nunavut's role in facilitating the trade of Nunavut sealskins will also be explored. Similarly, findings from focus group discussions will be expanded on to gain a better understanding of how the sealskin market is currently meeting the needs of Inuit value chain actors. As such, results from the previous two chapters will be revisited to analyze the barriers, bottlenecks, and challenges in the sealskin value chain, as well as provide recommendations for potential ways forward

4.2 Barriers, Bottlenecks and Challenges in the Sealskin Market

Findings from document reviews, the Fur Tracking System, and focus group discussions allowed for documentation of the existing value chain for Nunavut sealskins, as well as identification of various barriers, bottlenecks, and challenges that exist as a sealskin moves from an Inuk harvester to its eventual point of sale (Figure 9).

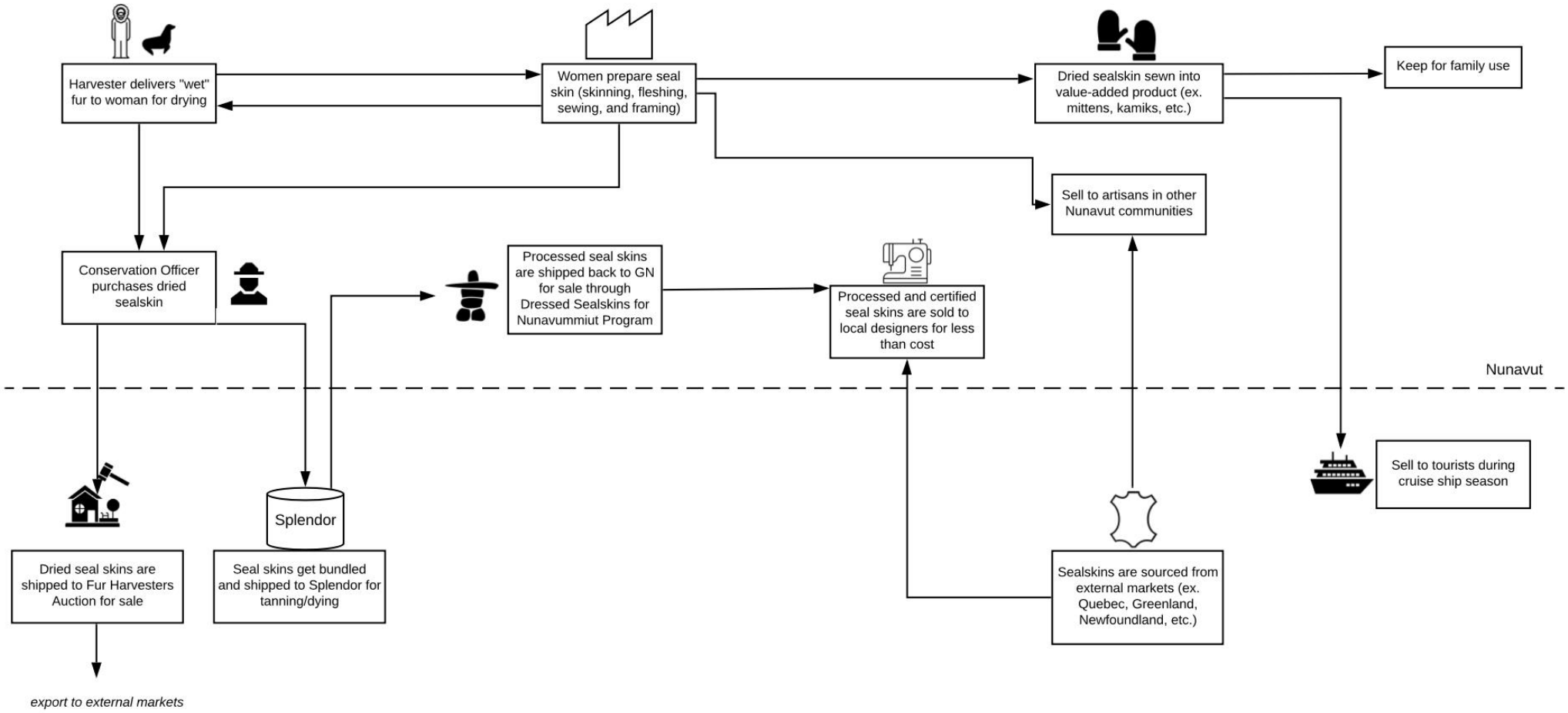

Figure 9. Current value chain of the Nunavut sealskin market. Note that some value chain activities take place in Nunavut (above the dotted line) while others take place outside of Nunavut (below the dotted line). GN stands for Government of Nunavut.

