

Climate change, oil and gas development, and Inupiat whaling in northwest Alaska

Changement climatique, développement pétrolier et gazier, et chasse à la baleine chez les Inupiat du nord-ouest de l'Alaska

Nobuhiro Kishigami

Volume 34, Number 1, 2010

Les Inuit et le changement climatique
The Inuit and Climate Change

URI: <https://id.erudit.org/iderudit/045406ar>

DOI: <https://doi.org/10.7202/045406ar>

[See table of contents](#)

Publisher(s)

Association Inuksiutiit Katimajit Inc.
Centre interuniversitaire d'études et de recherches autochtones (CIÉRA)

ISSN

0701-1008 (print)

1708-5268 (digital)

[Explore this journal](#)

Cite this article

Kishigami, N. (2010). Climate change, oil and gas development, and Inupiat whaling in northwest Alaska. *Études/Inuit/Studies*, 34(1), 91–107.
<https://doi.org/10.7202/045406ar>

Article abstract

Relationships between human beings and whales vary temporally and spatially. The Inupiat in northwest Alaska have historically formed a social relationship with bowhead whales, which they hunt for their subsistence. Whaling still occupies a core position in the lives of the majority of the coastal Inupiat and is related to their other activities although their culture has diversified and changed. Using actor-network theory from a political economy perspective, this paper describes several interrelated internal and external factors (actors) that threaten the continuation of whaling. The author concludes that whaling is directly linked to the cultural security of the Inupiat.

Climate change, oil and gas development, and Inupiat whaling in northwest Alaska

Nobuhiro Kishigami*

Résumé: Changement climatique, développement pétrolier et gazier, et chasse à la baleine chez les Inupiat du nord-ouest de l'Alaska

Les relations entre les êtres humains et les baleines varient temporellement et spatialement. Les Inupiat du nord-ouest de l'Alaska ont créé historiquement un lien social avec les baleines franches qu'ils chassent pour leur subsistance. La chasse à la baleine est encore au cœur de la vie de la majorité des Inupiat côtiers et elle est liée à leurs autres activités même si leur culture s'est diversifiée et a changé. Par le biais d'une perspective politico-économique de la théorie de l'acteur-réseau, cet article décrit plusieurs facteurs (acteurs) internes et externes interreliés qui menacent le maintien de la chasse à la baleine. L'auteur conclut que la question de la chasse est directement liée à la sécurité culturelle des Inupiat.

Abstract: Climate change, oil and gas development, and Inupiat whaling in northwest Alaska

Relationships between human beings and whales vary temporally and spatially. The Inupiat in northwest Alaska have historically formed a social relationship with bowhead whales, which they hunt for their subsistence. Whaling still occupies a core position in the lives of the majority of the coastal Inupiat and is related to their other activities although their culture has diversified and changed. Using actor-network theory from a political economy perspective, this paper describes several interrelated internal and external factors (actors) that threaten the continuation of whaling. The author concludes that whaling is directly linked to the cultural security of the Inupiat.

* National Museum of Ethnology and the Graduate University for Advanced Studies, 10-1 Senri Expo Park, Suita City, Osaka, Japan 565-8511. inuit@idc.minpaku.ac.jp

Introduction

When American commercial whalers began to observe fewer whales in the North Pacific, they sought new whaling grounds and entered the Arctic Ocean in 1848. They began to hunt bowhead whales (*Balaena mysticetus*) from the Alaskan coast to the coast of Canada's western Arctic. As a result, they caught more than 18,000 whales from that year to 1914, when commercial whaling in the Western Arctic ended (Bockstoce et al. 2005). By the early 20th century, the whales were drastically reduced in number. Due to their scarcity, hunting of bowhead whales was banned by an international whaling agreement in 1931. However, the United States permitted whaling by Alaskan Inuit under the Aboriginal exemption rule. The Marine Mammal Protection Act of 1972 and Endangered Species Protection Act of 1973 granted a subsistence exemption to Native Americans who catch game in traditional ways. The U.S. government has thus held to the position of protecting subsistence whaling by Indigenous peoples. Under these circumstances, Inupiat and Yupiit hunters caught about 11 whales a year on average from the early 20th century to around 1970.

In the 1970s, they hunted 29 whales per year on average, and the number of hit and lost whales increased. The catch increase was brought about by caribou hunting restrictions and the newly available cash for whaling from oil and gas exploration employment and the land claim settlement (Gambell 1982: 1). When U.S. government scientists reported to the International Whaling Commission (IWC) that the Bering Sea stock of bowhead whales had fallen to an estimated low of 600 to 1,800 in total, the IWC decided to ban Alaskan Aboriginal whaling in 1977 (*ibid.*: 2). Ten Inupiat and Yupiit whaling communities together established the Alaska Eskimo Whaling Commission (AEWC) to deal with the IWC ban (Braund and Moorehead 1995). The AEWC and the U.S. government negotiated with the IWC to lift the ban. As a result, in 1978 the IWC General Assembly agreed that Inupiat and Yupiit whalers could catch 18 whales or harpoon 27 in 1979 (Gambell 1982: 2). In that year, the catch quota became a part of Alaskan Aboriginal whaling management. Since 1981, the AEWC and the National Oceanic and Atmospheric Administration (NOAA) have effectively co-managed the whales (Freeman 1989; Huntington 1992).

