



ACCESS
Arctic Climate Change
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Project no. 265863

ACCESS
Arctic Climate Change, Economy and Society

Instrument: Collaborative Project

Thematic Priority: Ocean.2010-1 "Quantification of climate change impacts on economic sectors in the Arctic"

D5.51 – Scientific and ethical evaluation of the impact of indigenous seal hunting

Due date of deliverable: **31/03/2014**

Actual submission date: **11/06/2015**

Start date of project: **March 1st, 2011**

Duration: **48 months**

Organisation name of lead contractor for this deliverable: **LCP**

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	



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Work Package 5

Deliverable 5.51

SCIENTIFIC AND ETHICAL EVALUATION OF THE IMPACTS OF INDIGENOUS SEAL HUNTING

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TABLE OF CONTENTS

Scientific and Ethical Evaluation of the Impacts of Indigenous Seal Hunting	1
Table of contents.....	2
Introduction	4
I. Seal Hunting	5
I.1. Arctic seal populations	6
<i>I.1.1. Arctic Sea Definitions Applicable to Seals</i>	6
.....	7
<i>I.1.2 Arctic Seal Species</i>	7
I.2 Seal catches in the Arctic	8
I.3. Aboriginal seal hunting methods	11
<i>I.3.1. Current Inuit seal hunting Methods</i>	11
<i>I.3.2. problems of struck and lost</i>	13
I.4. Conservation and Environmental Agreements for Arctic Seals	13
<i>I.4.1. Arctic Seals and the IUCN Red List of Threatened Species</i>	14
<i>I.4.2. Multilateral Environmental Agreements for Arctic biodiversity</i>	16
II. Sustainability of Indigenous seal hunting	19
II.1. Sustainable use of living resources	19
II.2. Seal population trends and sustainability of sealing	22
<i>II.2.1. Seal population trends</i>	22
<i>II.2.2. Sustainability/evaluation of harvest rates</i>	24
II.3. Seal products - Indigenous use trends	26
II.4. Uncertainty about Climate Change impacts	27
<i>II.4.1. shift to a seasonal “Antarctic-like” sea-ice in the Arctic</i>	27
<i>II.4.2. Climate Change IMPACTS on Arctic marine ecosystems</i>	28
<i>II.4.3. Climate Change impacts on Arctic Seals</i>	28
III. Indigenous seal hunting and Animal Welfare legislations	30
III.1 What does “animal welfare” mean?	30
III.2 International context	31
<i>III.2.1 The World organization for Animal Health</i>	31
<i>III.2.2 Universal Declaration on Animal Welfare</i>	31
<i>III.2.3 Animal Welfare and NGOs</i>	32
III.3 EU agreements	32
IV. EU seal ban dispute	33
IV.1. Historic context	33
IV.2. From limited to generalized seal import ban	33
IV.3. Indigenous Peoples’ perspective	34
IV.4. EU seal ban has been validated	38
IV.5. Political consequences	40
V. Scientific and Ethic evaluation of Indigenous seal hunting	41

- V.1. **Scientific evaluation of Indigenous seal hunting**41
- V.2 **Ethical evaluation of Indigenous seal hunting**42
 - V.2.1. *Indigenous seal hunting and Indigenous rights*42
 - V.2.2. *Indigenous seal killing methods and animal welfare*.....43
 - V.2.3. *Balancing Animal welfare and Indigenous Peoples’ rights*44

INTRODUCTION

Assessing the impacts of indigenous seal hunting activity is a complex task. This assessment is a cross-sectoral study involving several fields and approaches. It highlights the scientific recommendations from a variety of relevant ecology and climatology authorities including : the International Council for the Exploration of the Sea (ICES) ; United Nations Food and Agriculture Organisation (FAO) ; regional/national regulations on the management and harvest of seals including the North Atlantic Fisheries Organization (NAFO) ; Working Group on Harp and Hooded Seals (WGHARP) ; Arctic relevant multilateral environment agreements on biodiversity including the Convention for Biodiversity (CBD) ; International Convention for the Regulation of Whaling (ICRW) and the United Nations Framework Convention on Climate Change (UNFCCC).

Seal hunting is not only a matter of sustainable management of marine resources: it is also an issue of animal protection and welfare policies which have experienced significant changes at international, regional and national levels in recent years. Since December 2009, the entry into force of the Lisbon Treaty provides a constitutional basis for animal welfare in the European Union (EU) : “The Union and the members, since animals are sentient beings, pay full regard to the requirements of animal welfare, while respecting the legislative or administrative provisions and customs of Member States relating in particular to religious rites, cultural traditions and regional heritage”.

In countries around the world, animal welfare concerns garner more attention as consumers recognize the links between animal health and animal welfare, and animal welfare and human well-being. The challenge is to increase animal food production while simultaneously ensuring good animal welfare and protecting food security.

The earliest animal welfare legislation was developed in countries where industrialized production is the norm. Therefore, these legislative instruments tend to focus on farm animals housed, transported and slaughtered. However, animal welfare legislation is not limited to industrialized production.¹ It progressively included other types of production such as subsistence farming, and more recently, wild animals.

In Europe, the main focus of the discussion related to seal management has been on the animal welfare aspects of seal hunting practices. In 1983, the European Union placed a ban on sealskins from particular species of seal pups. In 2009, EU members banned all imports of seal products with the exception of products from traditional hunts by Inuit peoples living in Alaska, Canada, Greenland and Russia, which may only be marketed on a not-for-profit basis.²

This study deals with the specific case of the EU import ban of seal products (ICTSD, 2009) based on welfare concerns and the point of whether the indigenous seal hunting practices constitute a justified exception under Article III-121 of the Madrid Treaty (respecting the customs of Member States relating to cultural traditions) and under Article XX (a) of the General Agreement on Tariffs and Trade (GATT) (measures necessary to protect public morals).

The ban has put the EU application to gain permanent observer status with the Arctic Council at stake. The day before the Council’s Ministerial meeting in April 2009, the Canadian Foreign Affairs Minister stated: “Canada doesn’t feel that the European Union, at this stage, has the required sensitivity to be able to acknowledge the Arctic Council, as well as its membership, and so therefore I’m opposed to it.”³

Greenland's Prime Minister and Inuit leaders criticized the ban for being incompatible with international agreements and human rights.⁴ The North Atlantic Marine Mammal Commission (NAMMCO) stated that the EU import ban on seal products "raises serious concerns for the future of international co-operation on responsible management and the sustainable use of renewable natural resources in general".⁵ Both Norway and Canada requested World Trade Organization (WTO) dispute settlement consultations following the EU's decision to ban trade in seal products.⁶

As summarized in Recommendation 1776 (2006) on Seal Hunting by the Parliamentary Assembly (PACE), "the international controversy surrounding seal hunting is first and foremost a political debate, bringing different and sometimes conflicting values, objectives and attitudes into play and that public opinion is particularly sensitive to this matter".

Animal welfare often stimulates strong emotions and it is important that, while addressing ethical aspects, developments in the field of animal welfare are based on a firm scientific background.⁷ The authors understand that along with the scientific and ethical aspects of the evaluation of the impacts of indigenous seal hunting, our study also must address the issues in an inter-cultural perspective.

I. SEAL HUNTING

Seal hunting occurs in various parts of the world for commercial, subsistence and cultural reasons. Seal hunting is also carried out in some areas for the sustainable management of marine resources. At least fifteen seal species are currently hunted, but the majority belong to four true seal species and one fur seal species:

- Harp seal (*Pagophilus groenlandicus*)
- Ringed seal (*Pusa hispida*)
- Grey seal (*Halichoerus grypus*)
- Hooded seal (*Cystophora cristata*)
- Cape fur seal (*Arctocephalus pusillus*).

The seal populations that are hunted for commercial purposes – an estimated 15 million animals – are generally not endangered. Globally, some 900 000 seals are hunted each year, with the commercial hunt in Canada, Greenland and Namibia accounting for about 60% of the annual seal kill. Hunting for commercial purposes also takes place in Russia and Norway. Around one-third of the world trade in seal products either passes through or ends up in the EU market.

Seal hunts around the world are governed by different rules and regulations. In some countries comprehensive systems are in place, while in others the seal hunt is regulated to a lesser degree. Within the EU, certain methods and means of capture and killing are prohibited in areas protected under EU nature law (Habitats Directive).⁸

I .1. ARCTIC SEAL POPULATIONS

I.1.1. ARCTIC SEA DEFINITIONS APPLICABLE TO SEALS

As seals are marine mammals which have to breathe air, they need regular access to the atmosphere. Because they are not as sea-adapted as cetaceans, seals also need platforms for resting (haul-out), to perform their annual fur moulting and to nurse the pups during their first weeks as they store enough fat to be insulated in cold water. The sea-ice is used by seals for these physiological functions. The presence of sea-ice is a limiting factor for seals distribution in the Arctic. Moreover, seasonal distribution, thickness and fracturation of sea-ice, especially during the nursing pup season in spring, are crucial for seal survival.

Sea-ice presence must be taken in account to build an accurate Arctic Seas biological definition. In that regard, this work defines the Arctic Seas as all Arctic and sub-Arctic waters where sea-ice is present at least during the spring months from February to May-June.

Atlantic Arctic Basin	Pacific Arctic Basin	Central Arctic Ocean
Hudson Bay, Foxe Basin, Ungava Bay (FAO Area 18)	Laptev Sea, East Siberian Sea (FAO Area 18)	(FAO Area 18)
Davis Strait (FAO Area 21)	Chukchi Sea (FAO Area 18)	
Baffin Bay (FAO Area 21)	Bering Sea (FAO Area 61 + 67)	
Greenland Sea (FAO Area 27)	Okhotsk Sea (FAO Area 61)	
White Sea (FAO Area 27)	Beaufort Sea (FAO Area 18)	
Kara Sea (FAO Area 18)	Bays and straits of western Canadian Arctic Archipelago (FAO Area 18)	

Table 1: Arctic Sea areas defined by the FAO.

According to this biological definition, Arctic Seas as used in this study correspond to the United Nations Food and Agricultural Organization (FAO) Area 18 (Arctic Sea) plus the northern part of Areas 21 (Northwest Atlantic, except subareas 3 to 6), 27 (Northeast Atlantic, except South Barents and Norwegian Seas), 61 (Northwest Pacific) for the western Bering and Okhotsk Seas, and 67 (Northeast Pacific) for the Eastern Bering Sea (Table 1). This study's biological definition is concordant with the regions used by the Conservation of Arctic Flora and Fauna (CAFF) to enumerate Arctic marine mammal species in the Arctic Biodiversity Assessment (Figure 1).



Figure 1: Arctic Seas as defined by the Conservation of Arctic Flora and Fauna (CAFF) report Arctic Biodiversity Assessment (2013).

I.1.2 ARCTIC SEAL SPECIES

Eight seal species can be observed in Arctic waters, but two have their main distribution outside Arctic waters in sub-Arctic and temperate waters and are less sea-ice dependent than true Arctic seals.

Considering the eight seal species⁹, plus the walrus, occurring in the Arctic Seas, the total Arctic seal population is about 13.2- 14.2 million individuals, with 60% represented by a single species — the harp seal — and another 25% by the ringed seal. As far as is known, 75-80% of all Arctic seals are concentrated in the Atlantic Arctic Basin (Canadian Arctic Archipelago waters, Hudson Bay, Baffin Sea, Davis Strait and Greenland Sea). Only about 1.5-2 million seals are present in the Pacific Arctic Basin and Okhotsk Sea. Most of these Arctic seals are strictly dependent on sea-ice coverage for breeding and moulting and pass their all life inside the ice-covered seas or at its edge (Figure2). In addition, the three specialized feeders species — the hooded seal which targets bottom-dwelling fishes, the bearded seal

and the walrus which feed on bottom-dwelling shellfish — are strictly dependent on continental shelf waters, less than 400 metres (m) deep, where their prey are concentrated.

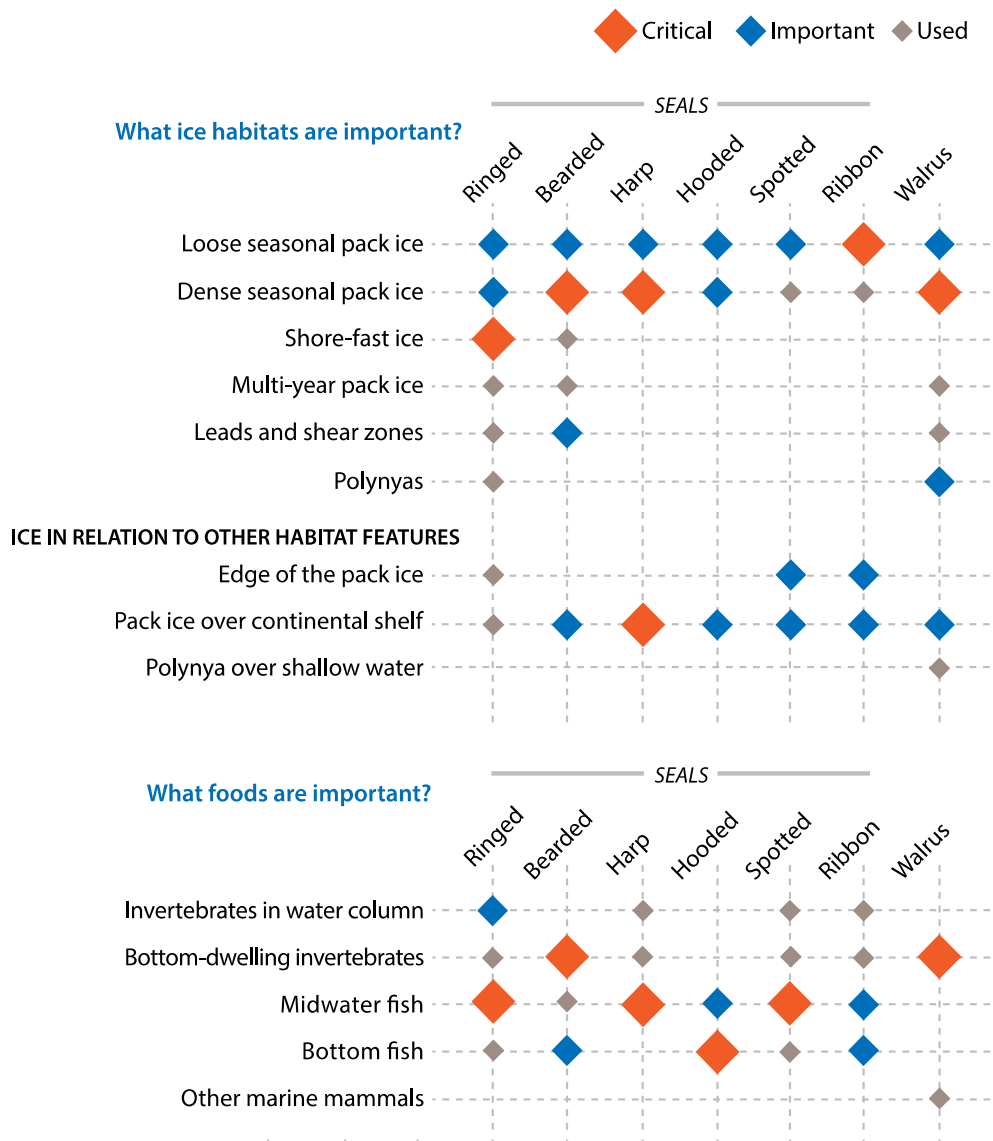


Figure 2: Importance of different sea-ice habitats for Arctic seals species.