Quality and sourcing of sealskins

Through the Dressed Sealskins for Nunavummiut Program, artists and designers are able to purchase Nunavut sealskins at cost. This program aims to support the local economy and encourage artists and designers to work with sealskins that entered the Sealskin Purchase Program, and hence are 'Nunavut' sealskins presumably hunted by an Inuk harvester. However, many respondents emphasized the poor quality of professionally processed sealskins through this program. As respondents outlined, this poor quality creates a trade-off between supporting the local economy or working with poor quality sealskins, or sourcing higher quality sealskins from outside the region. While some artists prioritize working with Nunavut sealskins regardless of the quality, others end up sourcing sealskins from outside the territory, namely from Newfoundland or Greenland. The results of sourcing sealskins from outside the territory are numerous. Given that the EU Indigenous Communities Exemption enables seal products sourced through an Indigenous Nunavut hunt entry into EU markets, Inuk artists working with non-Inuit sealskins are technically not be eligible for the EU Exemption. Additionally, sealskins sourced from outside Nunavut are not tracked through the Fur Tracking System and therefore do not meet traceability requirements under the EU Exemption. Beyond the EU Exemption, external sourcing of sealskins complicates the process of expanding current traceability efforts in the Nunavut seal market, if objectives are to promote both Nunavut sealskins and Inuit artists working with and selling sealskin products.

While many respondents noted the high quality of traditionally tanned sealskins, the rise in professional tanning and dying of sealskins has emerged with the focus on global markets. This is due to sealskin products needing to last longer and retain their quality in climates outside the Arctic, where the cold climate prevents decomposition of naturally tanned sealskin products. Therefore, the resultant number of professional tanned and dyed sealskin products that comes with servicing a global market can result in trade-offs in the local economy, as many artisans and artists work with low-quality sealskins that come from these processing methods.

Distribution of EU Exemption Certification tags

As the Attestation Body under the EU Indigenous Communities Exemption, the Government of Nunavut can certify sealskin products for entry into EU markets. While a small portion of the Nunavut seal market is actually sold in EU markets, the government administers certification tags to seal products destined for such markets that have been documented through the Fur Tracking System. Given that the EU Exemption requires full traceability, and the only

sealskins that are tracked must pass through the Sealskin Purchase Program, any Nunavut sealskins that do not enter this program technically do not meet requirements under the EU Exemption. With a growing number of cruise ship tourists traveling directly to remote Nunavut communities, such as Qikiqtarjuaq, this interaction between 'uncertified' artisan sealskin products and European tourists is becoming more commonplace. Despite all respondents agreeing that cruise ship tourists, whether American or European, do not purchase sealskins products when visiting Nunavut, this lack of government administration of the EU Exemption tag prevents any potential purchases, regardless of interest. This is compounded by a lack of public awareness of the EU Exemption by respondents, and perhaps Europeans tourists themselves. A Government of Nunavut-sponsored marketing campaign for Inuk-hunted and Government-certified sealskins with cruise ship lines could be an opportunity to take advantage of a new customer base.

Existing branding tags

Discussions with artists and retailers revealed limitations of existing branding tags on Nunavut arts and craft products, as well as opportunities for improving such marketing and branding schemes for Nunavut sealskin products. The Igloo Tag Trademark was created in 1958 and has become an internationally recognized symbol for authentic Inuit art (Inuit Art Foundation, n.d.). Similarly, the Authentic Nunavut logo was created as a brand for the authenticity of Nunavut arts and craft products (Government of Nunavut, n.d.a). While the Igloo Tag is not directly used for sealskin products, both tags are commonplace in many retail outlets across the territory, particularly in Iqaluit, and are therefore exposed to a large number of tourists. However, discussions with artisans and retailers identified some limitations in these existing branding tags. A retailer selling sealskin products outlined that there is no enforcement or tracking system to maintain product authenticity with the Igloo Tag or Authentic Nunavut, therefore diminishing the value and credibility of these branding strategies. While the Fisheries and Sealing Division has expended substantial resources into the creation of the Nature's Edge Program, such a program emphasizes building a brand for Nunavut sealskins without first expanding the current market. While the Nature's Edge logo is not currently used on value-added products, results from the focus group discussions suggest there is a risk in adding more branding tags to an already saturated marketplace with numerous, sometimes confusing labelling systems.

