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## **Inuit-organised polar bear sport hunting in Nunavut territory, Canada**

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Polar bear sport hunting (which in the case of Nunavut is defined as a form of conservation hunting) is an economically important form of Aboriginal ecotourism in the Canadian Arctic territory of Nunavut. Each sport hunt provides approximately 20 times the monetary value of a polar bear taken in a subsistence hunt. Positive cultural outcomes for communities that offer these hunts include the revival of dog mushing; preservation of traditional sewing, hunting and survival skills, and accommodation within the industry for the subsistence economy and Inuit norms of sharing. Concurrently, there are frequent community discussions about the industry that provides insight into Inuit views of hunting for recreation as well as western-style wildlife management, which allow for an examination of how Inuit communities are working to accommodate the non-Inuit culture and the market economy. Sport hunting provides Inuit with a reason to support western-style conservation and learn about scientific research and management programmes. Recent international concern about climate change impacts on two polar bear populations and its extrapolation to all populations threatens the conservation programme already in place in Nunavut. Polar bear conservation is of primary concern to Inuit and non-Inuit alike, but pressure to reduce hunting that is not supported by evidence, could result in an undue reduction in the value of polar bear harvesting (by reducing hunting and stopping conservation hunting). This may well result in a loss of local support for conservation measures, including polar bear quotas, which would erode, rather than support, protection for this species.

**Keywords:** conservation; hunting; culture and ecology; indigenous people; sport hunting; polar bears; Inuit; Nunavut

### **Introduction**

The right to hunt polar bears (*Ursus maritimus*) is held by local or indigenous peoples as outlined in the International Agreement on the Conservation of Polar Bears and Their Habitat, which was ratified by all polar bear range states during the 1970s (Fikkan, Osherenko, & Arikainen, 1993). Canada has also recognised the Aboriginal right to transfer hunting rights for polar bears to others, so long as an Aboriginal guide accompanies the tourist hunter (Canada Treaty Series, 1976). As a result, Aboriginal people in the Canadian Arctic territories hold the right to hunt polar bears and to conduct sport hunts for this species at sustainable levels. Nunavut territory, with an 85% Inuit Aboriginal population, is home to

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the majority of polar bears in Canada. Nunavut controls its polar bear harvest through a quota system, whereby a total allowable harvest is calculated using scientific and traditional knowledge for each of 12 polar bear populations (out of 19 total world populations) (Dowsley & Wenzel, 2008). The total allowable harvest is then divided among the relevant hunting communities. Inuit communities decide if, and how much of, their local quota will be devoted to sport hunting. Outfitting and guiding are also under community control.

The majority of Nunavummiut (Nunavut residents) live in small, remote communities with populations of fewer than 2000 people. Hunting continues to be an economically, nutritionally and culturally valuable activity, with many people consuming 'country food' as the result of subsistence hunting (Chan et al., 2006; Collings, Wenzel, & Condon, 1998; Kuhnlein & Receveur, 2007; Searles, 2002). Sport hunt outfitting and guiding build on this lifestyle and are of such economic value that they are often the largest source of income for part-time/seasonal guides, as well as being a major source of non-government money in these small communities (Freeman & Wenzel, 2006; Smith & Wright, 1989).

This article first explores the inclusion of polar bear sport hunting as a form of ecotourism in the context of the mixed-wage labour/subsistence economy of Nunavut. Discussion then shifts to examining the challenges Inuit face in developing a culturally appropriate conservation hunting industry. The future of this industry is also discussed with particular reference to international concerns about climate change.

## **Methods**

This paper explores the Inuit-organised sport hunt industry for polar bears in Nunavut Territory. It draws on information in government reports and meetings, peer-reviewed articles and data gathered by the author in Nunavut in 2004 and 2005 during three trips lasting a total of 6 months involving research in four communities in the Qikiqtaaluk (Baffin) region of the territory: Qikiqtarjuaq, Clyde River, Pond Inlet and Igloodik (Figure 1). These communities accepted an invitation to participate in a larger study on polar bear management, conservation, sport hunt and traditional use as part of the author's PhD research at McGill University, Montreal, Canada (Dowsley, 2008). In 2004, a pre-test was conducted in Qikiqtarjuaq to refine questions relating to the sport hunt industry. During 2005, approximately 120 semi-structured and informal interviews were conducted with people who were directly and indirectly involved in the polar bear sport hunt industry including government biologists, wildlife officers, hunting guides, outfitters, community decision makers, hunters, elders and other community members. People not working with the government were compensated for their time. Results were communicated back to the communities through reports and presentations.

## **Polar bear sport hunting as Aboriginal ecotourism and conservation hunting**

Sport, or trophy, hunting is an economically important form of tourism and recreation in many countries (Baker, 1997a; Simiyu & Bennun, 2000). Its impact varies, but multiple studies indicate that it is not necessarily more invasive, nor does it necessarily have a larger ecological footprint than other forms of tourism, including activities classically defined as ecotourism (Lovelock, 2008a; Newsome, Dowling, & Moore, 2005; Roe, Leader-Williams, & Dalal-Clayton, 1997). Due to the small numbers of visitors, sport hunting puts less pressure on tourism infrastructure and may therefore be easier to develop in remote Aboriginal communities than other forms of tourism. For this reason