The aim of this paper is to describe the conditions under which the Inupiat in northwest Alaska¹ engage in subsistence whaling, including the use of whale products. I will employ actor-network theory (Latour 2007) from a "political economy" perspective, i.e., a society's economic and political actors influence its members' discourses and practices. To grasp the interrelated factors that impinge on or facilitate whaling by the Inupiat and their use of whale products, I will examine possible multiple actors or agents (including non-human ones) with different interests in relation to whales and whaling. I will also utilise actor-network analysis to determine how several actors relate to whaling (*cf.* Blok 2007), thus elucidating the contemporary critical situation of Inupiat whaling. The data come primarily from my research in

¹ On Inupiat culture and society, see Burch (1975, 1998, 2005, 2006), Sheehan (1997), and Spencer (1976[1959]).

Barrow (Alaska) in September 2006, July-August 2007, February-March and September-October 2008, and June 2009.

Significance of whaling in contemporary Barrow

Whaling is not only a means for the Inupiat to obtain culturally valued food but also an ethnic symbol that distinguishes them from others. Meat and skin with blubber are nutrient-rich and have health benefits (Reynolds et al. 2006). Whaling and associated consumption practices provide a basis for their social life and ethnic identity (Bodenhorn 1990, 2000, 2000/2001; Freeman et al. 1998). The whale meat, *maktak* (skin with blubber), and blubber are never exclusively owned and consumed by the successful boat captain and his crew. These edible products are shared or distributed among particular persons or groups, confirming and maintaining social relationships with them (Bodenhorn 2000; Worl 1980). In addition, respect and social recognition are gained by successful boat captains who generously give parts of their catches to other villagers.

Whaling is closely related to Inupiat world and gender views. The Inupiat people believe that whales willingly give themselves to those hunters and their wives who behave properly toward other people and the whales. They say that a good hunter's wife attracts the whales, which can, for their part, think about, understand, listen to, and see the Inupiat people. Thus, a special meaning is given to an Inupiat woman, especially a boat captain's wife (Bodenhorn 1990, 2000; Brewster 2004; Turner 1990). Hunting, sharing, and consuming of bowhead whales are thus politically, culturally, socially, and nutritionally important for contemporary Inupiat people along the northwest Alaskan coast (e.g., Bodenhorn 2000; Chance 1990; Freeman et al. 1998; Kishigami 2009; Victor 1987; Worl 1980).

Influences of climate change on bowhead whales and Inupiat whaling

A warming trend began to be observed in the 1980s across the Arctic regions. It has modified not only the natural environment but also human activities, and has produced unexpected problems.² Many of its consequences have tended to be negative for both marine mammals and their hunting (e.g., ACIA 2004; Alter et al. 2009; Freeman and Foote 2009; Hovelsrud et al. 2008; Huntington 2009; Huntington et al. 2007; Krupnik and Jolly 2002; Moore and Huntington 2008; Smith 2008; Würsig and Gailey 2002). In this section, I will describe several factors that seriously affect the whale hunt: environmental change; oil and gas development; and tourism and shipping in the Arctic Ocean. Their effects on Inupiat whaling have been amplified by climate warming in many ways.

² Würsig and Gailey (2002) call human-mediated impacts of climate change on marine mammals "tertiary effects."

Environmental change

Climate warming has affected animals, plants, and their habitats in the Arctic regions. Habitat change has especially affected bowhead whales, polar bears, hooded seals, and narwhals (Laidre et al. 2008). Specifically, the new unstable and unpredictable environmental conditions have had negative impacts on the whale hunt in Barrow. In the spring, hunting success depends on open leads, wind direction, and stable land-fast ice. In the fall, it depends on wind speed and relatively ice-free waters (George et al. 2003). While the freeze-up near Barrow usually began in September in the 1980s, more recently it has been delayed until November. Furthermore, because spring sea ice is now very unstable, hunting incurs much higher risks than before. In March, local hunters have observed drastic changes in drifting sea ice.

In the 1980s, bowhead whales would migrate eastward off the Barrow coast from late April to June and westward from late September to early October. Recently, the offshore sea ice has not been lasting as long and the total offshore sea ice has been smaller because of climate warming. Local whaling is increasingly hindered by the changes in migration timing and in the route of bowhead whales (Hovelsrud et al. 2008) because the extent of sea ice is now reduced and the whales can migrate over a much larger area of open sea than in the 1980s. In the spring of 2007, with the sea ice beginning to melt much earlier than before, the shore-fast ice separated from the land. This was the ice where hunters and others would butcher whales. Accordingly, non-hunting villagers were prohibited by the Barrow Whaling Boat Captains Association from going out to the sea ice to help butcher landed whales.

Oil and gas development

Although there are approximately 27 billion barrels of recoverable oil and 132 trillion cubic feet of natural gas along Alaska's outer continental shelf, it has been very difficult and risky to develop these resources because of the severe Arctic environment, especially the existence of year-round sea ice (NRC 2003). Because recent climate warming has reduced the extent of sea ice in the Arctic Ocean, oil and gas exploration has increased in the 21st century, and this increased activity is affecting migration routes of bowhead whales and bowhead hunting by the Inupiat.