Related to branding strategies and building on the notion of traceability, artisans were optimistic about furthering a Chain of Custody for Nunavut sealskin products. While the

development of a consumer-facing traceability system was thought to only attract the few, most conscious consumers, artisans were in favour of investments in educational materials to educate consumers on where Nunavut sealskins come from. An idea receiving increasing attention in seafood traceability programs is the concept of 'stored fish' which emphasizes the story of a sea(food) product's journey from water to plate. This concept can require fewer resources than a consumer-facing traceability system yet accomplish a similar goal in encouraging consumers to preferentially purchase the "fish that has a tale" (Future of Fish, 2017). Encouraging perspectives on building a Chain of Custody for Nunavut sealskins presents an opportunity for moving towards 'storied seal' that can tell the story of an Inuk harvester and traditional Inuit practices in preparing and working with sealskin products.

Public awareness of government programs

A lack of public awareness of government programs was a common theme among all focus group discussions. Not a single respondent in the Qikiqtarjuaq focus group discussions was aware of existing Government of Nunavut programs, such as the Nature's Edge Program or the Dressed Sealskins for Nunavummiut Program. This may largely be due to the remoteness of smaller Nunavut communities, with Iqaluit being the central hub for Government of Nunavut employees. Additionally, there are no retail shops in Qikiqtarjuaq, as is likely the case with many other Nunavut communities, reducing the incidences that artists and artisans outside of Iqaluit may be exposed to specific branding programs developed by the Fisheries and Sealing Division. With the increasing importance of internet sales, however, these branding and marketing programs may become increasingly important for the sale of sealskins, particularly if artisans are selling their products outside the territory. Regardless of where individuals are selling their products, current inconsistencies in the branding of Nunavut sealskins undermines their purpose and limits expansion of the current market for Nunavut sealskin products.

Influence of government

Through the Sealskin Purchase Program, a large portion of the value chain falls under the influence of government, where movements are documented and tracked through the Fur Tracking System (Figure 10).