Harp seals accounting for about 40% of aboriginal catch are critically linked to seasonal pack ice. Ringed seals accounting for 47% of aboriginal catch depend exclusively on shore-fast ice for reproduction. (See section I.2¹⁰). As climate change principally affects shore-fast ice and dense seasonal pack ice (see section II.4.), harp and ringed seals are expected to be highly threatened by the onset of an earlier melting season.

I.2 SEAL CATCHES IN THE ARCTIC

Large-scale commercial harvests are restricted to harp and hooded seals, except for the hooded seal population in the Jan Mayen area of the Greenland Sea (Figure 3). Both species faced intense commercial hunting in the 19th and 20th centuries, first for their oil and later mainly for the highly prized pelts of pups. Seal products nowadays also include a significant aphrodisiac trade (particularly for harp seal sex organs), and seal oil has become a popular health product because of its omega-3 content. Canada, Greenland, Norway and Russia have been and still are involved in regulated commercial harvest of these species.¹¹ Ringed seals are also targeted by commercial harvest and occupy the second-rank by number when Inuit subsistence hunt is included, a large quantity of pelts being sold by Inuit hunters to peltries.

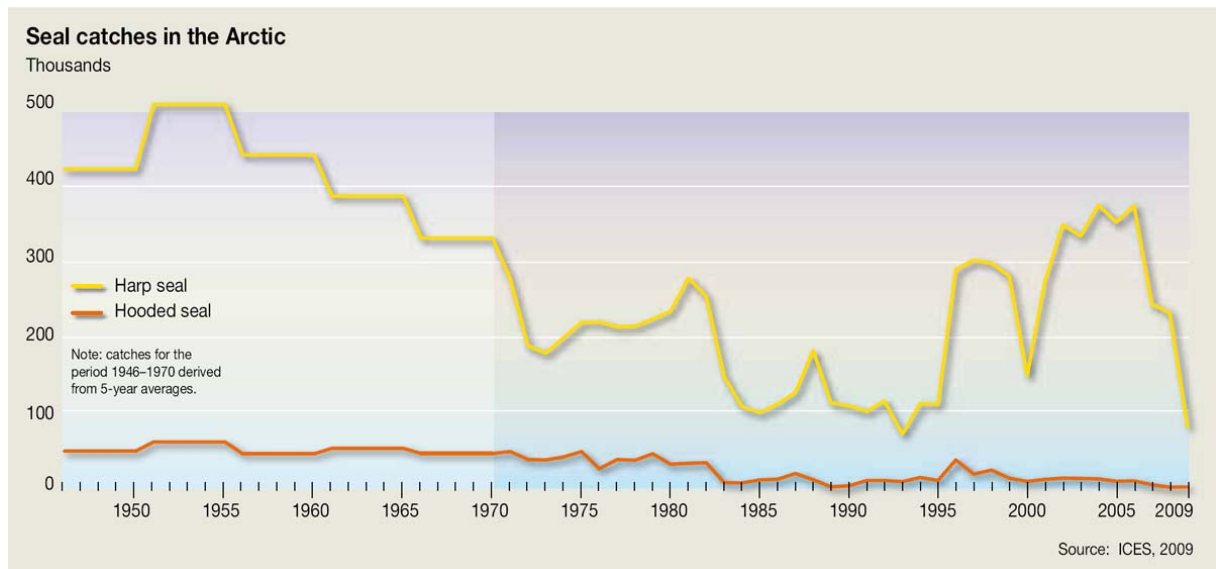


Figure 3: Harp and Hooded Seal catches in the Arctic, 1945 – 2009.

In 2012, the global capture production for Arctic seals (FAO Statistics) was : harp seals - 105 990 ; ringed seals – 43 754 ; hooded seals – 2 091 ; bearded seals – 1 458 ; spotted seals – 271 ; and ribbon seals - 0. The two sub-Antarctic seal species were 177 for the grey seals and 0 for the harbor seals.¹²

Commercial Arctic seal hunting is practiced by Canada, mainly for the harp seal in the Front region off Newfoundland and by Norway in the Greenland Sea. Russian Federation commercial hunting has largely declined since 1994 for most species and virtually stopped after the ban on catches of harp seals less than one year of age pronounced in 2009 as Russian hunters focused on “beaters” pelts. The Russian Federation has applied a hunting ban for harp and hooded seals since 2011.

Arctic seals are also targeted by aboriginal peoples, mainly Inuit, for subsistence (food, pelts, and traditional uses) and commercial issues in the United States, Canada, Greenland and the Russian Federation. This main targets of the shore-based harvest are the ringed and harp seals, but the other seal species are also killed by indigenous peoples for specific traditional uses (clothes and accessories), or on an opportunistic mode. In the period since 2010, about three-quarters of the nearly 420 000 Arctic seals harvest in the Arctic was by local aboriginal peoples using sea-ice as hunting platforms or small motorized boats (Figure 4).

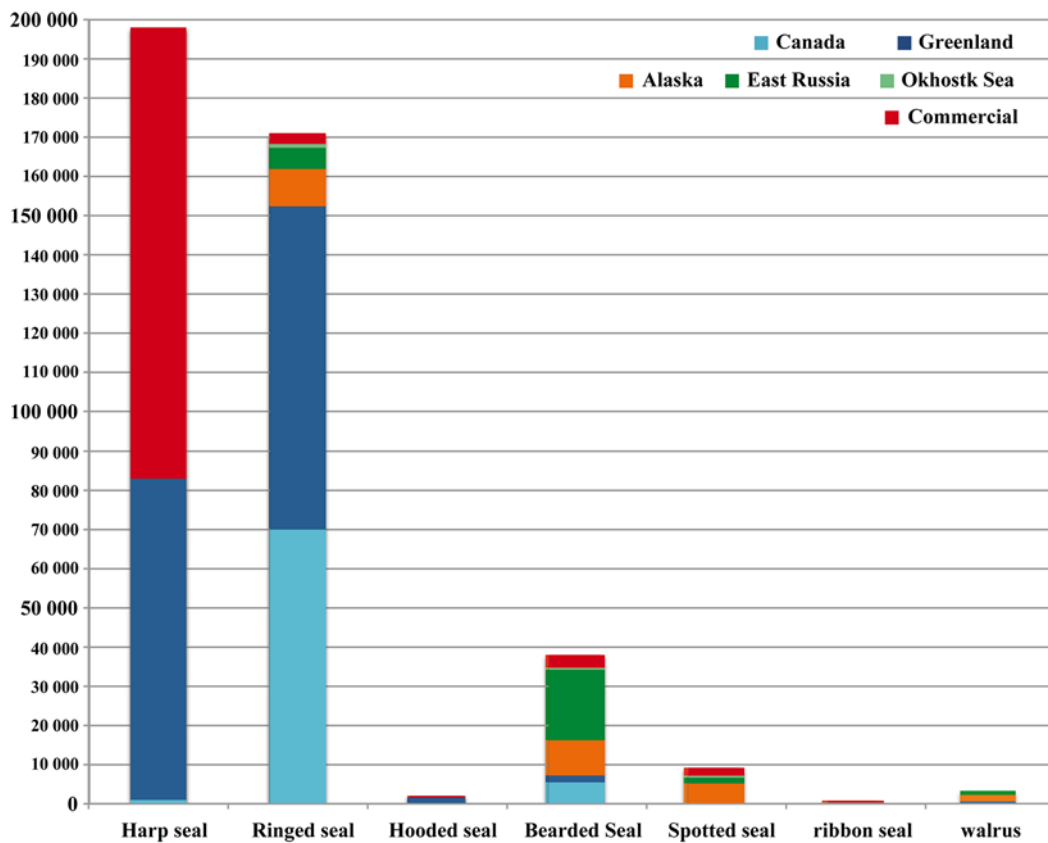


Figure 4 : Seal harvest by aboriginal subsistence hunters and commercial harvest estimates for six Arctic seal species since 2010.

The aboriginal catch represents about 299 000 seals per year, mostly harp and ringed seals — the most abundant and widespread species living in close association with sea-ice (Table 2). The majority of this catch is realized by Inuit from Greenland, Canada, Alaska and Russian Far East Siberia (Chukotka). The main targeted species are the ringed (47% of total aboriginal catch) and harp (40%) seals in the Atlantic Arctic Basin where Inuit and these two seals species are more numerous and live in higher densities.

	Harp seal	Ringed seal	Hooded seal	Bearded seal	Spotted seal	Ribbon seal	Walrus
Canadian natives	1 000	70 000	0	5 500	0	0	400
Greenland	82 000	82 400	2 000	1 750	0	0	150
Alaska natives	0	9 500	0	9 000	5 200	193	1 682
Western Russiannatives	0	5 400	0	18 000	1 500	200	1 053
Okhotsk Sea	0	1 000	0	500	500	200	0
Commercial harvest	115 000	2 700	23	3 250	2 000	200	0
Total harvest	198 000	171 000	2 023	38 000	9 200	793	3 285

Table 2 : Seal harvest by species for indigenous and commercial harvest annual estimate.

If Russian and Alaskan (United States) aboriginal peoples have nearly no commercial use of their catch beyond a local or national scale, Canada and Greenland Inuit hunters are allowed commercial harvest. About 80% of the Greenland seal catch is from the activities of 2 100 professional hunters, with the 5 500 leisure-time hunters accounting for less than 20% of the total catch.

While the Arctic was the main territory for commercial seal harvest in the 19th and 20th centuries, current commercial sealing in the Arctic is about 24% of the total catch and it focuses on one species — the harp seal. Commercial seal hunting is restricted to the Labrador Sea and Saint Laurent Gulf, both regions are situated outside the Arctic, however, it directly impacts the western Atlantic Arctic Basin seal populations. Canadian commercial harp seal harvest has to be taken into account for Arctic seal management and regulations.¹³

Both Canadian and Norwegian commercial sealing represent nearly 60% of the total harp seal commercial catches. Since the closure of beater hunting by the Russian Federation in 2009 and the no catch advice given for the hooded seal by the Joint ICES/NAFO Working Group on Harp and Hooded Seals in 2007, and the walrus ban in 1956, Russian commercial sealing in the Greenland Sea and most of sealing conducted in Chukchi, Bering and Okhotsk Seas has stopped.

1.3. ABORIGINAL SEAL HUNTING METHODS

Seal hunting has been practiced by Arctic peoples for thousands of years on all Arctic coasts where they settled. The Inuit Peoples crossed the Beringia (Bering land bridge) from Far East Siberia and Chukotka to Alaska and then the Canadian Arctic and Greenland in the 13th or 14th centuries. Based on seal hunting, Inuit cultures developed specific hunting technics adapted to catch seals according to sea-ice seasonal conditions, seal species behaviour and local weather and geographic land distribution.

1.3.1. CURRENT INUIT SEAL HUNTING METHODS

Four main hunting methods have been developed and are still applied by Inuit hunters :

- “Uuttoq” hunting (sneaking)
- Breathing hole net trapping
- Ice-edge hunting (harpoon or rifle shooting)
- Coastal boat-based hunting (harpoon or rifle shooting) during summer or in open-water regions.

Details below concern Greenland Inuit, Kalaallit from western Greenland, Tunumiit from eastern Greenland and Inughuit from northern Greenland, but can be generalized to all Inuit Peoples.¹⁴

“UUTTOQ” HUNTING

In spring, when ringed seals come up through the breathing holes to haul-out on the ice to bask, they are easy targets for experienced hunters who use screens to sneak up to an appropriate rifle shooting distance. Hidden behind a canvas, the hunter crawls towards the seal. When at close range, he shoots the seal in the head. If the shot misses the head, the seal may manage to disappear through the breathing hole and it will be lost to the hunter. The method can only be used in the spring period when the sun returns and the sea-ice layer is not dislocated by melt.

BREATHING HOLE NET TRAPPING

From October to late March, netting is the prevailing method since it is impossible to use any other technique during the dark winter months. The success of netting under the ice also depends on the duration and stability of the fast-ice cover, the amount of snow, and the frequency of strong winds, all of which influence the possibilities for setting and tending the nets.

The net is generally tightened below the sea-ice surface between a small iceberg and the coast. The hunter digs three aligned holes a few metres from each other through sea-ice, then propels the “tooq” (ice chisel) into the water from one hole in a way that handle can be picked up from another hole. The strap on the “tooq” is used to tighten the net between the holes. Nets are visited several times a day, requiring to dig again through the refrozen hole. When the caught if the seal is still alive, it is killed by a blow to the head with the “tooq”.

The use of nets for catching ringed seals seems to have been introduced in Greenland by Europeans a few hundred years ago. In some municipalities, using nets under the ice constitutes about two-thirds of the total harvest of ringed seals. Especially in the northern parts of Greenland, where most ringed seals are caught, netting constitutes an important method to catch ringed seals during the winter due to the dark periods and ice conditions. Using rifles is not an alternative since it is not possible to see the seals in the dark. However, hunting with nets becomes less effective relative to the increase in light during the spring.

HUNTING FROM THE EDGE

Another type of hunting in which rifles are used takes place from the edge of the ice in springtime with ringed seals as the main target. Seals may also be caught through small cracks in the ice, at the edge of the permanent ice or from a drifting ice floe by a hunter with a kayak or a small boat on transported on a dog sledge.