In 2008, major oil development companies such as Shell Offshore Inc. and Royal Dutch Shell began to search for submarine oil and gas fields in the Beaufort Sea near Barrow. Many Inupiat whalers are worried that these activities, including large numbers of exploration ships and drill tests on the seabed, are adversely impacting the seasonal migration routes and health of bowhead whales. Exploration for oil and gas involves seismic testing and exploratory drilling in the summer and fall. Seismic air guns and/or drilling produce noises that are causing avoidance and other behavioural responses by bowhead whales (Alter et al. 2009; Miller et al. 2005; Nielsen 1988: 64-65; NRC 2003). With the change in migration routes, local whalers have to travel farther from their villages to hunt in the fall, thus increasing their risk of exposure to

adverse weather and long-distance navigation in rough seas (NRC 2003). They also believe that drilling, construction of oil-field bases, oil spills, and regular sea traffic may affect the ecology of bowhead whales and thus their whaling activities.

Because of the above reasons, the majority of the Inupiat in Barrow are opposed to development of submarine offshore oil fields on the Arctic coast of northwest Alaska, although they have supported and benefited from onshore oil extraction and have supported drilling in the Alaska Natural Wildlife Refuge. During the Bush administration, however, oil and gas development was spurred by the economic and political context, both within and outside the United States. In the Beaufort Sea, approximately 1.1 million acres were leased in 2003, 2005, and 2007 (Oceans North U.S. 2010). In the Chukchi Sea, approximately 2.7 million acres of leases were offered by the Minerals Management Service of the Federal Department of the Interior in 2008 (*ibid.*).

After Barack Obama of the Democratic Party was elected president in November 2008, offshore oil development in northwest Alaska was toned down. Nonetheless, the Minerals Management Service gave Shell Offshore Inc. conditional approval to drill two exploratory wells in the Beaufort Sea in October 2009 and three in the Chukchi Sea in December 2009. For 2010, the company plans to start drilling between July and October, except during the whaling period. Although most Inupiat whalers and several environmental NGOs oppose the exploration activities and are taking legal actions against the federal government and the oil and gas companies, they may not be able to stop these activities. Yet exploration and development may pose significant environmental risks to bowhead whales and the whale hunt in the Chukchi and Beaufort Seas.

Arctic tourism and transportation

Due to sea-ice reduction as the climate continues to warm, the number of freighters and tourist ships is increasing in the Arctic Ocean year by year (Brigham and Ellis 2004; PAME 2009a), and affecting the natural environment and lives of the Inupiat and Yupiit (PAME 2009a). The World Meteorological Organization (WMO) reports that the sea ice has annually decreased by 72,000 km² on average because of climate warming. In addition, the European Space Agency (ESA) has disclosed that there is no year-round sea ice in both the Northwest Passage around the top of North America and the Northeast Passage around the top of Eurasia. These passages drastically shorten shipping distances between East Asia and North America/Europe. Shipping costs are accordingly lower, the result being an increase in the frequency and intensity of maritime traffic along Alaska's coast.

Tourists are travelling through the Northwest Passage in the Canadian Arctic. The number of cruise ships has been steadily increasing since 1984 and reached 22 ships per year in 2006. Tourism may benefit the economy of Arctic villages where the ships visit. However, as Stewart et al. (2007) point out, these ships run the risk of fatally

crashing into drifting ice as climate warming changes the nature and distribution of ice floes and sea ice. Indeed, there are no international shipping rules for the Arctic Ocean. As foreign ships attempt to operate freely in Canadian and American territorial waters, there will be disputes over both national sovereignty and submarine resource development. Eventually, international political conflicts may arise (Jensen 2008; McRae 1986; Stewart and Draper 2006; Westermeyer and Goyal 1986). Bowhead whales in particular will be threatened by release of oil from ships through accidental discharge, ship strikes, disruption of migratory patterns, and noise from shipping activity (Leaper and Donovan 2009; Miller et al. 2005; PAME 2009a; Ritter 2009). According to the PAME's report:

The western Arctic stock of bowhead whales seasonally migrates through the Bering Strait, Chukchi and Beaufort Seas in the Bering Strait. They are physically constricted to a relatively small corridor, exposing them to increased interactions with vessels transiting this area during spring and fall. Bowhead whale migration could also be potentially disrupted by icebreakers. Whales could move further offshore following the open leads created by icebreaking vessels, putting them out of reach of coastal whaling communities (PAME 2009a: 147).

Several hunters in Barrow see relationships between warming climate, shrinking sea ice, rising seawater temperature, and increasing numbers of ships. They are worried about the subsequent possible impacts of sightseeing, cargo, and oil and gas exploration vessels on bowhead whales and their hunting activities. Bowhead whales may shift their migration route away from Barrow to avoid noises from passing ships. In particular, the fall hunt may become much more difficult because the hunters would have to tow the whales to Barrow over a much greater distance.

The influence of outside organisations on Inupiat whaling

Some organisations are based outside the state of Alaska but have an influence on Inupiat whaling. They include the International Whaling Commission (IWC), the U.S. government and oil and gas multinational corporations, and environmental and animal-rights organisations. Whaling is also being affected by internal changes in Inupiat society.