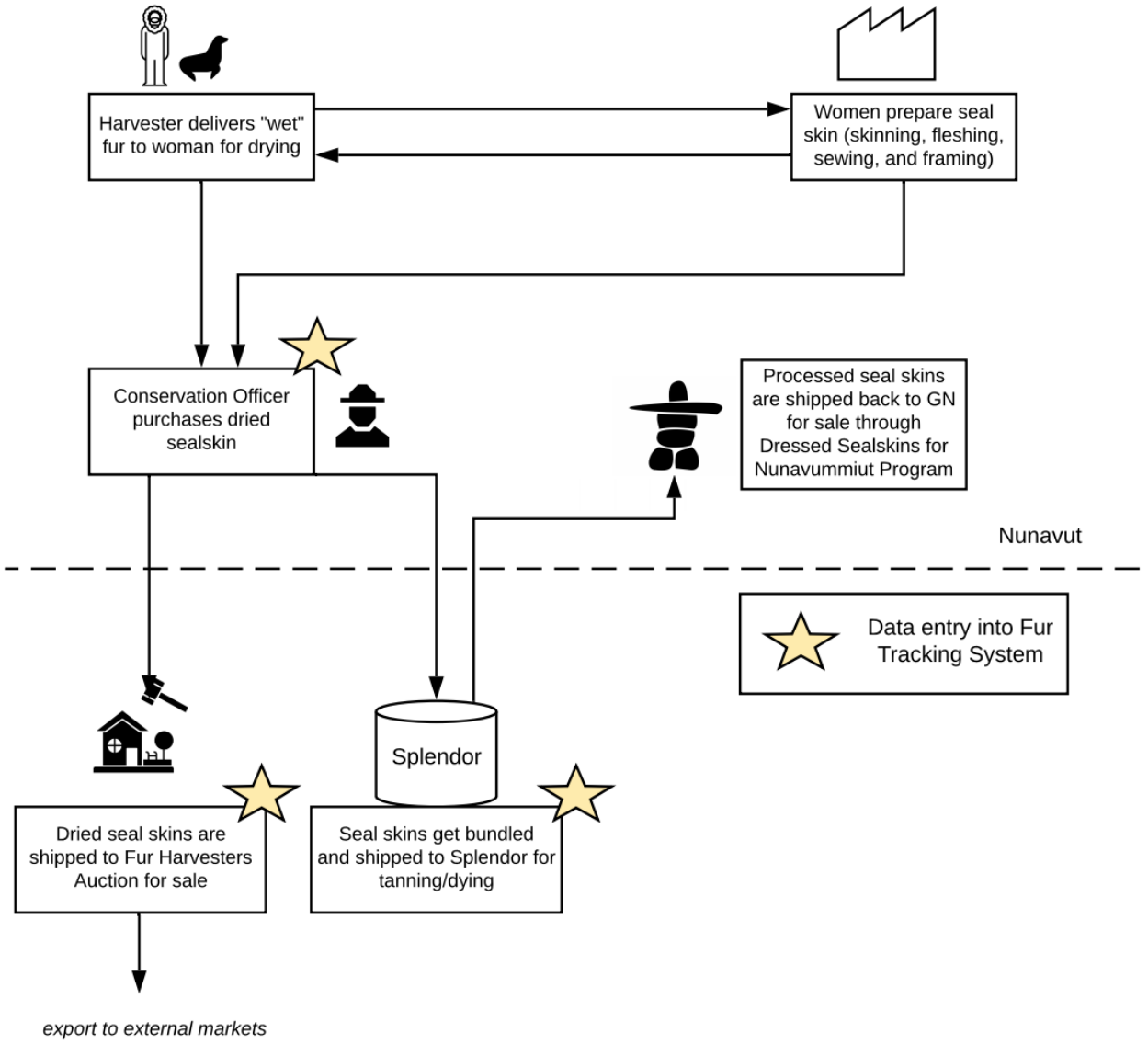

Figure 10. Current value chain for Nunavut sealskins that falls under the influence of the Government of Nunavut (GN), where movements are documented and tracking through the Fur Tracking System. Yellow star indicates a data entry point into the Fur Tracking System.

While the Fur Tracking System is able to track sealskins as they move from an Inuk harvester to professional tanning and dying in Southern Canada, many of the identified barriers, bottlenecks, and challenges identified through this research fall outside the influence of government. It is important to note that when market tools such as certification and traceability are administered and funded by government agencies, this can create limitations in resolving some of these barriers, bottlenecks, and challenges when they fall outside the scope of government influence.

4.3 Recommendations for a renewed marketing strategy

Results from this research demonstrate that sealing remains integral to Inuit and offers not only economic return, but has an important cultural identity in terms of food security and passing down *Inuit Qaujimajatuqangit* through generations. As such, it is important to develop strategies that will support the seal market and allow Inuit to continue this important way of life. Previous research in Nunavut has outlined that the legacies of colonialism have made Inuit "lost between two worlds, the traditional Inuit world and the modern non-Inuit world" (Dana et al., 2005). There are few cases more telling of this than with the seal hunt, where Inuit continue an important, land-based activity while participating in the global market. This reliance on the global market has made Inuit vulnerable to external forces, as seen through the impacts of anti-sealing campaigns. As current efforts work to reconcile this disconnect and enable Inuit to walk in two worlds, there is a need to appreciate the strengthens and limitations that result from being subject to external market forces.

With consideration of the need to support the seal market, along with the limitations that come with servicing a global market, this research has sought to identity a path forward that can meet the needs of Inuit harvesters, artisans, and designers, as well as external market forces that drive the trade of sealskin products. Through an assessment of the current traceability system, focus group discussions with value chain actors, and analysis of the barriers, bottlenecks, and challenges in the seal market, a number of recommendations are offered for the development of a renewed marketing strategy for Nunavut sealskins.

Set clear priorities for focus of seal market

With an acknowledgement that the Nunavut seal market participates in the commercial trade of sealskins, setting a clear priority for the focus of seal marketing efforts can better direct resources and programs to meet set goals and objectives. The most recent Sealing Strategy for Nunavut outlined the need to focus on local markets before looking to other markets (Government of Nunavut, 2010) which stands in sharp contrast to the focus of CMAPS in developing tracking systems for Inuit seal products entering EU markets (DFO, 2017). It is not to say that both markets cannot be promoted, however, clarifying the focus of marketing efforts can improve efficiencies in current efforts and allow the Fisheries and Sealing Division to more effectively evaluate key goals and objectives.

While external market forces drive the trade of sealskins that occurs through the Sealskin Purchase Program, results from focus group discussions reported that the majority of Nunavut sealskins are sold within the territory. With a strong local economy, it is reasonable that government efforts be directed towards supporting local entrepreneurial activities. In addition, this research has demonstrated the potential to build southern Canadian markets for Inuit products, with some respondents describing favourable returns when selling sealskin products in southern markets. However, increasing tourism in the Arctic will continue to bring more tourists into communities where local designers will be directly connected with global markets. At present, focus group respondents agreed that cruise ship tourists are not purchasing sealskin products, therefore creating an opportunity for marketing and branding efforts to improve tourist demands for such products in a manner that both supports a global market while continuing to build the local economy.