COASTAL BOAT-BASED HUNTING

Hunters in small boats shoot seals found in open water. Such hunting for harp seals is mostly a one-man activity. When the hunter reaches a promising area, he stops the boat engine or slows the speed while systematically searching the area. Noise from the engine can complicate the hunt since it will scare away the seals and make any judgment of their movements difficult. Experience, good eyesight and excellent hunting skills are therefore required to spot a seal and shoot it from a small boat.

Hunting of harp seals occurs exclusively from small boats with rifles. After having shot the seal, the hunter will, as fast as possible try to reach the seal before it sinks. However, there are without doubt seals that sink before they can be hauled up, especially in the pre-summer period in the months of May and June when harp seals are very lean. Consequently, during the first few weeks of the open-water hunt, the loss due to sinking is slightly higher than during the remainder of that season.

A variation of the edge hunting is employed to catch seals at their breathing hole. This methods is generally a group activity, each hunter posting himself at the edge of a different “allu” (breathing hole) waiting motionless, sometimes for hours, the seal come to breath and the hunter shoots or harpoons it. Because of its relatively low profitability, these days this method is rarely used.

I.3.2. PROBLEMS OF STRUCK AND LOST

Hunting of harp seals occurs exclusively from small boats with rifles, and there are probably quite a few seals that sink before they can be hauled up. This is especially true in the pre-summer period when harp seals are very lean. Harp seals moult beginning in early April each year (in Greenland), starting with adult males, immature males and followed by adult females. During moulting the animals fast and lose more than 20% of their body weight mainly in the form of fat. Most hunting loss is due to shooting seals from substantial distances. The loss rate varies primarily according to seasonal changes in the specific gravity of seals — their fat content, mainly as sub-cutaneous blubber, changes their density (density of fat rich tissues is lower than low fat tissues like muscles) and thus their floatability or sinking rate — and the salinity of surface water. In May and June, struck and lost rates for harp seals may be as high as 40 – 50%, but when the major harvest takes place in the autumn, the amount of loss is significantly reduced due to the increase in blubber thickness. Location is also a factor as seals that are shot close to river deltas are more likely to sink because of the relative freshness of the water, where the lower density of the water facilitates the sinking of seals.

Ringed seals are fattest and the water most saline in the winter, which means that the animals are much more prone to float at that season than they are during spring and summer.

Another factor affecting loss rate is the skill of the hunter. An experienced hunter will wait to be closer of the seal before shooting to minimize sinking risk. The quality of shooting material, rifle and ammunition, may also affect the loss rate. These factors are impossible to estimate, but we can assume that professional hunters are more experienced and better equipped than sports hunters as, in Greenland at least and possibly in Canada, professional hunters are responsible for nearly 75-80% of the total harvest, the impact of these two factors is probably negligible.

Any technical amelioration allowing a substantial decrease of struck and lost is progress regarding animal welfare. Most escaping wounded seals bleed to death or drown, as they are too exhausted to swim to the surface to breathe.

I.4. CONSERVATION AND ENVIRONMENTAL AGREEMENTS FOR ARCTIC SEALS

While a number of agreements and protection measures cover several seal species, prominence is given to the hooded seal, as it is arguably the species in most need given its vulnerable status. Documented population declines of hooded seals resulted in the introduction of quotas in the early 1970s in order to achieve sustainable harvests.¹⁵

In 1984, an ICES Working Group on Harp and Hooded Seals in the Greenland Sea was established. In 1988, the terms of reference were expanded to include harp seals in the White and Barents Seas. In 1989, the Working Group recommended that a Joint ICES/NAFO Working Group on Harp and Hooded Seals (WGHARP) be established with the following mandate.

“ ... for the purpose of assessing the status of these stocks and providing related advice and information in the areas of both organizations. Contracting Parties to either organization or regulatory commissions who might desire advice on harp and/or hooded seals in a particular geographical area must refer their request to the organization (NAFO or ICES) having jurisdiction over or interest in that area. Advice based on reports of the Joint Working Group would be

provided by ACFM in the case of questions pertaining to the official ICES Fishing Areas (FAO Area 27) and by NAFO Scientific Council in the case of questions pertaining to the legally-defined NAFO area. ICES will administrate the Joint Working Group in terms of convening meetings, formulating terms of reference, handling membership and chairmanship, and processing, printing, and distributing Working Group reports.”

Following a request from Norway, WGHARP met for the first time in October 1991. The International Council for the Exploration of the Sea (ICES)/North Atlantic Fisheries Organization (NAFO) Working Group on Harp and Hooded Seals (WGHARP) has become an important source of scientific advice on the management and harvest of harp and hooded seals. WGHARP annually provides quota advice to ICES/NAFO member states for their harvests of these seal species. Since 2007, WGHARP has recommended that no harvest of Greenland Sea hooded seals should be permitted, with the exception of catches for scientific purposes. As for setting quotas for the northwest Atlantic hooded seal, a precautionary approach has been adopted since 2007.

In 2009, the Russian Federation introduced a ban on harp seal less than one year old (beaters) harvest. In Canada, the killing of both harp seal white-coat pups and hooded seal blue-backs (pups) for commercial purpose is prohibited. In Svalbard both harp and hooded seals are protected.

Appendix 3 of the Conservation of European Wildlife and Natural Habitats (Bern Convention) lists protected fauna species, including six seal species with habitats in the Arctic (hooded, bearded, harp, harbor, ringed and grey seals). Through the framework of the EU Habitats Directive, signatory states of the Bern Convention have agreed to take appropriate and necessary legislative and administrative measures to ensure the protection of the wild fauna species listed in its appendices, and any exploitation of wild fauna specified shall be regulated in order to keep the populations out of danger.

However, the Bern Convention’s applicability to seals in the Arctic is limited. Of the European seal hunting nations, only Norway has ratified the Convention. Russia has not signed the Bern Convention. Greenland, although a part of Denmark, is not part of the European Union (EU) and is not committed by the legislation.

With a focus on animal welfare, in 2010 the EU put a ban on all imports of seal products with the exception of products “derived from hunts traditionally conducted by Inuit and other indigenous communities and which contribute to their subsistence”.¹⁶

In the United States, the Marine Mammal Protection Act (MMPA) limits hunting of marine mammals to Alaskan natives who may take seals for subsistence use and for the production of authentic native handicrafts, which may be sold. MMPA prohibits all other consumptive use of marine mammals.

I.4.1. ARCTIC SEALS AND THE IUCN RED LIST OF THREATENED SPECIES

The IUCN Red List of Threatened Species identifies and documents those species most in need of conservation attention if extinction rates are to be reduced. It is widely recognized as the most comprehensive, apolitical, global approach for evaluating the conservation status of plant and animal species. In order to produce Red Lists of threatened species worldwide, the IUCN Species Survival Commission draws on a network of scientists and partner organizations, which use a scientific standardized approach to determine species’ risks of extinction.

According to the IUCN Red List of Threatened Species, most Arctic seal species are currently evaluated as having a low risk of extinction, with the exception of the hooded seal (Table 3). Although the population in the Northwest Atlantic is stable, the northern-most breeding population in the Northeast Atlantic (West Ice) has declined by 85–90% over the last 40–60 years. Even with protective measures taken in the last few years, recent data show that the decline is continuing through unknown causes. As a result, the hooded seal had been classified as “vulnerable” on both Norway’s Red List since 2006 and on the IUCN Red List since 2008. The ribbon seal, spotted seal, and the Okhotsk Sea ringed seal sub-species (*P. h. ochotensis*) have not been categorized by IUCN due to insufficient data.

Common name	IUCN Red List	Justification
Ringed seal ¹⁷	Least Concern	For the global assessment at the species level, the Arctic ringed seal numbers and broad distribution leads to the classification of Least Concern. However, given the risks posed by climate change to all ringed seal sub-species, including the Arctic ringed seals, this species should be reassessed within a decade.
Bearded seal ¹⁸	Least Concern	Due to its large population, broad distribution, variable feeding habits and no evidence of a decline, the bearded seal should be classified as Least Concern. However, this species is likely going to be negatively impacted by climate change and should be monitored over the coming decades.
Harp seal ¹⁹	Least Concern	Due to its large population size, and increasing trends, the harp seal should continue to be classified as Least Concern. However, climate change poses a serious threat to this species and harp seals should be reassessed within a decade
Hooded seal ²⁰	Vulnerable	Hooded seals in the Northwest Atlantic breeding areas are currently either stable or increasing modestly. However, the Northeast Atlantic stock has declined by 85-90% over the last 40-60 years. The cause of the decline is unknown, but very recent data suggests that it is on-going (30% within 8 years), despite the protective measures that have been taken in the last few years. Although the hooded seal is thought to be panmictic, the precipitous decline in the eastern stock (from over half a million to 70 000) over a period of a few decades warrants that the hooded seal be classified as Vulnerable.
Spotted seal ²¹	Data Deficient	The spotted seal is moderately abundant, but it faces numerous threats and several major sub-populations have declined in recent years. The global number, risk posed by climate change and the uncertainty regarding spotted seals is not known, nor is the extent of the current declines.
Ribbon seal ²²	Data Deficient	Ribbon seals have an unknown mortality in salmon nets and bottom-set gill nets. This species is likely to be seriously and negatively impacted by reductions in the extent and seasonal coverage of sea-ice throughout their range. However, it is not possible to evaluate the current situation for this species as the

		most recent estimates are almost two decades old.
Grey seal ²³	Least Concern	Continuing, well-documented increases in overall population and most sub-populations, low levels of localized hunting and widespread conservation measures in most range states and current population size based on pup production estimates is 400 000. Continued declines in Icelandic waters give cause for concern, but globally, grey seals should be classified as Least Concern.
Harbor seal ²⁴	Least Concern	Due to its large and either stable or increasing population, on a global scale the harbor seal is classified as Least Concern. However, for conservation concerns at a somewhat finer spatial scale, it is prudent to assess each of the sub-species separately as some populations are small and declining.
Walrus	Data Deficient	Although the global population is undoubtedly still quite large, there is evidence of declining populations in two of the sub-species. Climate change is expected to have negative consequences for walrus and particularly severe consequences for the Pacific sub-species. Insufficient recent data is available regarding current population sizes and trends throughout much of the walrus' range. At this time, this species is classified as Data Deficient.

Table 3: IUCN Red List - Arctic seals.

Three out of the six Arctic and the two sub-Arctic seals species are evaluated as “Least Concern” in the IUCN Red List of Threatened Species. Nonetheless, all of them are described as being potentially impacted by the reductions in the extent and seasonal coverage of sea-ice, their natural habitat.

The ringed seal is currently classified as a species of “Least Concern” on the IUCN Red List, due to the large population size and broad distribution of the Arctic sub-species. Kovacs, et al. noted that given the risks posed to the ringed seal by climate change, the conservation status of all ringed seal sub-species should be reassessed within a decade.²⁵ The ringed seal was chosen by the IUCN Species Survival Commission as one of ten climate change flagship species to illustrate the impacts of climate change on polar habitats, including the effects of ice loss on ice-adapted species (IUCN Species Survival Commission 2009).

1.4.2. MULTILATERAL ENVIRONMENTAL AGREEMENTS FOR ARCTIC BIODIVERSITY

According to a recent United Nations Environment Program (UNEP) study, among the 500 international treaties and other agreements related to the environment, two-thirds are regional in nature and several global and regional multilateral environment agreement (MEAs) are relevant to the Arctic. There also exist a few MEAs, which contain an exclusive Arctic scope, such as the Agreement on the Conservation of Polar Bears, signed by all Arctic nations that have polar bear populations, and the Agreement between the Governments of the United States and Canada on the Conservation of the Porcupine Caribou Herd.

The objectives, priorities, and levels of implementation of MEAs differ significantly from one agreement to another, even where an overall objective might be protection of biodiversity. The scope of biodiversity-related MEAs varies and includes :

- conservation of individual species,
- migration routes and habitats,
- protection of ecosystems,
- trade in species,
- safe transfer, handling, and use of living modified organisms,
- protected areas,
- sustainable use of biodiversity.

Under the United Nations Convention on Biological Diversity (CBD) a working group has been established under Article 8(j) that deals with indigenous knowledge as it relates to the conservation and sustainable use of biodiversity.

Biodiversity is defined by the CBD as :

The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems, as well as the ecological complexes, of which they are part; this includes diversity within species, between species and of ecosystems. Biodiversity includes the multitude of poorly known species, of which there are many in the Arctic, that collectively provide the foundation for food webs and ecosystems. The interactions between humans and their surroundings are also part of the diversity, vitality and sustainability of life on Earth.

Important MEAs in the context of Arctic biodiversity include²⁶ :

- Ramsar Convention on Wetlands
- Convention on Biological Diversity
- UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage (WHC)
- Convention on Migratory Species (CMS) and its associated agreements such as the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Regional and/or species-specific agreements, such as the Bern Convention on the Conservation of European Wildlife and Natural Habitats, the International Convention for the Regulation of Whaling (ICRW) and the Agreement on the Conservation of Polar Bears, are also highly relevant to the conservation of Arctic biodiversity.

Arctic-relevant MEAs and international fora	High and direct relevance	Medium relevance
<p>Legal: MEAs, including species agreements and mechanisms for development of enhanced co-operation.</p>	<ul style="list-style-type: none"> ● Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) ● Agreement on the Conservation of Polar Bears ● Convention for the Protection of the Marine Environment of the Northeast Atlantic (OSPAR) ● Convention on Biological Diversity (CBD) ● Convention on Migratory Species (CMS) ● Convention on Wetlands (Ramsar Convention) ● International Convention for the Regulation of Whaling (ICRW) ● UN Framework Convention on Climate Change (UNFCCC) ● United Nations Law of the Sea (UNCLOS) ● Stockholm Convention on Persistent Organic Pollutants 	<ul style="list-style-type: none"> ● Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ● Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) ● World Heritage Convention (WHC)
<p>International Organizations and Policy Forums</p>	<ul style="list-style-type: none"> ● Arctic Council ● Barents-Euro Council (BEAC) ● European Union – Northern Dimension Policy ● World Trade Organization (WTO) ● United Nations Forum on Forests (UNFF) ● International Maritime Organization (IMO) 	<ul style="list-style-type: none"> ● Council of Baltic Sea States (CBSS) ● Conference of Arctic Parliamentarians (CPAR) ● European Economic Area (EEA) ● Nordic Council of Ministers (NCM) ● Northern Forum

Table 4: MEAs and relevant international fora, and their relevance to Arctic biodiversity.