The IWC

Since 1982, when the IWC adopted a moratorium on large-scale commercial whaling, the commercial catch of large whales has been suspended. At IWC general meetings over the last 24 years, member countries have discussed resumption of whaling. IWC member countries can be divided into three groups: pro-whaling, anti-whaling, and neutral countries, the latter tending to support the anti-whaling countries (Ohmagari 2005). Although most IWC member countries support the anti-whaling position, the number of pro-whaling countries has recently increased with the recovery of several whale stocks. The IWC prohibits hunting of 13 species of large whales for

commercial purposes, but approves bowhead whaling by Alaska's Indigenous peoples as an Aboriginal subsistence activity. Currently, the IWC countries have been re-examining continuation of Alaskan Aboriginal subsistence whaling and the catch quota every five years. Inupiat whalers are actively interested in these proceedings (Bodenhorn 2000/2001: 40).

In 2002, consensus was not achieved among participants at the 54th IWC meeting in Shimonoseki (Japan) on a joint proposal by the United States and the Russian Federation to amend the limits on Aboriginal bowhead whaling in the Bering, Chukchi, and Beaufort Seas. The proposal was put to a vote but was not approved by the required 75% majority (IWC 2003: 18-22). The IWC thus suspended the Alaskan and Russian Aboriginal whale hunts, to the dismay of Inupiat and other Aboriginal whalers. However, at a special IWC meeting in Cambridge, England in September the same year, the amendment was re-visited and approved for the sake of the nutritional and cultural needs of the peoples concerned. As a result, Alaskan Aboriginal whalers were allowed to harvest up to 275 whales over 5 years from 2003 to 2007.

The IWC has generally allowed Aboriginal subsistence whaling on the grounds of resource quantity, historical precedent, nutritional necessity, and cultural need (Gambell 1982). As the 2002 54th IWC meeting shows, IWC members do not automatically take Aboriginal peoples' opinions into account. Furthermore, the European Union (EU) declared an anti-whaling position as one of its political principles on June 5, 2008 and has put pressure on Greenland and Denmark to stop Aboriginal whaling. Aboriginal whaling in general has been more vulnerable than ever before to IWC politics, in particular the influences of the environmental and animal-rights movements and the political decisions of the anti-whaling countries. Thus, Aboriginal subsistence whaling is now carried out under very unstable political and social conditions.

The U.S. government and the oil and gas multinational corporations

The United States used to be one of the most active whaling countries. But after World War II, and especially after 1972 when it proposed a whaling moratorium at the United Nations Conference on the Human Environment in Stockholm, it became a major anti-whaling force. That decision came from the U.S. government identifying bowhead whales as an "endangered species" in 1970 and negatively viewing their hunting by Alaska's Indigenous peoples. Nonetheless, because Alaska's Inupiat and Yupiit have been hunting bowheads for over 1,000 years, and because this tradition is an Indigenous right, the U.S. government cannot deny or prohibit their subsistence whaling activities. It thus supports Aboriginal whaling on its territory while being against any commercial whaling of large whales.

The U.S. government is, however, indirectly damaging Aboriginal whaling in Alaska by promoting that state's offshore oil and gas development in line with American energy security policy. Hurricane Katrina, which destroyed oil fields and oil

refineries in the American South in late August 2005, caused a domestic oil shortage, which in turn led to a worldwide shortage and a rapid rise in oil prices. Securing oil resources became an urgent national matter, and the Bush administration began to seriously consider development of offshore oil along the northwest Alaskan coast. Such development has the potential to bring both new economic opportunities and stresses to Indigenous communities while putting pressure on a fragile Arctic ecosystem (*cf.* Palmer 2009; PAME 2009b).

Waters around Alaska belong not to the state of Alaska or to Alaskan Aboriginal organisations but to the U.S. federal government. The federal Minerals Management Service proposes new plans for gas and oil lease sales every five years. The U.S. government has tried to sell mining and leasehold rights to 202 districts in the Beaufort Sea and 193 districts in the Chukchi Sea. Shell Offshore Inc. spent about \$84 million in 2005 and 2007 acquiring leases in the Beaufort Sea, and in 2008 paid \$2.1 billion for exploration rights in the Chukchi Sea. Conoco Phillips spent over \$0.5 million acquiring leases in the Chukchi Sea. Repsol, Statoil, and Eni also acquired leases in 2008 (Rosen 2010).

At the annual general meeting of the Alaska Eskimo Whaling Commission in Barrow in February 2008, several oil companies explained their research and development activities to Aboriginal whalers. Shell Offshore Inc. declared that it was going to carry out research drilling (i.e., 30 to 750 metres in depth) at three locations on the sea floor in 202 and 193 districts after the end of the 2008 spring whaling in Kaktovik. Although the oil companies tried to persuade the local whalers to accept offshore exploration, the majority of the Inupiat people—especially local whalers—remained opposed in areas where they harvested migratory bowhead whales. There was a strong sense that both exploration and development would harm the natural environment and Aboriginal subsistence activities in Alaska. Thus, the Alaska Eskimo Whaling Commission and other Inupiat organisations strongly opposed the oil companies' proposal. On the other hand, there has tended to be support from non-Inupiat people and some Inupiat in the North Slope Borough, who expect employment and economic spin-offs. Oil and gas development divides the borough, and each village within it, hence creating social tensions within the Aboriginal communities.