Increased awareness and delivery of government programs

The Government of Nunavut's programs related to the seal market have long focused on educating the public about how sealing is carried out in Nunavut. While such measures are important for resolving misinformation created from anti-sealing campaigns, there is a significant lack of public awareness of government programs across Nunavut. In Qikiqtarjuaq, not a single respondent was aware of the Fisheries and Sealing Division's seal related programs, including the Nature's Edge and the Dressed Sealskins for Nunavummiut Program. Low awareness of Government of Nunavut programs has been previously identified during a 2005 review of Harvest Support Programs (Aarluk Consulting Incorporated, 2005). While the expansiveness and distances between communities across the territory creates difficulties in regular consultation and communication of such programs, this lack of awareness undermines the most fundamental goals of these programs in supporting Inuit that participate in the seal market. Given that much of the entrepreneurship in Nunavut exists in the form of selling arts and crafts such as sculptures, rings and clothing (Mason et al., 2008), improving awareness and delivery of government programs in remote communities can aid entrepreneurial activity by informing individuals on how to market and sell their products, something of importance as identified by focus group respondents.

Despite the costs of increasing program awareness and delivery outside of Iqaluit, such efforts may actually generate a number of benefits can support the seal market more broadly. By engaging Inuit harvesters, artisans, and designers more effectively, the Fisheries and Sealing

Division can incorporate more actors into the marketing of Nunavut sealskins and actually resolve some of the barriers, bottlenecks, and challenges that currently exist outside the influence of government. For instance, engaging local artisans and designers in Nunavut communities in the distribution of EU certification tags could not only permit the sale of sealskin products to European cruise ship tourists, but could expand the existing traceability system to verify provenance and document the sale of sealskin products from artisans to cruise ship tourists. This largely depends on the willingness of cruise ship tourists to purchase sealskin products, however, increasing awareness and delivery of government programs across the territory is an important first step to resolving current weaknesses in the value chain. By working with harvesters and artisans and taking on their priorities for the future of their activities and products, the Government of Nunavut could simultaneously support Inuit entrepreneurism.

Frame traceability as the linkage between branding and marketing

Efforts to support the seal market involve a balance of branding sealskin products as well as finding markets to sell these products. The Fisheries and Sealing Division has put a lot of effort into developing a brand for Nunavut sealskins, largely through the Nature's Edge Program. While the current traceability system through the Fur Tracking System enables market access to external markets, a renewed conceptualization of this traceability system can strike a balance on the branding and marketing of Nunavut sealskin products. The way the current system is set up, it largely complies with many aspects of the 'Five Core Functions of Seafood Traceability'. But while the current traceability system is not consumer-facing, and rather functions as an internal accreditation system for the trade of sealskins, it is possible to transform this system into a Chain of Custody for Nunavut sealskins, as encouraged by focus group respondents. The development of a Chain of Custody for Nunavut sealskins could improve public awareness of Nunavut sealskins by communicating to customers the community of origin as well as the name of the harvester and individual who prepared the sealskin. Such measures could improve the brand for Nunavut sealskins, verify provenance, as well as reduce the need to add another branding tag in an already saturated market, all concepts identified as important by focus group respondents. This movement to 'storied seal' would mirror what is occurring in fish and seafood more broadly, to share with consumers the origin stories of what they are eating.

Address quality and provenance trade-offs

Although unanticipated in the initial objectives of this research project, challenges regarding the poor quality of Nunavut sealskins were a common theme among focus group respondents. As such, it is important that the Fisheries and Sealing Division address this issue and its connections to the sourcing of sealskins from outside the territory. In some cases, Nunavummiut designers and retailers working with or selling sealskin products may choose to purchase sealskins from outside the territory, however it is important that this decision not stem from the poor quality of Nunavut sealskins that prevents individuals from supporting the local economy, as is the present case. While respondents suggested that the process of professional tanning and dying diminishes the quality of sealskins, it is unclear where in the value chain this reduction in quality actually occurs. It is likely that professional processing changes the nature of sealskins compared to traditional tanning methods, however it is also possible that the lowest quality sealskins getting sold to the Conservation Officer, as outlined by respondents, may also contribute to the low quality of sealskins that are distributed through the Sealskin Purchase Program.

While the scope of this study cannot determine how this issue can be solved, an analysis into current tanning and dying processes may produce secondary benefits for the value chain. According to the Fur Tracking System, the number and origin of sealskins that get shipped to Splendor for processing is inconsistent with what would be expected according to the Division's operations. While the reasons for these shipments may exist outside the scope of this research, such discrepancies can create inefficiencies and complications from a traceability perspective. Therefore, in the event that professional processing operations are reassessed in an effort to improve quality, secondary benefits may be produced through better organization and efficiencies in the Sealskin Purchase Program.