While commercial sealing has been practiced on quite a large scale and pushed at least the hooded seal to be classified by the IUCN as "vulnerable", the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) does not list any Arctic seals species in its three annexes.

With the IUCN Red List reassessment of all mammals species in 2015, it is highly probable that most of Arctic seals species category status will be amended, with all the ice-dependent species likely to shift from "least concern" to "vulnerable" or higher endangered categories. If it is the case, the listing of these seal species in CITES Annex II or Annex I will be possible.

II. SUSTAINABILITY OF INDIGENOUS SEAL HUNTING

II.1. SUSTAINABLE USE OF LIVING RESOURCES

The Convention on Biological Diversity (CBD) defines sustainable use of living resources as : “the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations”. In 2004, the CBD produced the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity to “provide a framework for assisting governments, indigenous and local communities, resource managers, the private sector and other stakeholders, about how to ensure that their uses of biological diversity will not lead to its long-term decline.”²⁷

Two of the 16 practical principles (PP) seem to be of major interest regarding indigenous seal harvest, the 11th:

Users of biodiversity components should seek to minimize waste and adverse environmental impact and optimize benefits from uses.

and the 12th:

The needs of indigenous and local communities who live with and are affected by the use and conservation of biological diversity, along with their contributions to its conservation and sustainable use, should be reflected in the equitable distribution of the benefits from the use of those resources.

As Inuit peoples are both “active users” and deeply “dependent on the long-term preservation of living resources”, they are directly concerned by those two PP. As far as Inuit “Qaujimajatuqangit” (body of knowledge and unique cultural insights of Inuit into the workings of nature, humans and animals - Inuktitut from Nunavut) and hunting practices are followed by seal hunters, we can expect Inuit hunters to apply those practical principles.

Traditionally, seal hunting is associated with a deep spiritual connection between the hunter and the seal, conducting the former to acknowledge the second for accepting to be killed, the separation between humans and animals being much less marked in the Inuit culture than in European and occidental cultures.

Waste is seen as selfish by Inuit and all parts of hunted seal are used for food, clothing (pelt), tool manufacture (bones and tendons) and oil production (fat and blubber). Equitable distribution of seal meat to an enlarged family is also a traditional practice. Such a traditional sharing of hunted and collected natural resources is also of critical importance for ensuring food security for the whole community, a problematic question is those remote regions where “southern food” is scarce and very expensive.

Minimizing adverse environmental impact of sealing and maintaining harvest to a sustainable level are both questionable aspects of Inuit seal hunting as “Qaujimajatuqangit” for seal hunting is limited to a local scale and accepts over-harvest in order to prevent unpredictable low hunting success periods.

IUCN produced a policy statement concerning the sustainable use of wild living resources in 2000.²⁸ It stated:

- a) Use of wild living resources, if sustainable, is an important conservation tool because the social and economic benefits derived from such use provide incentives for people to conserve them.*
- b) When using wild living resources, people should seek to minimize losses of biological diversity.*
- c) Enhancing the sustainable uses of wild living resources involves an ongoing process of improved management of those resources.*
- d) Such management should be adaptive, incorporating monitoring and the ability to modify management to take account of risk and uncertainty.*

These statements are completed by four considerations which could increase the sustainability of wild living resources:

- a) The supply of biological products and ecological services available for use is limited by intrinsic biological characteristics of both species and ecosystems, including productivity, resilience and stability, which themselves are subject to extrinsic environmental change.*
- b) Institutional structures of management and control require both positive incentives and negative sanctions, good governance and implementation at an appropriate scale. Such structures should include participation of relevant stakeholders and take account of land tenure, access rights, regulatory systems, traditional knowledge and customary law.*
- c) Wild living resources have many cultural, ethical, ecological and economic values, which can provide incentives for conservation. Where an economic value can be attached to a wild living resource, perverse incentives removed, and costs and benefits internalized, favourable conditions can be created for investment in the conservation and the sustainable use of the resource, thus reducing the risk of resource degradation, depletion and habitat conversion.*
- d) Levels and fluctuations of demand for wild living resources are affected by a complex array of social, demographic and economic factors, and are likely to increase in coming years. Thus attention to both demand and supply is necessary to promote sustainability of uses.*

Regarding the management aspect, a question also integrated in the CBD Addis Ababa Principles and Guidelines, Inuit people do ask to be part of and in some extent are already part of management decision-making and actions. Due to their very different political status, Inuit involvement in management is varied in the Arctic.

In Canada, Inuit are distributed across three federal territories : Nunavut, Yukon and the Northwest Territories (NWT) and two provinces, Quebec (Nunavik) and Newfoundland and Labrador. In the territories, natural resources management is assumed by local governments, including seal management. In Nunavut management is assumed by Inuit which represent 84% of inhabitants (2013). Conversely, in the NWT, Inuit are a small minority with 3 100 people without direct access to management decision-making ; the same holds in the Yukon with an Inuit population of 255.

In Nunavik, the situation is quite different as the region does not have the same political status as it part of the Province of Quebec and, as a minority, Inuit have no direct access to management decision-making. Yet the Inuit account for a part of the Nunavik regional government (65% of administrative employees) and participate in Inuit harvest support and wildlife conservation.

The situation for Labrador Inuit (Nunatsiavut: 2 160 people) is a mixture of the Nunavik and Nunavut status as the Nunatsiavut acquired a self-government right on their land in coastal northern Labrador in 2005 with jurisdictional authority over health, education and justice, but not over environment and living resource management which is still decided by the provincial government.

In Alaska, where Inuit peoples (mainly Inupiaq and Yupik) total nearly 50 700 people, natives have no direct involvement in management decision-making, but may defend their interest through the Alaska Inter-Tribal Council and tribal and village governments.

In Greenland, where 89% of inhabitants are Inuit (2012), the government, mostly involving Inuit representatives, is in charge of natural resource management without intervention of the Danish government.

In Chukotka and Far East Siberia, natural resources management is centralized and directly organized by the Russian government.

In Canada (mostly Nunavut), Alaska, Greenland and Chukotka, Inuit hunters participate in wildlife monitoring and are involved in some scientific programmes as active partners in community-based monitoring (CBM). The scope of CBM is diverse and complex and continues to develop as experiences of integration are shared. These monitoring approaches range from programs involving local stakeholders only in data collection with the design, analysis and interpretation undertaken by professional researchers, to entirely autonomous monitoring schemes entirely run by local people.

The Greenland government is piloting a natural resource monitoring system whereby local people and local authority staff are directly involved in data collection, interpretation and resource management. The scheme is called *Piniakkanik sumiiffinni nalunaarsuineq* (Opening Doors to Native Knowledge) and supports various management decisions concerning marine habitat conservation, marine fishing techniques and adaptation of hunting seasons to increase protection of threatened species.

The main problem concerning sustainable use of living resources remains the opposition between the European ("western industrialized countries") and indigenous perspectives about what is sustainable. The European position is scientific knowledge-based, using large time and space scales, and supposed to be cultural and spiritual perspectives free, but have to deal with ethical and existing legacies. The Inuit position is traditional knowledge-based, using local space scale and traditional oral knowledge, deeply embedded in cultural and spiritual values, and must be consistent with everyday conditions in a very harsh and resource scarce environment not compatible with farming or agriculture, where food security is an everyday concern, and the more and more pronounced auto-determination and self-governing claims.

II.2. SEAL POPULATION TRENDS AND SUSTAINABILITY OF SEALING

II.2.1. SEAL POPULATION TRENDS

Because of insufficient data, most Arctic seal population trends are only available for a very few species.

HARP SEALS

The Greenland Sea population seems to be stabilized or in modest decline as the population was estimated at 649 566 seals in 2011, which, according to modelling, is a little bit less than 2008 estimate.

The White and Barents Seas population was estimated as 1.36 million, with a pup production of about 163 000, which is slightly higher than the estimates obtained from surveys completed between 2005 (122 658; SE=19 625) and 2009 (157 000; SE=16 956). However, the estimate is considerably lower than survey estimates prior to 2004 (~300 000). The available data are not sufficient to determine declining or stabilizing population trends.

Harp seal population in the northwest, living between Canada and Greenland, is considered "increasing", especially on the Front region off Newfoundland, with a total pup production estimate of 1.6 million pups and a total population of 8.1 million seals. But the pregnancy rate is declining and the mean age of reproductive maturity is on the increase. Consequently, population trends are difficult to assess.

RINGED SEALS

As ringed seals do not aggregate on whelping grounds, and each female gives birth to its pup in a snow lair, pup production is not available for this species and most estimates are based on visible hauled-out adult seals on ice during their basking period. For those reasons, trends are not available for ringed seals which are estimated to total 3 - 4 million seals.

HOODED SEALS

The species is thought to total 662 000 hooded seals. The Greenland Sea population is considered to be "in decline" with an annual pup production of 16 000 (2007). The Report of the Joint NAFO/ICES Working Group on Harp and Hooded Seals (WGHP) in 2012 recommended that no harvest to be allowed for Greenland Sea hooded seals.

The northwest population, living between Canada and Greenland, is thought to be "probably increasing", with a total seal pup production of 116 900 (2005), higher than in the 1980s.²⁹

BEARDED SEALS

As bearded seals do not aggregate on whelping grounds and live mostly solitary in remote regions, no population trends are available for the species which is estimated to total 875 000 seals.

SPOTTED SEALS

The remoteness and dynamic nature of their sea-ice habitat along with their broad distribution and seasonal movements makes surveying spotted seals expensive and logistically challenging. Spotted seal haul-out behaviour likely varies based on many factors such as time of year and time of day, daily weather conditions, age and sex. Consequently, no current accurate estimates have been published, though spotted seals are thought to total about 400 000 seals in the Arctic seas.

RIBBON SEALS

The current population trend of ribbon seals cannot be determined from the time series of imprecise and potentially inaccurate abundance estimates. But high rates of ribbon seal sightings in recent surveys, and reports from hunters that indicate stable or rising numbers, suggest that there has not been a recent dramatic decline. The species is thought to total 675 000 in the Arctic Seas.

WALRUS

Using aerial survey data and simulation including total catch, and age and sex structure of animals caught, the three Greenland walrus populations were estimated to be possibly decreasing for the Baffin Bay, decreasing for the West Greenland / Southeast Baffin island populations, and as stable or slightly increasing for the East Greenland population. The Svalbard population shows an increasing trend. The Kara Sea area walrus stock may also be increasing, although information for this area is very limited.

Aerial survey results of Pacific walrus are not directly comparable among years due to differences in survey methods, timing of surveys, segments of the population surveyed and incomplete coverage of areas where walruses may have been present ; and do not provide a reliable estimate of population trends. The species is estimated to total 200 000 - 250 000 walruses.

HARBOR SEALS

Because of variable methods, dates and localities of the surveys conducted in Northwest Atlantic, population trends are not available for Canadian harbor seal populations.

The Greenland harbor seal populations, which total about 1 000 seals, are thought to be stable despite some shifts in distribution due to sea-ice condition.

The Svalbard population seems to be stable, but its small size (1 888 seals) makes it vulnerable to chance events, such as diseases and climate change impacts.

Aerial surveys in 2011, 2012 and 2013 yielded a new minimum point estimate of 7 081 harbor seals for the entire Norwegian coast, but no population trend could be stated.

No population trends are available from the Kara/Barents sea populations, nor the Icelandic or Pacific populations.

GRAY SEALS

Norway's coast population of gray seals is estimated to have been increasing since 2011. The Norwegian total allowable catch has been settled to maintain the population at a stable trend. The northernmost Norwegian and Russian grey seal population trend in the Murmansk region is unknown.

Icelandic gray seal population seems to be stable with a low of 4 200 pups, just above the government management objective of 4 100 adults. Such a harvesting objective seems to be unsustainable as it does not fit with the 70% maximal rate.

Based on surveys conducted in the three main breeding grounds in Atlantic Canada, Sable Island (Front region), the Nova Scotia coast and Gulf of St Lawrence populations are all increasing with respective pup production of 62 000, 3 000 and 11 300.

Concerning the Arctic Seas, where gray seals do not reproduce, the species is considered as vagrant, coming from sub-Arctic population stocks.

II.2.2. SUSTAINABILITY/EVALUATION OF HARVEST RATES

The sustainability of seal harvest is equally proclaimed by the diverse seal hunting nations — Canada, Greenland, Norway and the Russian Federation — but hunting impacts on seal population evaluation procedures, based on scientific agencies (Department of Fisheries and Oceans for Canada) or the independent organizations (ICES) used by them vary and do not apply the “precautionary approach” with the same efficiency.

To be considered precautionary, there needs to be convincing evidence that the management approach will generate a low probability of harmful effects on the seal population. What constitutes a harmful effect and acceptable levels of risk are ultimately value judgments. Nonetheless, such criteria need to be incorporated as specific management objectives so that the probability of meeting them under different scenarios incorporating uncertainty can be evaluated.³⁰

Canadian management of commercial harp seal hunting is based on the “objective-based fisheries management” procedure (OBFM), a scientific process involving : (i) estimating the production of harp seal pups from aerial surveys ; (ii) estimating total population size using a model based on a time-series of estimates of pup production and pregnancy rate data ; (iii) projecting the model forward in time to simulate the effects of varying hunt levels ; and (iv) assessing the simulated projections in terms of management objectives.³¹

The OBFM approach is more widely adopted and has been applied to other harp seal hunts, including in the White Sea (NAFO-ICES). OBFM can be categorized as the “traditional” approach to management, in that it does not have a catch limit algorithm and has not been tested by simulation. Therefore, OBFM is potentially vulnerable to failure arising from incorrect assessments, including model specifications and biased input data. It also provides no guarantee that management measures will provide the desired balance among specified conservation objectives in the long term.³²

Other procedures for setting limits on takes of marine mammals include the Revised Management Procedure (RMP) of the International Whaling Commission and the calculation of levels of Potential

Biological Removal (PBR). Both approaches are widely acknowledged to be precautionary. They attempt to provide a fully specified catch algorithm, ensure a very low probability that the stock will decline below a given level and are robust to errors in input data. Both the RMP and PBR follow the “management procedure type approach”, where rules for setting catch limits are agreed in advance, and long-term performance has been tested by computer simulation.

The RMP uses a time-series of abundance and catch data that make the algorithm complicated compared with the single equation involving current abundance that is the basis of PBR. But using these data result in RMP catch limits becoming more precise over time.