Because the federal agency has authority to give permission for oil and gas development, its decisions are out of the hands of local Inupiat residents. Inupiat whalers have opposed various exploration projects and attempted negotiations. However, they have been unable to stop the projects, the sole concession being that the companies would interrupt exploration during the summer and fall whaling period in 2010. It is apparent that power differences in favour of oil development have added a new level of risk to the decline of bowhead whale populations and the Inupiat whale hunt.

Environmental and animal-rights groups

Several environmental and animal-rights groups became interested in whales in the 1960s. In 1965, representatives from the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wildlife Fund (WWF) began to attend IWC special meetings as observers. Later, Friends of the Earth and other groups joined as observers. Most of them are concerned with the anti-whaling movement. As large environmental organisations such as Greenpeace and the WWF are the most active lobbyists, they have a strong influence on domestic and international politics and public opinion. Iwasaki-Goodman (2005: 105-111) points out that anti-whaling NGO activities have caused a polarisation between two groups—anti-whaling and pro-whaling countries—at the annual general meetings of the IWC. Other anti-whaling NGOs include Campaign Whale, the Humane Society International, the International Fund for Animal Welfare, and the Sea Shepherd Conservation Society. Although their main target is commercial whaling, their activities appeal to public opinion and national governments and negatively impact continuation of Aboriginal whaling.

Internal changes in Inupiat society that affect whale hunting

Inupiat society in Alaska has been moving toward internal diversification and increasing heterogeneity (NSB 1994, 2004; Worl and Smythe 1986). The population of Barrow has been rapidly growing since the 1950s through natural increase, immigration from small communities nearby, and a non-Indigenous influx from outside Alaska. Because Barrow is the political and economic centre of the North Slope Borough, there are a lot of highly paid jobs that have attracted many Americans from outside Alaska. In 2000, the population of Barrow numbered 4,581 and was composed of several ethnic groups: American Indian or Alaska Native (2,558, 55.8%), Euro-American or European (972, 21.2%), Asian (429, 9.4%), Hispanic or Latino (153, 3.3%), Native Hawaiian and Pacific Islander (59, 1.3%), African-American (44, 1.0%), some other ethnic groups (1, 0.0%), and two or more ethnic groups (365, 8.0%) (U.S. Census Bureau 2000: 7, Table 5).

With a growing proportion of younger generations in the Inupiat population, diversification of occupations has become prominent in Barrow. Because the town has several grocery stores, restaurants, and a supermarket, those with enough cash can choose non-traditional foods. Although the younger Inupiat like to eat *maktak* (skin parts with blubber), some do not like to eat other parts of the whale (or walrus), as they prefer Euro-American-style cuisine. Thus, Inupiat are tending to depend less on local foods from hunting and fishing (NSB 2004: NRW 37).

Furthermore, Barrow is economically stratified and discrepancies between the rich and poor are widening (e.g., NSB 1994: BRW 22-23). Inupiat must invest a lot of money to engage in hunting and fishing, given their use of motorboats, snowmobiles, rifles, gasoline, bullets, and other equipment (NSB 1994: BRW 37-38, 2004: BRW 42-43). A whaling boat captain needs \$20,000 a year to carry out the spring and fall whale

hunts. Although all the Inupiat villagers benefit through formal and informal distribution of the catches, not all families participate in the whaling activities.

Inupiat involvement in subsistence activities has thus changed. While whale hunts are still a leading activity of Inupiat in Barrow, their relationships to the whales and their hunts are becoming increasingly more symbolic economically and politically. This political symbolism paradoxically plays a strong role in its continuation, particularly in the pan-Inuit political movement.

Discussion

Since 1978, Alaskan Aboriginal whalers have had to obtain approval for quotas from the IWC general meeting every five years and have continued their whaling despite political pressures from anti-whaling countries, and environmental and animal-rights NGOs. Aboriginal subsistence whaling is vulnerable to suspension by international politics and public opinion. In addition, more and more Inupiat support offshore oil and gas development along the northwest Alaska coast because they believe that it will contribute to the local economy. Several environmental, political, and economic factors, or actors, have an interacting influence on contemporary Inupiat whaling activities in Alaska, as illustrated in Figure 1. This figure shows that climate warming, the U.S. energy crisis, and the pursuit of profits by multinational corporations are driving oil and gas development in the Arctic Ocean, which in turn may negatively influence both bowhead whales and the whale hunt. Figure 1 also identifies several anti-whaling actors, such as environmental and animal-rights NGOs, public opinion, and the national political stance on whaling. These factors interrelate to create the present environmentally and politically sensitive and negative conditions that interfere with Inupiat whaling.

Conclusion

In this paper, I have described several factors affecting the current bowhead whale hunt of the Inupiat people and its continuation on the basis of my field research in Barrow, Alaska. These factors are 1) changes in sea-ice patterns due to global warming; 2) increases in exploration for oil and gas development as a result of changes in sea-ice patterns; 3) increases in shipping, oil and gas exploration, and tourist maritime traffic due to the decrease in sea-ice cover; 4) the IWC; 5) U.S. energy policy; 6) economic activities of multinational corporations; 7) the anti-whaling movement represented by several environmental and animal-rights NGOs; and 8) internal changes in Inupiat society. I argue that Inupiat whalers are hunting bowhead whales under environmentally, socially, politically, and economically critical conditions created by a combination of these factors.