4.4 Conclusions

Overall, this study investigated the suitability of certification and traceability in the Nunavut seal market and if, or how, these market tools can support Inuit rights to food, culture, and economic opportunities. In order to investigate this, the existing traceability system was assessed in order to understand current areas of strength and opportunity. In addition, through focus group discussions, this research aimed to understand the shared perspectives of value chain actors on measures to support the seal market. These collective findings allowed for the documentation of the existing value chain for Nunavut sealskins, as well as identification of

various barriers, bottlenecks, and challenges that occur as a sealskin moves from a harvester to its eventual point of sale. It was determined that the current traceability system for Nunavut sealskins as operated through the Sealskin Purchase Program partially satisfies Future of Fish's 'Five Core Functions of Seafood Traceability', however a number of practical and more systematic opportunities for improvement remain, particularly with respect to a greater involvement of all value chain actors in these efforts. Through focus group discussions, it became evident there are difficulties in capturing the rich value of seal hunting into a certification standard or traceability system, yet the economic importance of this market creates a need to reconcile retaining cultural value in an economy so connected to commercial markets. Finally, an outline of various barriers, bottlenecks, and challenges has demonstrated that resolving such trade-offs may improve the suitability of market tools in supporting the Nunavut seal market.

This research project only examined the opportunities for certification and traceability to support the market for sealskins, as this has been the most prominent connection to external markets. However, there are a number of other seal products for which other markets can be explored, including seal meat or seal oil. In addition, this research project focused on the role of certifications and traceability from a supply perspective, however, future research could examine consumer perspectives and awareness of such market tools in order to understand the potential return on investment these tools may achieve. Above all, what this research has confirmed is that while market tools may support the seal market, certifications and traceability are not a panacea, but rather one tool in a complex 'market toolbox' that may be used to support the Nunavut seal hunt.

The aforementioned recommendations are specific to this project, however, recommendations for future considerations and research regarding the suitability of market tools, such as certifications and traceability on Indigenous products, have been formulated below. As this research has outlined, certification systems are normally based off of Western ontologies of sustainability and resource management (Gulbrandsen, 2009). As a result, attempts to develop these certification systems for Indigenous products risk failing to acknowledge the social and cultural contexts of local communities. This approach risks undermining the rights of Indigenous peoples as well as a potential 'decoupling' – that is, the resistance to incorporate certification practices into daily activities (Aravind and Christmann, 2011). As certification systems continue to proliferate in the global economy, there is fruitful opportunity to adapt standards towards social

and cultural contexts in an effort to increase positive outcomes for both local stakeholders and rightsholders as well as to satisfy market demands. For Indigenous products, such systems could be built off traditional value systems, as in the case with the Ngāi Tahu tribe in New Zealand setting up an internal accreditation system based off values and principles of the tribe (Bar and Reid, 2016).

While this research briefly touched on the high technical costs of implementing full-chain traceability, these constraints have been previously identified in small scale fisheries across the Global South (Eklof, 2008; Ponte, 2008). Despite geographic differences, the realities in both of these contexts are quite different than those of large, commercial fisheries, where sophisticated technologies are in place to record data at all nodes along the value chain (Duggan and Kochen, 2016). As such, the development of lower technology traceability models that can address the limited data and technical capacity in small-scale settings, as in the Nunavut seal market, may reduce traceability barriers and allow a broader spectrum of activities to verify provenance.

In the discussion of certifications and traceability in the Nunavut seal market, this research has shown that there are limitations in servicing a global market. Some limitations come from the influence of government, some are trade-offs in the local economy, and others are in retaining value in a certification or traceability system. It is possible that much of these limitations arise from the ontological disconnect between Inuit and more objective, Western-driven market tools, thereby creating the need to reconcile retaining cultural value in an economy so vulnerable to external market forces. While some practical recommendations have emerged, this research has demonstrated that when talking about market tools on Indigenous products, it's not always about RFID tags, block chains, or consumer facing traceability systems, but rather about understanding these conceptualizations on how to develop marketing strategies that acknowledge and appreciate the value of what they seek to represent. The policies implemented therefore, must be based on understanding and acknowledging the rich value of the Nunavut seal market and use this to better inform consumers of the provenance and pride of supporting this market. Certifications and traceability may have a future in the seal market, but are contingent on the ability to maintain the authentic nature of Nunavut sealing without assimilating the market in a manner that overlooks inherent Inuit rights.

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Appendix

A. Focus Group Script Guide

Artist and retailer focus group questions

A. Role in seal market/production preferences

a. What kind of products do you make with sealskins? How did you learn to work with sealskin? Can you describe the amount of sealskin needed to produce your finished product?
b. Do you prefer tanned and dyed skins or natural dried skins? Do you have a preference for ringed or harp seals? Is there a difference in quality between the species? Or does this preference depend on the product you're making?