The NAFO/ICES Working Group on Harp and Hooded Seals, the scientific advisory committee followed by the NAMMCO for seal hunt management in the Greenland Sea, Barents Sea and White Sea, uses the OBFM for its general seal hunt impact evaluation but limits the catches allowed within the PBR for data-poor species to reduce the risk of over-exploitation due to catches exceeding the seal replacement yield. Norway and Russia, at least in Atlantic Arctic Basin, follow NAFO-ICES advice for their commercial seal hunting management and total allowable catch (TAC) definition.

Greenland does not yet manage its seal hunt through the TAC process or any other catch management direct procedures. It is regulating based on local hunting season opening, age and/or sex ratio of catchable seals, boat size, seal hunt permits delivery and protected areas based on NAMMCO reports and advice from the East Greenland and the Canadian scientific data for the West Greenland seal populations. In addition, local seal catch reports are taken in account in decision-making despite their questionable reliability.

In some cases, mostly harp seals, walrus and other aggregating species on whelping grounds, use of direct pup-counting data series would be more effective than a single model-based estimate of current total population. The single model-based population, as used for PBR, has to deal with the difficulties to estimate reproductive success and mortality rates which may vary greatly from year-to-year with climate and other Arctic ecosystem variables.

It is important to note that seals are a long-living species, with a sexual maturity at 4-5 years for most species. Therefore pup-counting data have to be considered cautiously as a decrease in pup production will impact the seal reproductive capacity 4 - 5 years later at least.

For non-aggregating species, such as ringed and bearded seals, which live in the most remote parts of the Arctic seas, the development of management procedures is problematic. This is due to the scarcity of sufficient and reliable population estimates and trends and the lack of reproductive and mortality rates on which to build accurate abundance model used by both RMP and PBR.

To summarize, management procedures for seal hunting used by the different sealing nations need to be homogenized and improved to maximize the precautionary approach as IWC has done for whale management. Those management procedures need to be adapted to the great variability of data availability beyond the aggregating and non-aggregating species, include clear management objectives in terms of conservation and economic sustainability and allow different scenarios to be tested by simulation. In addition, testing simulations need to explore the various scenarios for climate change effects on seal populations, particularly for sea-ice dependent species.

II.3. SEAL PRODUCTS - INDIGENOUS USE TRENDS

The diet of Arctic indigenous peoples has changed considerably in recent years through the introduction of non-local foods available from stores. Traditional foods typically account for less than half of the energy intake. In Greenland, for example, consumption of local foods ranged from 10% of the diet of women in Nuuk to one-quarter of the diet in the hunting districts of Uummanaq and Qaanaaq. Consumption of local foods also vary by the age of the person, from an average of 13% local food for those under 30 years of age to one-quarter for those older than 50. Nonetheless, traditional foods can provide the majority of many vital nutrients (protein, vitamins and minerals) in some communities where stores are absent or poorly provisioned.

Another indicator is participation in local food production, which can illustrate the cultural significance of hunting, gathering and fishing. For example, a 2007 study in the Inupiat community of Kivalina in Alaska found that at least one household member in 95% of households surveyed had harvested wild food that year. Sharing among households remains important and widespread, so that levels of use are often higher than levels of participation in the actual harvest. In the Kivalina study, fish were the most widely used (98% of households), followed by marine and land mammals (93%). The extent of use in Kivalina is typical of most Alaska villages.

The annual replacement value of traditional food consumed by Inuit in Nunavut has been estimated at approximately CAD 40 million (Statistics Canada, 2001). Moreover, beef, lamb, cow milk, chicken eggs and other “southern” foods are often expensive in Arctic communities, though where local foods are sold commercially, the local food prices may be high as well.³³

Documentation of the harvest and use of wild foods in the Arctic is inconsistent, with varied methods and indicators in use, and often large gaps between surveys. As a result, comparisons at a regional scale and trends of use of wild food are nearly impossible.

In Alaska, harvests in the 1990s in areas largely beyond the tree line in the Arctic averaged 234 kilograms (kg) of edible food per person per year, 301 kg in western areas and 169 kg in the south western parts of the state averaged. In the Arctic area, marine mammals comprised the largest share, at just over 40% of the total harvest, followed by fish and terrestrial mammals. In the other areas, fish contributed more than 60% of the total harvest. In all areas, birds, shellfish, plants and other foods made only modest contributions by weight. There are several indications that overall harvest levels are declining around Alaska, due to many factors, but the trend varies spatially and temporally, making it difficult to confirm any patterns with the limited available data.

In Canada, the 1989 harvest in the Northwest Territories, which at the time included what is now Nunavut, was about five million kg of fish and animals, about 232 kg per person. More recent data for the NWT focuses on participation rather than harvest (Northwest Territories Bureau of Statistics 2009). About half of NWT residents participate in hunting, fishing or trapping. In small NWT communities, 40-60% of the residents obtain three-quarters or more of their meat and fish from hunting and fishing, a figure that has not changed in the past decade. In medium-sized communities, however, consumption of local fish and meat appears to be declining. Participation in hunting, fishing and trapping has declined in the past decade or two, but appears to be stabilizing.

In Greenland, local wild food production is different than in Canada or Alaska. Professional hunters, who sell their products in local markets known as *brædtet*, provide 80-90% of the locally produced meat that

is consumed, with the rest coming from leisure time hunters' activity. The number of active professional hunters is decreasing, however, and the average age of hunters has increased sharply in recent decades. In 1987, half of the professional hunters were under 35 years, whereas today only a quarter of the hunters are in that category. Another quarter of hunters are over 55 years. Informal exchange of hunting and fishing products in small settlements remains important, but the professional hunting in Greenland is experiencing an overall downward trend.

In Arctic Russia, there is both commercial hunting and personal-use (or subsistence) hunting. In the post-soviet period, the population has dropped across much of the Russian Arctic and higher prices have made access to hunting more difficult. As a result, most commercial hunting activity has declined. Subsistence hunting and fishing, however, have increased, especially around settlements, as wild foods have become increasingly important in local diets due to a lack of alternatives. Traditional marine mammal harvests have resumed in Chukotka, for example. At the same time, some illegal hunting has increased as enforcement has declined. The future of hunting in the Russian Arctic is tied closely to economic conditions in the region and across the country, making projections difficult.³⁴

Some qualitative interviews made by Le Cercle Polaire in west Greenland since 2009 indicate that cultural globalization affects food consumption in medium- to large-sized communities, particularly with the youth as seal meat "have to be accompanied by fries to be eaten by kids". But, such effects of cultural shifts are evident only in areas where access to "southern food" is available at prices that make it competitive with hunted meat indirect costs (fuel for boats, rifle ammunitions and other equipment).

Overall, the impacts of globalization on Inuit food preferences and traditional hunting seems to favour the regression of seal hunting and seal meat consumption in young Inuit along with the wider availability of southern products, an increasing education level (more pronounced in the Russian north and Nordic countries), and access to other cultures and non-traditional knowledge sources through the internet and other broad communication channels. The trend is more pronounced in Greenland, Alaska and some parts of Canadian Arctic, and is clearly related to access to southern food in the remotest settlements. Such shifts are slow, sometimes on a generational scale, but could have measurable effects on seals harvest within a couple of decades, and possibly coinciding with the summer ice-free Arctic Ocean onset, a critical period for Arctic seal survival.

II.4. UNCERTAINTY ABOUT CLIMATE CHANGE IMPACTS

II.4.1. SHIFT TO A SEASONAL "ANTARCTIC-LIKE" SEA-ICE IN THE ARCTIC

A major impact of climate change in the Arctic — an ice-free Arctic Ocean in summer — looks certain, although when and where remain open questions.

While the onset of such a seasonal "Antarctic-like" sea-ice variability in the Arctic — with a sea-ice covered ocean in winter and an ice-free ocean in summer — cannot be predicted with certainty (5 to 70 years depending on which models or scenarios are used), we can be sure that Arctic seals as well as the all Arctic marine biodiversity will be faced with seasonal sea-ice shift before the end of this century. The shift between the normal Arctic system (a huge winter sea-ice extent covering all the Arctic seas and northern most parts of sub-Arctic seas and a permanent summer melting resistant sea-ice covering half of winter extent) to an Antarctic-like system has already begun, impacting coastal and continental

shelves waters of Arctic seas, which are the most productive parts of the Arctic Ocean where Arctic seals live (for a detailed analysis of the global effects of the seasonal sea-ice shift on Arctic Seals, see list of references given in endnote³⁵).

II.4.2. CLIMATE CHANGE IMPACTS ON ARCTIC MARINE ECOSYSTEMS

Climate change is by far the most serious threat to Arctic biodiversity and exacerbates all other threats. The impacts of climate change include a long list of changes in the physical environment, which will have profound effects on Arctic biodiversity. The conditions will vary spatially, but aside from temperature increases, the most pronounced changes are likely to include³⁶ :

- accelerating loss of sea-ice cover, especially multi-year ice,
- earlier and more variable sea-ice and snow melt,
- later onset of autumn sea-ice formation and snow precipitation,
- disappearance of coastal ice shelves,
- more frequent and severe extreme events (icing, erosion, storms, flooding, fire),
- ocean acidification,
- increased precipitation with more winter snow,
- increased freshwater discharge into the Arctic Ocean,
- increased periods of summer drought, but with more severe rains,
- flooding of low coasts,
- coastal erosion,
- increased frequency of winter thaw-freeze events including rain-on-snow resulting in ice crust formation,
- earlier drying of ponds,
- disappearance of perennial snow beds,
- thawing permafrost and thermokarst development with drainage of peat lands and ponds or establishment of new ponds.

The extent to which these effects are expected to develop varies between projections, but the overall direction is clear and several of them are already evident.

II.4.3. CLIMATE CHANGE IMPACTS ON ARCTIC SEALS

Climate change predictions for the coming decades may change the prognosis for some seal species significantly. In a warmer Arctic, endemic seals will face extreme levels of habitat change, the most dramatic being the reduction in sea-ice extension as well as earlier melting in spring. Impacts of sea-ice loss depend on the use of the different kinds of these habitats by the seals for reproduction, moulting and hauling-out behaviour and by where they catch their prey (Figure 5). As detailed knowledge about the way particular seal species are linked to sea-ice is lacking, there are significant differences of opinions regarding which seal species is most vulnerable to climate change. Most likely, all ice-associated seal species will face great challenges.

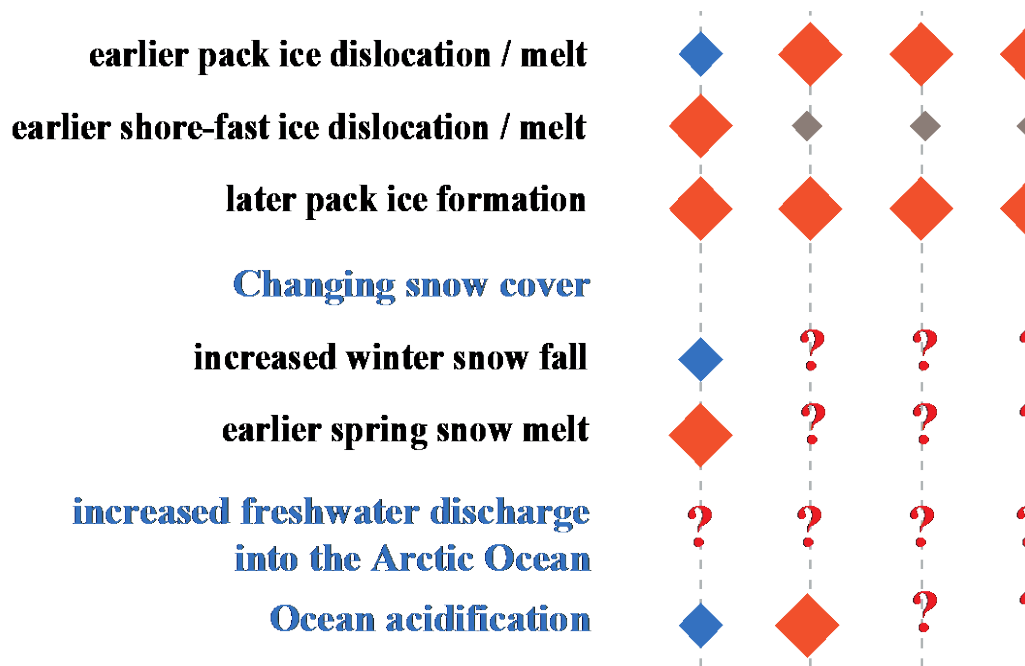


Figure 5 : *Expected climate change impacts on Arctic seals and walrus.*

Of the Arctic seals, the hooded seal is generally considered as the most sensitive as it has very specific feeding requirements and use sea-ice for whelping and moulting. Considering sea-ice condition requirements for denning and whelping, ringed seals appear to be more at risk than any other seals with a direct impact on pup survival of shore-fast ice and snow cover conditions (for more details, see list of references given in endnote³⁷).

As most of Arctic seals avoid multi-year sea-ice, which is too thick and far from productive continental shelves, this icy habitat has less impact on seal survival. The paradox is that it is the very last habitat to resist summer sea-ice melts in some models at the end of this century, a habitat not suitable for seals.

Less ice, together with increased water and air temperatures, will impact seal mobility and the density and distribution of their prey. Such conditions will increase competition from invasive temperate species and increase predation from sub-Arctic species unable to reach them, such as killer whales. In addition, it will increase the risk of disease and possibly increase the risk of contaminants. Seals will also be affected by an increase in human activities such as shipping and natural resource exploitation in areas previously inaccessible due to ice.

In terms of the natural evolutionary adaptation abilities of mammalian species, 5 to 70 years is very short. This period of time covering less than one generation in the low case to three generations in the longer case, and drastically too short for any kind of genetic adaptation process.

As seal species exhibit behavioural patterns which are much less flexible than those of primates or cetaceans, most scientist think it very unlikely that they can develop efficient behavioural adaptations to sea-ice retreat and elongation of the melting season, and especially to the shift northward of their whelping grounds as melting onset becomes progressively earlier. Most sea-ice seals systematically return to their birth site to reproduce despite the poor sea-ice cover.

Seasonal pack-ice, especially when it extends over continental shelves - the most productive regions of Arctic seas - is used by most Arctic seals. It is of critical importance for their feeding since most of their

prey lives in close relation with ice-covered continental shelves. Harp and ringed seals, the main target of Inuit hunters, are critically linked to seasonal pack-ice for all aspects of their life. Ringed seals depend almost exclusively on shore-fast ice for reproduction purposes.