Whaling and associated activities are a core part of contemporary Inupiat life in coastal northwest Alaska. As whaling is key to continuation of their way of life, the

sustainable use of bowhead whales is vital to Inupiat culture. For coastal Inupiat, the problem is not only “food security” but also “cultural security.”

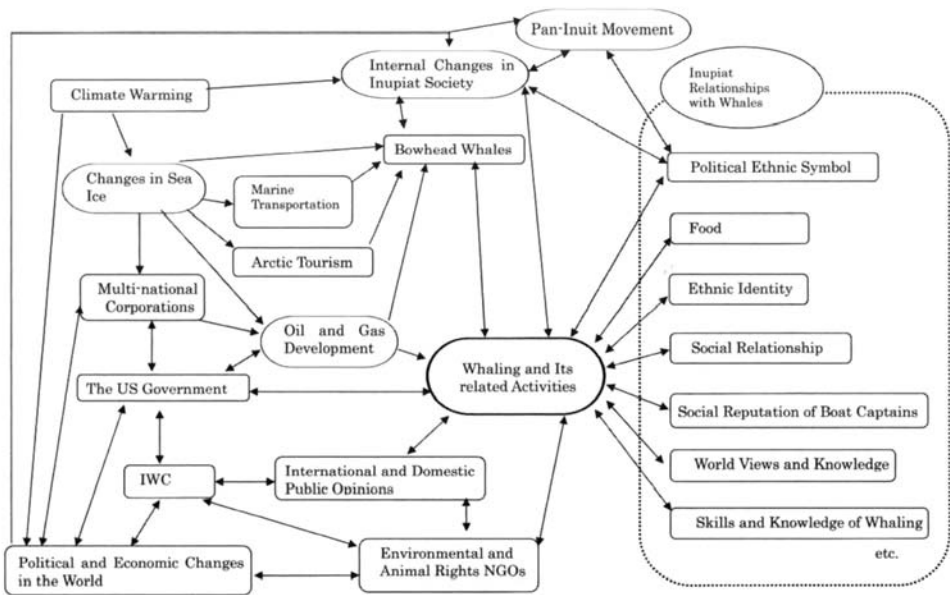


Figure 1. Relationships among several factors (actors) affecting contemporary Inupiat whaling.

Acknowledgements

I thank the following people and organisations for their kind help and support in my research in Barrow: Eugene Brower, Harry Brower, Jr., Taqulik Hepa, Herman Ahsoak, Lewis Brower, Craig George, Johnny Leavitt, Glenn Sheehan, Molly Lee, David Koester, Claire Alix, David McMahan, Hiroko Ikuta, Shunwa Honda, the National Museum of Ethnology, the Japan Society for the Promotion of Science, the Barrow Arctic Science Consortium (BASC) and the Barrow Whaling Captains Association. Also, I thank Professors James Savelle of McGill University and David Koester of the University of Alaska, Fairbanks as well as two anonymous reviewers for their comments and corrections of my earlier drafts. Of course, any shortcomings are all mine.

References

- ACIA (ARCTIC CLIMATE IMPACT ASSESSMENT)
2004 *Impacts of a Warming Arctic: Arctic Climate Impact Assessment*, Cambridge, Cambridge University Press.
- ALTER, S.E., M.P. SIMMONDS and J.R. BRANDON
2009 The Tertiary Threat: Human-mediated Impacts of Climate Change, The International Whaling Commission, Scientific Committee, IWC/SC61/E8.
- BLOK, Anders
2007 Actor-networking Ceta-sociality, or, What Is Sociological about Contemporary Whales?, *Distinktion*, 15: 67-91.
- BOCKSTOCE, J.R., D.B. BOTKIN, A. PHILP, B.W. COLLINS and J.C. GEORGE
2005 The Geographic Distribution of Bowhead Whales, *Balaena mysticetus* in the Bering, Chukchi, and Beaufort Seas: Evidence from Whaling Records, 1849-1914, *Marine Fisheries Review*, 67(3): 1-43.
- BODENHORN, Barbara
1990 I'm Not the Great Hunter, My Wife Is: Inupiat and Anthropological Models of Gender, *Études/Inuit/Studies*, 14(1-2): 55-74.
- 2000 It's Good to Know Who Your Relatives Are but We Were Taught to Share with Everybody: Shares and Sharing among Inupiaq Households, in George W. Wenzel, Grete Hovelsrud-Broda, and Nobuhiro Kishigami (eds), *The Social Economy of Sharing: Resource Allocation and Modern Hunter-Gatherers*, Osaka, National Museum of Ethnology Senri Ethnological Studies, 53: 7-60.
- 2000/01 It's Traditional to Change: A Case Study of Strategic Decision-Making, *Cambridge Anthropology*, 22(1): 24-51.
- BRAUND, Stephen R. and Elisabeth L. MOOREHEAD
1995 Contemporary Alaska Eskimo Bowhead Whaling Villages, In McCartney, Allen P. (ed.), *Hunting the Largest Animals: Native Whaling in the Western Arctic and Subarctic*, Edmonton, University of Alberta, The Canadian Circumpolar Institute, Studies in Whaling, 3: 315-337.
- BREWSTER, Karen
2004 *The Whales, They Give Themselves: Conversation with Harry Brower, Sr.*, Fairbanks, University of Alaska Press.
- BRINHAM, L. and B. ELLIS
2004 *Arctic Marine Transport Workshop*, Anchorage, Institute of the North.