B. Challenges and opportunities in working with, selling, or sourcing sealskins

a. Where do you source your sealskins from?
b. Do you have trouble sourcing enough sealskins to keep up with demand for your products? What do you do in that case?
c. Are most of the sealskins you work with purchased through the Dressed Sealskins for Nunavummiut Program? Does this program meet your needs? Can you estimate what proportion (ex. If most, how much? 75%? 90%?)
d. Is there a difference in quality between sources? Is that a factor in where you choose to source from? What factors determine quality?
a. Do you source sealskins outside of Nunavut? Is this more expensive than purchasing through the Dressed Sealskin for Nunavummiut Program? What factors influence this decision?

C. Thoughts and perspectives on working with sealskin as a sustainable livelihood

a. How does working with sealskin contribute towards your livelihood (identity, time spent, income)?
b. How do you see your work becoming an artisanal industry? (i.e. scaling up production or entry into other markets)

D. Thoughts and perspectives on seal marketing and branding

a. Where do you want to sell your products? Are you interested in expanding your products to international markets (i.e. Asia, the Middle East, etc.?)
b. Where do you see the best return on your time? High-end exclusive markets? Or on a local consignment basis?
c. Do you think the Nature's Edge brand is helpful for improving market access? Do you think it would be beneficial to expand this brand to finished value-added sealskin products?
d. Do you want a brand based on your identity (i.e. Nunavut, Inuit, artisan) or marketing? (i.e. enticing people to buy)
e. In the case that a certification was applied to Nunavut sealing, who do you feel should be responsible for assessment? (i.e. third-party certification versus more of a Nunavummiut/Inuit-controlled process)
    i. Pass around hand-out on certifications and provide some background on certifications, third-party, etc.

E. Perceived connections between the seal market, Inuit rights, and market tools

a. In your words, how do you think that sealing in Nunavut contributes towards the realization of Inuit rights to food, culture, and economic opportunities?
b. What elements of the seal harvest do you think would need to be contained in any sort of certification process?
c. Do you believe that traceability and certifications can support the seal harvest in delivering these rights?
d. What are some other strategies you believe could support Nunavut sealing and Inuit rights?

Harvester focus group questions

A. Role in seal market

a. How many seals do you aim to hunt when you go out? Does all the meat go towards your family and community?
b. Do you keep track of how many seals you hunt or is this more just a part of your regular routine?

B. Benefits and challenges of Sealskin Purchase Program

a. Are revenues from the Sealskin Purchase Program enough to augment hunting costs? Is there any income leftover to go towards household expenses?
b. How long does it typically take from the time you harvest to when you sell the sealskin to the Conservation Officer? Is this turn-around time too long to augment hunting costs?
c. Do you bring all sealskins you hunt to the Conservation Officer? Or do you keep some for domestic use? If so, how many?

C. Thoughts and perspectives on sealing as a sustainable livelihood

a. How does sealing contribute towards your livelihood? Does sealing contribute towards less of your livelihood than in the past?
b. How have various international bans affected your relationship with the seal hunt?

D. Thoughts and perspectives on seal marketing and branding

a. Do you feel that the Government should be working to improve marketing and branding for Nunavut seal products?
b. How do you feel about the role of traceability and certifications in facilitating improved marketing and branding strategies?
c. Are you interested in learning more about how certifications could be applied to the sealing sector?
    i. Pass around hand-out on certifications and provide some background on certifications, third-party, etc.

E. Perceived connections between sealing, Inuit rights, and market tools

a. In your words, how do you think that sealing in Nunavut contributes towards the realization of Inuit rights to food, culture, and economic opportunities?
b. What elements of the seal harvest do you think would need to be contained in any sort of certification process?
c. Do you believe that traceability and certifications can support the seal harvest in delivering these rights?
d. What are some other strategies you believe could support Nunavut sealing and Inuit rights?

Processer and artisan focus group questions

B. Role in seal market

a. Can you describe the process of preparing a sealskin? How long does this typically take?
b. Do you keep track of how many sealskins you prepare or is this just more a part of your regular routine?
c. What tools/equipment do you require to prepare sealskins? Do you have difficulty in gaining access to these materials?
d. What factors are important in determining the quality of a sealskin? Is the quality of a sealskin an important consideration for you while you prepare it?
e. Is there a limit on how many sealskins you can prepare? What factors contribute towards this limit?

C. Benefits and challenges of the Sealskin Purchase Program

a. Does the income generated from selling sealskin to the CO contribute towards household income? Or does this money go towards augmenting hunting costs?
b. Do all of the sealskins you prepare get sold to the CO? Or do you keep some for domestic use? If so, how many?