As climate change principally impacts shore-fast ice and dense seasonal pack-ice, harp and ringed seals are expected to be significantly threatened by the earlier melting season onset. Such changes would greatly reduce reproductive success ; earlier dislocation and melting of ice reduce pup survival, as well as increase adult mortality due to increased energetic costs for their moulting (thermo-regulation costs are much higher in water than above ice in air) and for feeding, as sea-ice will be located further from the feeding grounds. Seal pup survival in ringed seal populations will also be reduced by the changing regime of snow fall, the reduction of snow on shore-fast ice reducing the availability of whelping dens for the mothers or inducing higher mortality rates in pups due to insufficient protection against the atmospheric cold and predation by polar bears and hunters.

Considering the lack of reliable knowledge about the future reaction of Arctic seal populations to climate change, especially for harp and ringed seals — the main target of Inuit hunters — the "Precautionary Principle" should be applied to seal harvests, both commercial and subsistence, and hunting quotas should be strictly linked to reliable reports of all catches, including struck and lost animals. The precautionary principle should also be applicable to Inuit hunters to maintain sustainable management of seal stocks in the Arctic Ocean as it undergoes the progressive effects of climate change.

III. INDIGENOUS SEAL HUNTING AND ANIMAL WELFARE LEGISLATIONS

III.1 WHAT DOES “ANIMAL WELFARE” MEAN?

In addition to the various religious, ethical and philosophical bases for animal welfare, there is increasing recognition of the ties between animal welfare indicators and animal health. In countries around the world, animal welfare concerns attract more attention as consumers recognize the links between animal health and animal welfare, and animal welfare and human well-being. The challenge is to increase food animal production while simultaneously ensuring good animal welfare and protecting food security.

What is meant by “animal welfare” depends in part on values that differ between cultures and individuals. These differences can be summarized under three broad headings (Fraser, 2008) :

- physical health and biological functioning of animals,
- “affective states” of animals,
- ability to live in a reasonably “natural” manner.

As pointed out by a recent FAO study, because the earliest animal welfare legislation was developed in countries where industrialized production is the norm, these instruments tend to focus on farm animals housed, transported and slaughtered in high technology environments designed to intensify production.³⁸ However, animal welfare legislation need not be limited to industrialized production. Well drafted legislation can and should apply to other types of production such as subsistence farming and small-scale commercial production. Different scales of production raise different concerns, but the basic animal welfare principles are common to all. Animal welfare often stimulates strong emotions and it is

important that, while addressing ethical aspects of new technologies whenever appropriate, developments in the field of animal welfare are based on a firm scientific background

III.2 INTERNATIONAL CONTEXT

III.2.1 THE WORLD ORGANIZATION FOR ANIMAL HEALTH

The World Organization for Animal Health (OIE) is the intergovernmental organization in charge of improving animal health worldwide. The OIE has increased in prominence and influence in recent years, especially since it was identified in the World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (STS Agreement) as the source of international standards for animal health.

The OIE “ has elaborated health standards for intensive farming. These standards are found in the OIE Terrestrial Animal Health Code. The Code aims to ensure the health of terrestrial animals and the safety of animal products in international trade”.³⁹ The OIE and its member states are committed to the harmonization and implementation of the animal welfare standards contained in the Code, while taking into consideration economic and social development needs.

The World Trade Organization (WTO) international trading system is designed to eradicate barriers to trade through the creation and enforcement of market access rules. As noted, the SPS Agreement identifies the OIE as the source of binding international standards on animal health.

Article XX of the General Agreement on Tariffs and Trade (GATT) lists trade restricting measures that can be exempt from WTO rules, including measures "necessary to protect public morals" (para. (a)) and measures "necessary to protect human, animal or plant health" (para. (b)).⁴⁰ Legal arguments have been framed to justify an exemption for animal welfare trade restrictions under both paragraphs, although it is generally agreed that animal welfare issues can more easily be justified as protecting human or animal health than public morals. Yet, because the WTO has not yet directly addressed the issue, the arguments themselves and the likelihood that they might succeed are speculative.

III.2.2 UNIVERSAL DECLARATION ON ANIMAL WELFARE

A world where animal welfare matters and cruelty ends.

In recent years, a number of non-governmental organizations (NGOs) under the leadership of the World Society for the Protection of Animals (WSPA) have advocated that the United Nations elaborate and adopt a Universal Declaration on Animal Welfare (UDAW). A global petition launched to support the UDAW initiative acquired over 2.2 million signatures in 2010 (www.udaw.org). According to established principles of international law, the UDAW would not be binding, although it would represent a consensus among states regarding animal welfare and would therefore be considered customary international law.⁴¹

In 2007, the International Committee of the OIE “decided to support the development of a UDAW that would call on countries to acknowledge the importance of animal welfare and that would, at the same time, recognize the OIE as the principal international animal welfare standard-setting body. The

International Committee considered that a UDAW would "complement and promote the work of the OIE, and facilitate global acceptance of OIE standards and their application at a national, regional and global level".⁴²

III.2.3 ANIMAL WELFARE AND NGOS

International animal welfare NGOs originally targeted farm and laboratory terrestrial animals. Since the 1970s, some NGOs (e.g. Humane Society International, International Fund for Animal Welfare) developed huge public awareness campaigns denouncing the cruelty of seal hunting. These campaigns were largely carried out by national NGOs in Canada, United States, United Kingdom, Belgium, Netherland and France, and some environmental NGOs, such Greenpeace. The first EU seal ban in 1983 resulted from huge EU citizen support to NGOs campaigns against seal pup killings.

Most of national and international NGOs with animal welfare concerns had not targeted Inuit seal hunting. However, their actions against commercial sealing methods resulted in the collapse of the seal skin market, damaging Inuit ability to sell their products. Some NGOS have presented official apologies to Inuit communities. A resurgence of intense activism against seal hunting during the early 2000s led to a second EU seal ban in 2009. During the stakeholder consultation process in 2008, participating NGOs asked for an Inuit exemption, a measure which was, however, insufficient to moderate the seal skin market collapse.

III.3 EU AGREEMENTS

The Council of Europe (COE), an international organization whose membership consists of the governments of nearly all the countries on the European continent, has been one of the leading fora for the promotion of animal welfare since the 1960s. Seeking to recognize the importance of animal welfare and the contributions animals make to human health and the quality of life, over time the COE has adopted six conventions on animal welfare. These have facilitated regional harmonization of animal welfare standards in the COE member states. In line with the COE conventions on animal welfare, the Parliamentary Assembly of the Council of Europe (PACE) has adopted three recommendations and are addressing seal hunting.

The Declaration on the Welfare of Animals annexed to Maastricht Treaty in 1992 was the first reference to animal welfare in EU legislation. The legal basis for animal welfare in European Commission treaties has been progressively strengthened.⁴³

IV. EU SEAL BAN DISPUTE

IV.1. HISTORIC CONTEXT

1983

The first EU seal import ban on seal pup skins was initiated in the late 1970s by Canadian and US NGOs. Campaigns against the large-scale harvest on spring sea-ice off Newfoundland of harp seal, white coats and hooded seal blue backs were brought into the spotlight by NGOs and international celebrities such as Brigitte Bardot in Europe. Images of clubbed and bloody baby seals on white sea-ice largely sparked a massive public outcry which led the European Economic Community (EEC) to ban the import of seal pup harvest products.

2009

Responding to new NGOs public awareness campaigns against seal harvest, mainly conducted by the International Fund for Animal Welfare in Brussels and relayed by many European animal welfare NGOs, the second EU seal import ban was adopted in 2009.

Earlier EU Member State actions include the Dutch Parliament proposal in 2005 to ban the import, export and all marketing of harp and hooded seals and their derived products and requested the European Commission to produce a legislative proposal for a seal ban. Also in 2005, Italy adopted a temporary ban on seal products. In 2006, the German Parliament voted unanimously on a motion to urge the government to ban seal products. In 2006, the European Parliament called for an end to the trade in seal products and urged the European Commission to produce a legislative proposal for a seal ban. Consequently, the European Commission asked the European Food Safety Authority (EFSA) to prepare a study on the welfare aspects of the killing and skinning of seals, which was submitted in 2007. In 2008, COWI (a consultancy)⁴⁴ submitted an assessment of regulatory frameworks and management practices for seal hunting to the European Commission.

Following a public consultation process, in 2009 the European Commission adopted a regulation banning the trading of seal products within, into and from the European Union to ensure that products derived from seal killed and skinned in ways that cause pain, distress and suffering are not found on the European market. It entered into force in 2010.

IV.2. FROM LIMITED TO GENERALIZED SEAL IMPORT BAN

The EU in response to animal welfare concerns has adopted two seal bans :

- The Council Directive 83/129/EEC of 28 March 1983 concerning the importation into Member States of skins of certain seal pups and products derived therefrom, confirmed by an indefinite extension of the Directive adopted through Council Directive 89/370/EEC of 8 June 1989.⁴⁵
- Regulation (EC) No 1007/2009⁴⁶ of the European Parliament and of the Council on trade in seal products, implemented by the Commission Regulation (EU) No 737/2010 of 10 August 2010⁴⁷ laying down detailed rules for the implementation of Regulation (EC) No 1007/2009 of the

European Parliament and of the Council on trade in seal products.

These two seal bans were initiated by NGOs and were justified by the EU Council by "renewable public pressure" (2003) and "doubts... expressed about some of the methods used for hunting seals, such as shooting, netting and clubbing, that can cause avoidable pain and distress" on one hand, and, on the other hand, in a more "nature conservation" objective by "doubts about the effects of non-traditional hunting on the conservation of harp seals in the East Atlantic, the Barents Sea and the White Sea" (2003). It is important to note that for the 2009 seal ban decision, the animal welfare argument was the sole justification that was given, excluding any "nature conservation" justification.

The 1983 Directive, as well as the 2009 regulation, foresaw "limited exemptions to respect the fundamental economic and social interests of Inuit and other indigenous communities".

IV.3. INDIGENOUS PEOPLES' PERSPECTIVE

Violet Ford, former vice-president of the Inuit Circumpolar Council of Canada, argued that Inuit seal hunting management is intrinsically sustainable and fully consistent with the Convention on Biological Diversity :

"Inuit practice sustainable development through a combination of age-old practices and modern institutional frameworks. Inuit pursue their economic goals and economic self-reliance while at the same time practicing sustainable use. Traditional practices of the Inuit relevant to marine resources have been carried out in a manner that contributes to and enhances their sustainable use. Inuit are for the most part a marine-based Indigenous People who rely heavily on marine biodiversity as a food source and for economic self-reliance, and this includes the hunting and harvesting of seals. This resource has always been hunted and harvested in a sustainable and humane manner. In 1983, the EU passed a limited import ban on some seal products, with an exemption for Inuit. The result was a global collapse in prices for seal products and an attendant 220% increase in the suicide rate of adult male hunters, who are one of the key holders of traditional knowledge".⁴⁸

Sealing in Nunavut represents CAD 4 - 6 million in food value each year. Before the 1983 EU seal ban, income from seal pelts could reach up to CAD 1 million annually. That income allowed Inuit to buy the equipment and fuel necessary to continue to hunt, which provided a crucial source of food.⁴⁹ In a small community like Resolute (Nunavut), income from sealing dropped from CAD 54 000 in 1982 to CAD 1 000 in 1983. With the ban on hunting the most commercially valuable fur seals - white and blue coat species - the whole seal fur market collapsed before recovering partially during the 1990s.

Related to the 2007 legislative process for a second EU ban, Violet Ford is quoted, "Today, another seal import ban by the EU has been introduced. Is this history repeating itself? The difference today is that Inuit are producing seal products for economic self-reliance and since these bans are in place, they impact severely on the economy, livelihoods, and traditional knowledge and culture of the Inuit, and on the sustainable use of this biodiversity".⁵⁰

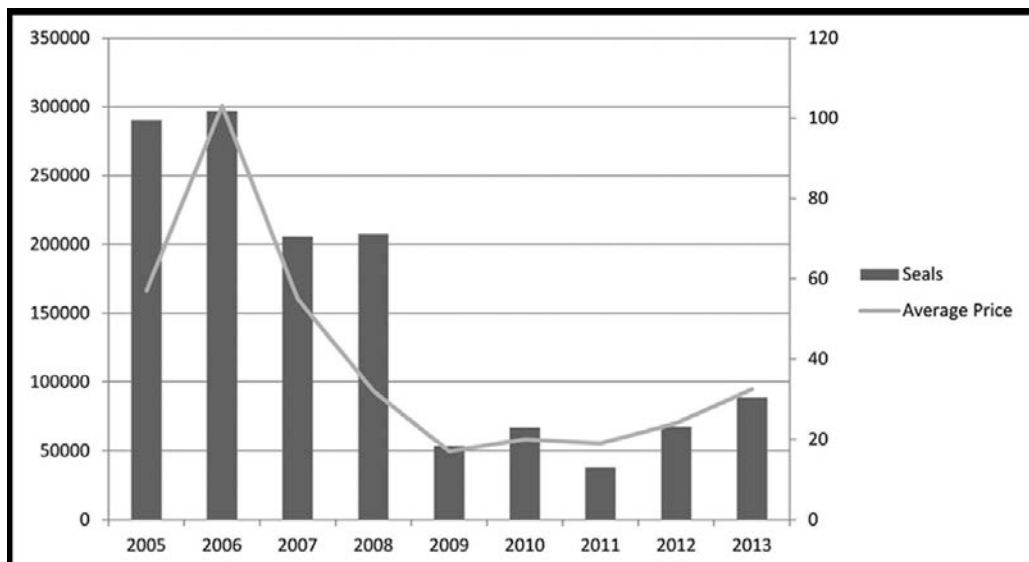


Figure 6 : Number of seals landed in Newfoundland and average seal skin price, 2005 – 2013. Source : Grid Arendal Publications, Case Study 4- Seals.

The Canadian seal product market, mainly provided by Newfoundland commercial harvesting, was severely impacted ; the average price for one seal fell by more than 50% within one year (Figure 6) : ⁵¹

“While in 2006 almost 300 000 seals were landed, generating around 30 million Canadian dollars with an average of about 102 dollars per seal, a massive drop occurred in 2007 when the legislative process for a ban was in full progress. The following year around the same number of seals of around 200 000 was caught while the average price dropped to 32 dollars, amounting to a landed value of 6.6 million dollars. In the adoption year of the ban, 2009, the number of seals dropped to 53 531, generating merely 857 000 dollars with an average of 17 dollars per seal. Since then, the average price has slightly increased and amounted to 19 dollars in 2011, with a number of seals ranging at around 38 000 with a landed value of 735 000 dollars.”