BURCH, Ernest S., Jr.

1975 *Eskimo Kinsmen: Changing Family Relationships in Northwest Alaska*, St. Paul, West Publishing Co.

1998 *The Inupiaq Eskimo Nations of Northwest Alaska*, Fairbanks, University of Alaska.

2005 *Alliance and Conflict: The World System of the Inupiaq Eskimos*, Lincoln and London, University of Nebraska Press.

2006 *Social Life in Northwest Alaska: The Structure of Inupiaq Eskimo Nations*, Fairbanks, University of Alaska.

CHANCE, Norman A.

1990 *The Inupiat and Arctic Alaska*, Fort Worth, Holt, Rinehart and Winston.

DONOVAN, G.P.

1982 The International Whaling Commission and Aboriginal/Subsistence Whaling: April 1979 to July 1981, Cambridge, International Whaling Commission, *Reports of the International Whaling Commission*, Special Issue, 4: 79-86.

FREEMAN, Milton M.R.

1989 The Alaska Eskimo Whaling Commission: Successful Co-Management under Extreme Condition, in Evelyn Pinkerton (ed.), *Co-Operative Management of Local Fisheries: New Directions for Improved Management and Community Development*, Vancouver, University of British Columbia Press: 137-153.

FREEMAN, Milton M.R. and Lee FOOTE (eds)

2009 *Inuit, Polar Bears, and Sustainable Use: Local, National and International Perspectives*, Edmonton, Canadian Circumpolar Institute Press.

FREEMAN, Milton M.R. et al.

1998 *Inuit, Whaling, and Sustainability*, Walnut, London and New Delhi, Altamira Press.

GAMBELL, R.

1982 The Bowhead Whale Problem and the International Whaling Commission, Cambridge, International Whaling Commission, *Reports of the International whaling Commission*, Special Issue, 4: 1-6.

GEORGE, John C., S. BRAUND, H. BROWER Jr., C. NICOLSON and T.M. O'HARA

2003 Some Observations on the Influence of Environmental Conditions on the Success of Hunting Bowhead Whales off Barrow, Alaska, in Allen P.

McCartney (ed.), *Indigenous Ways to the Present: Native Whaling in the Western Arctic*, Edmonton, Canadian Circumpolar Institute Press and Salt Lake City, The University of Utah Press: 255-275.

HOVELSRUD, Grete K., Meghan MCKENNA and Henry P. HUNTINGTON
2008 Marine Mammal Harvest and Other Interactions with Humans, *Ecological Applications*, 18(2) Supplement: 135-147.

HUNTINGTON, Henry P.
1992 *Wildlife Management and Subsistence Hunting in Alaska*, London, Belhaven Press.

2009 A Preliminary Assessment of Threats to Arctic Marine Mammals and Their Conservation in the Coming Decades, *Marine Policy*, 33: 77-82.

HUNTINGTON, Henry P. et al.
2007 The Influence of Human Activity in the Arctic on Climate and Climate Impacts, *Climate Change*, 82: 77-92.

IWASAKI-GOODMAN, Masami
2005 *Where Culture Crosses Environment's Path – On Whales and Whaling* (in Japanese), Tokyo, Shimizukobundo.

IWC (INTERNATIONAL WHALING COMMISSION)
2003 Chair's Report of the 54th Annual Meeting, in *Annual Report of the International Whaling Commission 2002*, Cambridge, International Whaling Commission: 1-115.

JENSEN, Øsystein
2008 Arctic Shipping Guidelines: Towards a Legal Regime for Navigation Safety and Environmental Protection?, *Polar Record*, 44(229): 107-114.

KISHIGAMI, Nobuhiro
2009 A Preliminary Consideration of Aboriginal Subsistence Whaling from the Perspective of Cultural Security: A Case from Northwest Alaska, USA” (in Japanese), *Bulletin of the National Museum of Ethnology*, 33(4): 493-550.

KRUPNIK, Igor and Dyanna JOLLY (eds)
2002 *The Earth Is Faster Now: Indigenous Observations of the Arctic Environmental Change*, Fairbanks, Arctic Research Consortium of the United States.

LAIDRE, Kristin L. et al.
2008 Quantifying the Sensitivity of Arctic Marine Mammals to Climate-Induced Habitat Change, *Ecological Applications*, 18(2) Supplement: 97-125.