D. Thoughts and perspectives on sealing as a sustainable livelihood

a. How does sealing contribute towards your livelihood? Does sealing contribute towards less of your livelihood than in the past?
b. How have various international bans affected your relationship with the seal harvest?
c. Is there a trade-off in the quality of sealskins produced by youth? What are the difficulties in getting youth involved in preparing sealskins?

E. Thoughts and perspectives on seal marketing and branding

d. Do you feel that the Government should be working to improve marketing and branding for Nunavut seal products?
e. How do you feel about the role of traceability and certifications in facilitating improved marketing and branding strategies?
f. Are you interested in learning more about how certifications could be applied to the sealing sector?
    i. Pass around hand-out on certifications and provide some background on certifications, third-party, etc.
g. Do you think there is potential to explore markets for other seal products (i.e. seal meat, seal oil, etc.)?
h. Do you find current regulatory systems cumbersome in terms of paperwork and documentation of hunting practices?

F. Perceived connections between sealing, Inuit rights, and market tools

a. In your words, how do you think that sealing in Nunavut contributes towards the realization of Inuit rights to food, culture, and economic opportunities?
b. What elements of the seal harvest do you think would need to be contained in any sort of certification process?
c. Do you believe that traceability and certifications can support the seal harvest in delivering these rights?
d. What are some other strategies you believe could support Nunavut sealing and Inuit rights

B. Dalhousie Ethics Approval

DALHOUSIE UNIVERSITY
Research Services

Social Sciences & Humanities Research Ethics Board Letter of Approval April 29, 2019
Sara Vanderkaden
Science\Marine Affairs Program (Science)

Dear Sara,

REB #: 2019-4737
Project Title: The role of eco-certifications and traceability in supporting the Inuit seal harvest to deliver Inuit rights to food, culture, and economic opportunities

Effective Date: April 29, 2019
Expiry Date: April 29, 2020

The Social Sciences & Humanities Research Ethics Board has reviewed your application for research involving humans and found the proposed research to be in accordance with the Tri-Council Policy Statement on *Ethical Conduct for Research Involving Humans.* This approval will be in effect for 12 months as indicated above. This approval is subject to the conditions listed below which constitute your on-going responsibilities with respect to the ethical conduct of this research.

Sincerely,

Dr. Karen Beazley, Chair
Romeo #: 1029225
Award Agency: Nunavut Research Institute
Award number: N/A

Post REB Approval: On-going Responsibilities of Researchers
After receiving ethical approval for the conduct of research involving humans, there are several ongoing responsibilities that researchers must meet to remain in compliance with University and Tri-Council policies.

1. Additional Research Ethics approval
Prior to conducting any research, researchers must ensure that all required research ethics approvals are secured (in addition to this one). This includes, but is not limited to, securing appropriate research ethics approvals from: other institutions with whom the PI is affiliated; the research institutions of research team members; the institution at which participants may be recruited or from which data may be collected; organizations or groups (e.g. school boards, Aboriginal communities, correctional services, long-term care facilities, service agencies and community groups) and from any other responsible review

C. Nunavut Research Institute Approval

Nunavummi Qaujisaqtulirijikkut / Nunavut Research Institute
Box 1720, Iqaluit, NU X0A 0H0 phone:(867) 979-7279 fax: (867) 979-7109 e-mail:
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SCIENTIFIC RESEARCH LICENSE

LICENSE # 01 026 19N-A

ISSUED TO: Sara Vanderkaden
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312 1271 Church Street
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TEAM MEMBERS: C. Milley, M. Bailey

AFFILIATION: Dalhousie University

TITLE: The Role of Certifications and Traceability in Supporting the Inuit Seal Harvest to Deliver Inuit Rights to Food, Culture, and Economic Opportunities

OBJECTIVES OF RESEARCH:
Seal harvesting is at the centre of Inuit rights to food, culture, and economic opportunities. However, anti-sealing campaigns have collapsed the market for sealskins and imposed hardships on communities across Inuit Nunangat. The Canadian Government is working alongside the Government of Nunavut to create certification and tracking systems for Inuit seal products in European markets. However, credence qualities of the Inuit seal industry must be fully understood for certification standards to meet the needs of Inuit harvesters, processers, and crafters, as well as European regulators. An understanding of these credence qualities is also important for traceability systems to meet its requirements under the Nunavut exemption from the 2009 EU ban. It is also important to consider how Inuit perceive the role of certification standards in supporting their rights.

TERMS & CONDITIONS:

DATA COLLECTION IN NU:
DATES: July 25, 2019-August 30, 2019
LOCATION: Iqaluit, Qikiqtarjuaq

Scientific Research License 01 026 19N-A expires on December 31, 2019
Issued at Iqaluit, NU on July 25, 2019

Mary Ellen Thomas
Science Advisor