A similar collapse has been observed in Greenland where the seal skin industry saw a 237% decrease in turnover (affecting Greenlandic hunters - tanning, and selling to internal and external markets) (Table 5). Sales to export market have fallen drastically and around DKK 40 million have been lost from sales in the EU market. ⁵²

Directly dependant on seal skin market prices, Inuit people experienced an important decrease of their subsistence seal-hunting outcome. ⁵³ The amount of that economic loss is difficult to estimate because of the wide variability of calculation modes used by different sources. On average the loss estimate is 50% or more, but much higher for the Inuit living in the far north in remote settlements.

Year	EU	Outside EU	Number of sealskins sold	Value in 1.000 DKKR
2004	71 %	29 %	115.723	45.477
2005	69 %	31 %	108.372	54.399
2006	66 %	34 %	91.026 s	59.681
2007	43 %	57 %	45.043	20.889
2008	16 %	84 %	31.307	11.132
2009	22 %	78 %	19.602	5.201
2010	26 %	74 %	23.167	5.760
2011	36 %	64 %	Not available	Not available

Source: Great Greenland A/S

Table 5 : *Evolution of Greenland sealskin trade, 2004 – 2011.*

"With the cost of living in the Arctic regions many times that of southern regions, it is important that Inuit are able to sell seal skins at a reasonable price and that Inuit artisans and fashion designers have equal opportunity to develop a viable world market for their inspired creations. Even with an Inuit exemption, the effect of a ban on seal-products will render the price of seal skins so low as to make it virtually pointless for seal hunters to sell them." ⁵⁴

Another difference with the 1983 ban is the existence, since 1992, of the Convention on Biological Diversity and its objectives which include the conservation and sustainable use of biological diversity, and the fair and equitable sharing of benefits arising from its utilization. This treaty provides for involvement of indigenous communities in the sustainable use of biological resources coinciding with its objectives.

CBD is particularly significant because it recognizes, in its preamble, the close and traditional dependence on biological resources of many indigenous and local communities that embody traditional lifestyles, and the desirability of equitable sharing of benefits arising from the use of traditional knowledge, innovations, and practices relevant to the conservation of biological diversity and the sustainable use of its components.

The CBD preamble, along with Article 8(j), is one of the key articles for indigenous communities. It provides that each contracting party shall as far as possible and as appropriate:

Subject to its national legislation respect, preserve, and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.

Indigenous Peoples have been very influential with national governments to ensure that decisions of the CBD Conference of the Parties (COP) provide for their full and effective participation. It is an indication of the commitment that governments are making to implement Article 8(j). ⁵⁵

The CBD Decision (VII/12) relating to the Addis Ababa Principles and Guidelines for Sustainable Use provides a framework for assisting governments, indigenous and local communities, resource managers, private sector and other stakeholders to use biodiversity in a sustainable manner. The Addis Ababa

Principles and Guidelines could be applied in the case of seal management and overall marine governance by the Inuit. Relevant to the seal ban are principles 1 and 9 :

- Principle 1 states that when an international agreement adopts a policy regarding the use of biodiversity, national laws must be compatible if sustainability is to be enhanced. The associated operational guidelines involve a consideration of local customs and traditions, and identify any overlaps, omissions and contradictions in existing laws and policies.
- Principle 9 provides that sustainability of use depends on biological parameters of the resource being utilized and recognizes that social, cultural, political and economic factors are equally important ; it is therefore necessary to take such factors into account and involve indigenous and local communities, and the people experienced in these different fields, at all levels of the decision-making process. The guidelines state that such factors that could influence the sustainability of management should be taken account of.

EU SEAL IMPORT BAN CONSIDERED INCONSISTENT WITH THE CBD OBJECTIVES BY INUIT

The principal Canadian Inuit organization, Inuit Tapiriit Kanatami, and various Canadian, Norwegian, Greenlandic professional hunters, manufacturers and traders of seal products, consider that the CBD principle has not been represented with regard to the seal import ban. They see the seal import ban imposed by the EU as inconsistent with principles and guidelines in light of the biodiversity being used, the conditions under which they are used and the cultural context in which use is taking place.

EU SEAL IMPORT BAN DOES NOT FULLY MEET THE UN DECLARATION OF THE RIGHTS OF INDIGENOUS PEOPLES

Inuit representatives denounce the "colonialist" interpretation of Indigenous Rights to self-determination. Aiju Peters, an Inuit lawyer and seal skin clothes and garments designer, noted : ⁵⁶

"for a seal product to be exempt from the ban it not only has to "contribute to Inuit subsistence" but also must be "traditionally hunted" by an indigenous member of the Inuit homelands. This stipulation is very colonial - it implicitly paints a picture of Inuit out on the land, without any contemporary aid, such as store bought clothes, snow machines or rifles. The regulation defines Inuit as "members of the Inuit homelands where they hold aboriginal rights." This does not recognize that according to the Nunavut Land Claims Agreement 1993, Inuit in Nunavut have the right to define who is Inuit, not the European Parliament.

The regulation does recognize that under the United Nations Declaration on the Rights of Indigenous Peoples "the hunt is an integral part of the culture and identity" of indigenous peoples. However, the regulation omits to mention that the UN Declaration also states that "Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development."

IV.4. EU SEAL BAN HAS BEEN VALIDATED

World Trade Organization rejected Canada and Norway Claims

In response to claims that the EU seal import ban violated the "free exchange" principle as defined by the World Trade Organization (WTO), Canada and Norway submitted claims against the EU seal import ban to the WTO Dispute Settlement Body in February 2012. It concluded in November 2013 that : ⁵⁷

... it fulfills the objective of addressing the EU public moral concerns on seal welfare to a certain extent, and no alternative measure has been demonstrated to make an equivalent or greater contribution to the fulfillment of the objective as the EU seal regime

and, despite some inconsistencies with EU obligations regarding the Agreement on Technical Barriers to Trade, that :

... it has nullified or impaired benefits accruing to Canada and Norway under these agreements.

The Court Of Justice of European Union Validated the EU Seal Import Ban

At the same time the groups also made a claim to the Court of Justice of the European Union (CJEU). They contended that the principal objective of the basic regulation is the protection of animal welfare and that such an objective does not fall within the exclusive competence of the EU.

The General Court dismissed the action in April 2013, confirming that : ⁵⁸

The objective of the basic regulation, which is the improvement of the conditions of functioning of the internal market, taking into account the protection of animal welfare, cannot be satisfactorily achieved by action undertaken only in the Member States and requires action at EU level.

In response to concern and pressure from citizens concerned about animal welfare, several Member States had adopted or were in the process of adopting legislative measures aimed at restricting or banning economic activity linked to the production of seal products. Consequently, the coexistence within the EU of different commercial conditions resulted in a fragmentation of the internal market.

The legislature took care to ensure that the fundamental economic and social interests of Inuit communities engaged in the hunting of seals as a means to ensure their subsistence was not adversely affected. For that reason, the regulations provided for an exception to the ban on the placing on the market of seal products, where those products resulted from seal hunting by Inuit communities and other indigenous communities for the purposes of subsistence.

Irrespective of those decisions, Inuit Tapiriit Kanatami, the principal Canadian Inuit organization, contested the validity of the EU seal ban until the recent Canada – EU Joint Statement.

Canada -EU Joint Statement Gives Inuit Seal Products Access to EU Markets

Canada - EU Comprehensive Economic and Trade Agreement (CETA) negotiations produced a Joint Statement on Access to the European Union of Seal Products from Indigenous Communities of Canada which was signed in October 2014. It sets out the framework for co-operation to ensure that Canadian indigenous communities are treated the same as any other Indigenous community seeking access for seal products in markets within the European Union.⁵⁹

The joint statement recognizes the importance of preserving traditional ways of life in indigenous communities and establishes that the two sides will:

- Ensure that nothing prevents the participation of Canadian non-indigenous persons and organizations from processing, manufacturing and marketing Canadian indigenous seal products.
- Explore possibilities for supporting indigenous communities and traditional ways of life through capacity building and the exchange of best practices.
- Explore how indigenous communities can benefit from the new opportunities opened by the Canada-European Union Comprehensive Economic and Trade Agreement to develop their economic, social and environmental potential.
- Ensure that indigenous seal products imported into the European Union are not limited due to their type or intended purpose.

An expert group will collaborate with stakeholders to establish the administrative arrangements required for access to the EU under its exemption for seal products from Canadian indigenous communities. If the Canada-EU deal allows “non-indigenous persons” to process, market and manufacture seal products from indigenous harvesters, non-indigenous hunters appear to be left out of the agreement.

The Joint Statement has been denounced by the Canadian Sealers Association : ⁶⁰

“...very disappointed in the Government of Canada’s decision to sign a trade agreement with the European Union this coming Friday 26 September, without directly including the east coast seal industry and favoring a very restrictive exemption for Aboriginals. It clearly demonstrates that their understanding of the east coast seal harvest is so narrow and misguided that it is destroying an industry that had been in existence for hundreds of years and is an intricate part of life for all rural people especially in Newfoundland and Labrador, where a very large part of the seal population congregate off our coast, for several months each year.

A strong commercial sealing industry is essential, if we are to keep a large seal population from getting out of control, and further raising havoc with a very delicate ecosystem that is already being tested to its limits. Also for most sealers, income from harvesting seals has historically represented about one-third of their annual income and it is absolutely essential, that it be maintained”.

With this agreement, Canada appears to now accept the indigenous exemption that the European Parliament created in 2009. This condition banned Canadian Inuit seal products from EU markets as Canadian Inuit and non-Inuit hunters were undistinguishable.

Inuit representatives welcomed the agreement as an important first step in restoring economic opportunities for Inuit sealers : ⁶¹

“The exemptions applied to the European Union’s prohibition on the import of seals and seal products unfairly discriminated against Canadian Inuit, and we are hopeful that today’s announcement marks the commencement of a process that will rectify this concern,” said Nunavut Premier Peter Taptuna.

Inuit Tapiriit Kanatami (ITK) president, Terry Audla, noted encouragement for the Canada-EU joint statement and sees it as an important first step in restoring economic opportunities for Inuit sealers. ITK emphasizes that the plans must work for all four Inuit regions and include a realistic phase-in timetable. “We believe that implementing such a plan will take much work and co-operation from all sides. It is critical that Inuit have direct participation as this work proceeds. We remain hopeful that the trade of seal products — an abundant, renewable, sustainable and natural resource – be once again a generator of economic growth for Inuit communities,” Audla said.

IV.5. POLITICAL CONSEQUENCES

The most evident political consequence is the renewal of tensions in EU political and economic co-operation with Canada and Norway which submitted claims against the EU to the WTO Dispute Settlement Body.

All of the Arctic countries follow the position expressed by Peter Harrison, a Canadian official : ⁶²

“Europeans need to learn that the Arctic is not terra incognita, it is not like the Antarctic (...). Many people in Europe believe they should take a role in governing areas that are not anyone’s territory. Well, the Arctic happens to be owned by the countries around it, and a third of it is in Canadian territory.”

Regarding the issue of the EU becoming a permanent observer on the Arctic Council, in 2009, Canada’s Minister of the Foreign Office, Lawrence Cannon, stated : ⁶³

“Canada doesn’t feel that the European Union, at this stage, has the required sensitivity to be able to acknowledge the Arctic Council, as well as its membership, and so therefore I’m opposed to it (...) As long as this European Union doesn’t have the required sensitivity to the needs of northerners, I see no reason why they should be ... a permanent observer on the Arctic Council.”

Tensions with all Inuit Peoples representatives have also emerged, mostly with Canada and Greenland Inuit for whom the EU seal import ban is a "colonialist" interpretation of Indigenous Rights to self-determination. The issue of the right for Inuit to self-determination is particularly sensitive in a period where most of Inuit seek more autonomy and participation to decision-making to their governments particularly the Nunavik in Canada and Greenland in its relations with Denmark, as well as in international fora such as the Arctic Council.

The Canada – EU Joint statement on Inuit seal products may partially address the Canadian Inuit issue. However, having access to EU markets does not mean their seal products will be bought by EU consumers, a problem already evident to the Greenland Inuit. The joint agreement is likely to have a more positive impact on the general diplomatic and bilateral relations and possibly allow the EU to obtain observer status in the Arctic Council.

NON-EU SEAL SKIN MARKET

The Russian Federation banned harp and hooded seal skin import and export. Belarus and Kazakhstan adopted the ban in 2011, as did Taiwan in 2013. The non-EU international seal skin was severely reduced as the Russian Federation constituted the second-most important seal skin and seal product importer.

To address the seal skin market reduction due to closure of EU and Russian Federation markets, in 2014 a marketing plan was elaborated and spent in 2014 on a marketing plan to help expand Canada's international seal and long fur market in China and Turkey, two of the most important fur trade markets. Funding for the plan came from the Canadian Northern Economic Development Agency (CAD 51 200), the governments of Nunavut and Northwest Territories (CAD 7 300 each) and the Fur Harvesters Auction (CAD 25 400).⁶⁴ Whether the campaign will be sufficient to restore the seal skin market is a pending question, but important if an objective of the EU seal import ban is to end seal hunting.

V. SCIENTIFIC AND ETHIC EVALUATION OF INDIGENOUS SEAL HUNTING

V.1. SCIENTIFIC EVALUATION OF INDIGENOUS SEAL HUNTING

Within the limits of available data about seal population trends (see section II.2.), seal hunting is currently conducted as a sustainable living resource harvest as defined by the Convention on Biological Diversity (see section II.1.). The two main target species, harp seal (40% of aboriginal catch and 93% of commercial sealing) and ringed seal (47% of aboriginal catch, not a commercial species), number about 8 million for harp seals and 3 – 4 million ringed seals and are not considered to be threatened.

Although current indigenous and commercial Arctic seal harvests are conducted in a sustainable manner (see section I.2 and II.2), climate change impacts on Arctic ecosystems in the coming decades will likely make them unsustainable as all ice-dependent seals species will be threatened by sea-ice retreat.

If indigenous peoples' interest in traditional seal hunting and seal products fades as alternative opportunities and globalization take effect, Inuit seal hunting pressure on Arctic seals populations may be progressively reduced (see section II.3.). It is possible that a substantial reduction of seal catch could be evident by the mid-21st century. Yet such a seal hunting decrease would be of a different order of magnitude to the seal population decline due to climate change, the first being about thousand seals a year and the second up to tens or hundreds of thousands of seals a year.