104/N. KISHIGAMI

- LATOUR, Bruno
2007 *Reassembling the Social. An Introduction to Actor-Network-Theory*, Oxford, Oxford University Press.
- LEAPER, Russell and Greg DONOVAN
2009 Update on the IWC Ship Strike Database, Cambridge, International Whaling Commission, Scientific Committee, SC/61/BC9.
- McRAE, D.M.
1986 Management of Arctic Marine Transportation: A Canadian Perspective, *Arctic*, 39(4): 350-359.
- MILLER, G.W. et al.
2005 Monitoring Seismic Effects on Marine Mammals – Southeastern Beaufort Sea, 2001-2002, in S.L. Armsworthy, P.J. Cranford and K. Lee (eds), *Offshore Oil and Gas Environmental Effects Monitoring: Approaches and Technologies*, Columbus, Battelle Press: 511-542.
- MOORE, Sue E. and Henry P. HUNTINGTON
2008 Arctic Marine Mammals and Climate Change: Impacts and Resilience, *Ecological Applications*, 18(2) Supplement: 157-165.
- NIELSEN, Jørn Berlung
2008 Inupiat Whaling and Oil Industry in North Alaska, *Folk*, 30: 57-71.
- NRC (NATIONAL RESEARCH COUNCIL)
2003 *Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope*, Washington, The National Academies Press.
- NSB (NORTH SLOPE BOROUGH)
1994 *North Slope Borough 1993/1994 Economic profile and Census Report*, volume 2, Barrow, North Slope Borough, Department of Planning and Community Services.

2004 North Slope Borough 2003 Economic Profile and Census Report, volume 9, Barrow, North Slope Borough, Department of Planning and Community Services.
- OCEANS NORTH U.S.
2010 U.S. Oil and Gas Activities (online at: <http://www.oceansnorth.org/us-oil-gas-activities>).
- OHMAGARI, Kayo
2005 Whaling Conflicts: The International Debate, in Nobuhiro Kishigami and James M. Savelle (eds), *Indigenous Use and Management of Marine*

Resources, Osaka, National Museum of Ethnology, Senri Ethnological Studies, 67: 145-178.

PALMER, Andrew C.

2009 Under What Conditions Can Oil and Gas Developments in the Arctic Be Acceptable, and to Whom? *Polar Record*, 45(233): 113-117.

PAME (PROTECTION OF THE ARCTIC MARINE ENVIRONMENT)

2009a *Arctic Marine Shipping Assessment 2009 Report*, Arctic Council.

2009b *Arctic Offshore Oil and Gas Guidelines*, Arctic Council.

REYNOLDS III, J. E. et al.

2006 Human Health Implications of Omega-3 and Omega-6 Fatty Acids in Blubber of the Bowhead Whale (*Balaena mysticetus*), *Arctic*, 59(2): 155-164.

RITTER, Fabian

2009 *Collisions of Sailing Vessels with Cetaceans Worldwide: First Insight into a Seemingly Growing Problem*, Cambridge, International Whaling Commission Scientific Committee, SC/61/BC1.

ROSEN, Yerth

2010 Shell Offshore Oil Drill Plan in Alaska Challenged, *Reuters*, January 20 (<http://www.reuters.com/assets/print?aid=USN2017961320100120>).

SHEEHAN, Glenn

1997 *In the Belly of the Whale: Trade and War in Eskimo Society*, Anchorage, Alaska Anthropological Association.

SMITH, Cameron M.

2008 Of Ice and Men, *Cultural Survival Quarterly*, 32(2): 16-10.

SPENCER, Robert F.

1976[1959] *The North Alaskan Eskimo: A Study in Ecology and Society*, New York, Dover Publications.

STEWART, Emma J. and Dianne DRAPER

2006 Sustainable Cruise Tourism in Arctic Canada: An Integrated Coastal Management Approach, *Tourism in Marine*, 3(2): 77-88.

STEWART, E.J., S.E.L. HOWELL, D. DRAPPER, J. YACKEL and A. TIVY

2007 Sea Ice in Canada's Arctic: Implications for Cruise Tourism, *Arctic*, 60(4): 370-380.

- TURNER, Edith
1990 The Whale Decides: Eskimo's and Ethnographer's Shared Consciousness on the Ice, *Études/Inuit/Studies*, 14(1-2): 39-52.
- U.S. CENSUS BUREAU
2000 Alaska 2000: Population and Housing Unit Counts (online at: <http://www.census.gov/prod/cen2000/phc-3-3.pdf>).
- VICTOR, Anne-Marie
1987 Éléments symboliques de la chasse à la baleine, *Études/Inuit/Studies*, 11(2): 139-164.
- WESTERMEYER, William E. and Vinod GOYAL
1986 Jurisdiction and Management of Arctic Marine Transportation, *Arctic*, 39(4): 338-349.
- WORL, Rosita
1980 The North Slope Inupiat Whaling Complex, in Yoshinobu Kotani and William B. Workman (eds), *Alaska Native Culture and History*, Osaka, National Museum of Ethnology, Senri Ethnological Studies, 4: 305-320.
- WORL, Rosita and Charles W. SMYTHE
1986 *Barrow: A Decade of Modernization, The Barrow Case Study*, prepared for Minerals Management Service Alaska OCS Region, Anchorage, Alaska OCS Socioeconomic Studies Program, Technical Paper, 125.
- WÜRSIG, B. and G.A. GAILEY
2002 Marine Mammals and Aquaculture: Conflicts and Potential Resolutions, in R. R. Stickney and J.P. McVay (eds), *Responsible Marine Aquaculture*, New York, CAP International Press: 45-59.