NEED FOR INTERNATIONAL MANAGEMENT OF SEAL HUNTING

As climate change progresses, the need for more efficient Arctic ecosystems and seal population monitoring will increase drastically to secure their sustainable management. As Arctic seal distribution is not limited to one country, and Inuit hunters live in four different countries with different legislation and management processes, monitoring and management have to be placed at the international level.

Considering the Precautionary Principle underlying sustainable use of living resources, the very high level of uncertainty of the Arctic seals survival with the changing sea-ice conditions, Arctic seal species hunting should, at least, be largely restricted (all species) and suppressed for some species or

populations (hooded seal, eastern Atlantic harp seal and Atlantic walrus). Restriction should be managed at the international level as all species distribution cover more than one nation. Such international management could be accomplished through the CITES convention, with most seals species listed in IUCN Red List of Threatened Species.⁶⁵ Annex II (limit hunting to annual quotas) and the most endangered species and populations listed in Annex I (no killing allowed).

In addition, an international Arctic Seals Management Organization, involving Inuit representatives, countries with Arctic seals and walrus in their jurisdiction (including the EU) and all concerned stakeholders, would be necessary to co-ordinate and unify monitoring efforts, management decisions and legislation to cover the Arctic seas ice habitats. Such an organization, focussed on all Arctic seals species, should be complemented by an independent scientific advising structure, possibly an enlarged Joint ICES/NAFO Working Group on Harp and Hooded Seals, to facilitate the setting of effective Total Allowable Catch quotas. Two possibilities that would accelerate the creation and efficient functioning of such an organization could be within an existing international organization such as the International Whaling Commission Small Cetaceans sub-committee or through the enlargement of NAMMCO jurisdiction to cover the Arctic Seas.

As primary users of Arctic living resources, Arctic indigenous representatives should be involved in such an Arctic seal management organization and fully participate in the decision-making process. As should other relevant stakeholders such as Inuit hunting groups, seal product manufacturer and scientific advisors. Such involvement would meet one of Arctic indigenous demands. It may render better data collection about seals species that are needed for population estimates and catch inventories. These data are currently problematic.

V.2 ETHICAL EVALUATION OF INDIGENOUS SEAL HUNTING

V.2.1. INDIGENOUS SEAL HUNTING AND INDIGENOUS RIGHTS

The EU supported the 2007 UN Declaration on Rights of Indigenous Peoples adopted and seeks to integrate indigenous issues into all aspects of its external policies (political dialogues, multilateral fora, financial support). The EU funds projects, many run by international organizations or NGOs, through the European Instrument for Democracy and Human Rights. They typically support indigenous representatives as they seek to participate in relevant UN activities.

EU goals on the defence of Aboriginal Rights and Traditions, an issue for which it is particularly active in international fora, are :⁶⁶

The rights of indigenous peoples are a priority under the European Instrument for Democracy and Human Rights. The goals are to increase indigenous peoples' rights and capacity to control their own social, economic and cultural development, while enhancing territorial rights and capacity for sustainable management of biological resources.

Development/co-operation actions of the EU are driven by the European Consensus on Development. Greenland, as an overseas country linked to Denmark, receives annual EU financial support through Europe Aid for its development (EUR 25 million + EUR 42.8 million to support fishing).⁶⁷

For more details, see ACCESS report D.5.61 "Operational Conditions of Effective Participation of Arctic Indigenous Peoples in the Future Arctic".

DEFINITION OF "SUBSISTENCE" AND "TRADITIONAL HUNTING"

Inuit Peoples are particularly sensitive to others defining "Inuit", "subsistence" and "traditional hunting". They contend that the EU and others should abide by the definitions already adopted by the United Nations and that other related terms should be defined in the relevant fora with the participation of relevant indigenous peoples and governments. As the terms subsistence and traditional hunting have a broader scope of applicability than just seal hunting, in particular for indigenous peoples inside the EU (Saami) and overseas countries and territories, the EU could initiate this work in relevant international fora, such as UNESCO.

V.2.2. INDIGENOUS SEAL KILLING METHODS AND ANIMAL WELFARE

Statements concerning seal killing methods and animal welfare have to take into account the best scientific knowledge available about seal physiology. This has been documented by the Panel on Animal Health and Welfare of the European Food Safety Authority (EFSA) in a 2007 report to the EU Commission.⁶⁸ Another consideration relates to the normal living conditions of seals and particularly natural death, which have to be considered in order to evaluate the "natural" suffering and fear fellyings, the two conditions used to estimate wild living animal welfare.

Table 6 shows the regional distribution of killing methods and distribution of total seal catch in Greenland. Except in North Greenland where net trapping is largely used, rifle shooting ("Uuttoq" hunting, ice-edge hunting and coastal boat-based hunting) are currently the main killing methods used by Inuit hunters in Greenland. Rifle shooting is the best way to minimize the risk of escape of a fatally wounded animal or rapid sinking of the seal, head shots are the preferred aim, ensuring an instantaneous death with the lower risk of any suffering or feelings by the animal. This pattern may be reflective of Canadian, Alaskan and Siberian Inuit sealing.

Region	Distribution of catch with nets (%)	Distribution of catch with rifles (%)	Distribution of total catch (%)
North Greenland	68	49	54
West Greenland	19	26	24
East Greenland	11	17	15
South Greenland	2	9	7

Table 6 : Greenland - distribution of hunt of ringed seals by use of nets or rifles and in total catch per region, 1993-2007.⁶⁹

With net trapping, the seal's death results from a drowning process with suffocation, a death which is generally considered highly stressful by European and western cultures. It is important to consider that drowning is a frequent form of natural death for seals and other marine mammals as starvation, illness or any kind of incapacity to swim to the surface to breathe make them sink and die by suffocation. In ice-covered Arctic seas, drowning can also result from a rapid freeze of a breathing hole or closure of openings by drifting ice plates moved by currents and winds, a quite frequent event, and one that likely will increase with climate change effects.

The EFSA judged seal death by net trapping as "clearly protracted, and suffering is likely to be prolonged". But in comparison with "leghold trapping" used on terrestrial mammals, net trapping results in a death analogous to a natural and frequent death in seal natural life. Consequently, net trapping should not be considered as cruel.

Sea-ice retreat resulting from climate change may reduce the use of net trapping in northernmost Greenland, at least during spring. This is because sea-ice stability degradation will make net trapping more difficult and increasing open ice-free water will facilitate the use of rifles from boats, an easier and much less time-consuming method.

Seal pup killing in the spring (mostly clubbing, "hakupik", in Canada by professional sealers), especially the ringed seals white coat, is usually performed in the shore-fast ice lairs when pups are being nursed by the mother. The method is not considered to be cruelty, as generally the mother seal is also killed, which would result in the starvation death of the pup. This has been recognized and used to justify the Inuit exemption in the EU 2003 pup-seal ban. The Panel on Animal Health and Welfare has recognized clubbing as very efficient in terms of instantaneous death or unconsciousness when performed correctly.⁷⁰

In Inuit culture, the hunter follows a long learning process, observing experienced hunters for years prior to a first kill. This process is not only practical training, but also a cultural and spiritual learning leading the hunter to kill the prey in a way making the seal "accepting to be hunted again when it returns to life". For Inuit, good hunting practice is not only a question of efficiency, but also of respect for a spiritual kin.

As for any wildlife hunt, killing conditions cannot be controlled in the way that they are for farmed or captive animals, so that "best hunting practice" (i.e. instantaneous death or unconsciousness) cannot be guaranteed for all seal kills. But, as traditional hunter development is a long process, involving a strong spiritual and cultural aspect in which hunting practices are embedded, rates of "bad kills" are likely to be less than for commercial seal hunting where profitability may prevail over animal welfare.

Greater unpredictability of sea-ice conditions due to climate change is likely to increase the number of bad kills, as traditional knowledge and experience are less useful in shifting changing conditions. So Inuit hunting methods should adhere to the general principles to "to avoid in general all forms of cruelty to animals" and "to avoid unnecessary suffering" (EU Council Directive 74/577/EEC).

V.2.3. BALANCING ANIMAL WELFARE AND INDIGENOUS PEOPLES' RIGHTS

Concern about animal welfare has increased in recent decades in some societies, including the European Union. It is linked to ecological sensibility and supported by active NGOs. As a result, the EU has included it at various legislative levels (see section III.3). It also led the EU to ban seal products in response to civil society pressure, on the basis of non-scientific arguments, such as the cruelty of killings seal pups and all killing methods used by Inuit and commercial sealers (see section IV).

If animal welfare sensibility is to become more important for EU citizen concerns and if translated into legislation, the EU may evolve towards an emotionally-guided community, with more restrictions on the use of living resources regardless of their sustainability. This would place the EU in opposition with most of its economic and political partners.

Whether the market for seal products is to be maintained is not only a question of animal welfare but also a question of Indigenous Peoples' rights. As seal-hunting provides Inuits with food security, (especially in the most remote communities in the High Arctic), as well as cultural identity and self-determination, it meets the requirements of the UN Declaration on Rights of Indigenous Peoples and specific articles of CBC and other international agreements concerning indigenous rights (see sections I.4 and II.1). These agreements are all supported by the EU.

But in a rapidly changing world - and not only because of the climate change - defending the traditional way of life of 156 000 Inuit, when most of the rest of humanity have to adapt their habits could become challenging. Inuit Peoples are seeking ways to be part of the global economy by using their natural resources, which are scarce and mostly of marine origins. Most of all, they claim their right to self-determination and to be fully part of the decision-making about all aspects of Arctic governance, including seal products commercialization and natural resource management.

In that perspective, the Inuit exemption in EU legislation in its present form is not sufficiently precise. It could be amended through, for example, a temporary exemption application. This could minimize the "museum-like" perception of Inuit seal hunting by EU citizens, or the creation of an "Inuit hunting product" label to help maintain a restricted market (recognized as insufficient by both Inuit representatives and the Panel on Animal Health and Welfare) acceptable for EU citizens.

Unlike the ecological elements that can be assessed via scientific tools, animal welfare and human rights involve questions of sensibilities, opinions, beliefs and morality. These include highly emotional values which can reflect cultural traits and may be subject to unpredictable changes over time. Balancing animal welfare and Inuit rights are social questions in which natural and social sciences can enlighten aspects of the issues, but the decisions remain political.

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³ *Ibid.*

⁴ Arctic Council Indigenous Peoples Secretariat, 7 August 2009, EU Seal Ban Attacks Cultures, www.arcticpeoples.org/news/item/188-eu-seal-ban-attacks-cultures.

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⁸ European Commission, Trade in seal products, http://ec.europa.eu/environment/biodiversity/animal_welfare/seals/seal_hunting.htm.

⁹ Subarctic seals species : Harbor Seal, Grey Seal. Arctic seals species : Ringed seal, Bearded seal, Harp seal, Hooded seal, Spotted seal, Ribbon seal.

¹⁰ For more details, see also : <http://www.grida.no/publications/arctic-biodiversity/page.aspx?id=4594>

¹¹ *Op. cit.* note 2.

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¹⁶ *Op. cit.* note 2.

¹⁷ IUCN Red List of Threatened Species : Ringed seal, www.iucnredlist.org/apps/redlist/details/41672/0.

¹⁸ IUCN Red List of Threatened Species : Bearded seal, www.iucnredlist.org/apps/redlist/details/8010/0.

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- ³⁴ *Ibid*, pgs 605-607.
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³⁸ *Op. cit.* note 1.

³⁹ *Op. cit.* note 1.

⁴⁰ GATT is an international trade agreement adopted in 1948 which led to the creation of an international organization known as the GATT, which was the first and only international trade organization before the establishment of the WTO in 1995. The WTO incorporated the agreements negotiated during the "GATT years", which remain binding on GATT signatories.

⁴¹ *Op. cit.* note 1, p20.

⁴² *Op. cit.* note 1, p21.

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- The three Council of Europe (COE) conventions of principal interest for animal welfare :
 - The European convention for the protection of animals kept for farming purposes (ETS No. 87) of 1976, revised in 1992 (ETS No. 145). ETS No. 87
 - The European convention for the protection of animals during international transport (ETS No. 65) of 1968, revised in 2003 (ETS No. 193).
 - The European convention for the protection of animals for slaughter (ETS No.102) of 1979. ETS No. 102
- The Parliamentary Assembly of the Council of Europe (PACE) various texts (Recommendations or Resolutions) which lead to the seal hunting recommendation:
 - <http://assembly.coe.int/Main.asp?link=/Documents/AdoptedText/ta78/EREC825.htm>
 - <http://assembly.coe.int/Main.asp?link=/Documents/AdoptedText/ta93/ERES1012.htm>
 - <http://assembly.coe.int/Main.asp?link=/Documents/AdoptedText/ta04/EREC1689.htm>
 - <http://assembly.coe.int/main.asp?Link=/documents/adoptedtext/ta06/erec1776.htm>
- Three significant documents address future objectives and strategies on animal welfare in the EU:
 - Community Action Plan on the Protection and Welfare of Animals 2006-2010 (COM(2006)13 final of 23. 1.2006),
 - Animal Health Strategy for the EU 2007-2013,
 - European Union Strategy for the Protection and Welfare of Animals 2012-2015 (COM(2012) 6 final of 15.02.2012).
- EU legislation on the protection and Welfare of wild animals:
 - Council Regulation (EEC) No 3254/91 of 4 November 1991 prohibiting the use of leghold traps in the Community and the introduction into the Community of pelts and manufactured goods of certain wild animal species originating in countries which catch them by means of leghold traps or trapping methods which do not meet international humane trapping standards Official Journal L 308, 09/11/1991 p. 0001– 0004.
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- ⁴⁴ www.cowi.com/topmenu/aboutcowi/Pages/aboutcowi.aspx
- ⁴⁵ <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:31983L0129&from=EN>.
- ⁴⁶ <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32009R1007&from=EN>.
- ⁴⁷ <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32010R0737&from=EN>.
- ⁴⁸ *Op. cit.* note 2.
- ⁴⁹ Government of Canada : www.canadainternational.gc.ca/eu-ue/policies-politiques/seals-phoques.aspx?lang=eng.
- ⁵⁰ *Op. cit.* note 2.
- ⁵¹ Nikolas, S., (2014), “The Goals of the EU Seal Products Trade Regulation: from Effectiveness to Consequence”, *Polar Records*.
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