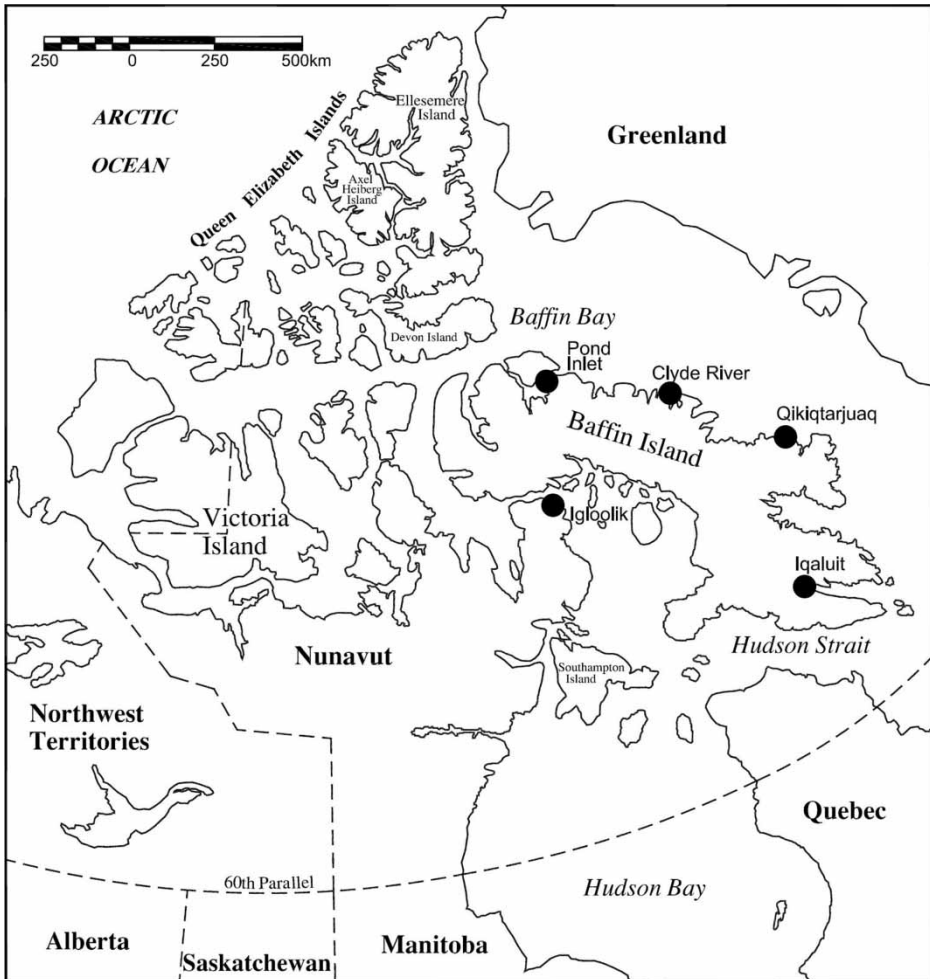


Figure 1. Map of Nunavut territory with major communities and case study communities labelled.

its present organisation and potential development must be carefully assessed in any consideration of Aboriginal ecotourism.

Sport hunting is classified as consumptive wildlife tourism (Lovelock, 2008a) and several authors include it as a form of ecotourism for multiple interconnected reasons. First, it can be less environmentally destructive than other forms of tourism (Baker, 1997b); second, it is a form of sustainable development (Dietrich, 1992) and third, it can encourage conservation through economic incentives (Freese & Trauger, 2000; Lewis & Alpert, 1997; Rasker, Martin, & Johnson, 1992; Wilkie & Carpenter, 1999). Some may question the morality of hunting, and as Franklin (2008) outlines, Western views are complex and change through time; but in terms of learning, respect and empathy Tremblay (2001) did not find any difference between consumptive and non-consumptive wildlife tourism. Franklin (2008) also highlights the important opportunity offered by hunting to engage with one's environment rather than merely viewing it, as in many tourism activities. Such engagement is obviously sought, and has a long history in Western society, not merely as an historic necessity for survival, but as a basis for conservation and a land

ethic (Leopold, 1949). Sport hunting is not merely the killing of animals; it is a multifaceted activity involving the tourist, local people and the environment, and depending on its organisation, can be considered a form of ecotourism (Lovelock, 2008b).

Sport hunting can have the following characteristics of an ecotourism activity as outlined by Wight (1994, pp. 39–40).

- (1) It does not degrade the resource [at least at the population level] and can be developed in an environmentally sound manner.
- (2) It can provide long-term benefits (conservation, cultural and economic).
- (3) It provides first hand, participatory and enlightening experiences to tourists.
- (4) It involves education of the different parties involved.
- (5) It encourages recognition of the intrinsic values of the resource.
- (6) It involves acceptance of the resource on its own terms, and in recognition of its limits, which involves supply-oriented management.
- (7) It promotes understanding and involves partnerships between many players, which include government, scientists and locals.
- (8) It promotes moral and ethical responsibilities and behaviour towards the natural and cultural environment by all players.

To expand on characteristic number 1, there are two biological concerns regarding sport hunting: the possibility of overharvest, and the long-term effects of the harvest on the wild-life population. When properly managed, sport hunting is sustainable and does not pose a risk for overharvesting the target species (Baker, 1997a; Lewis & Alpert, 1997; Lindsey, Frank, Alexander, Mathieson, & Romañach, 2006). In the case of Canadian polar bear sport hunting, in the late 1960s, the Northwest Territories (NWT) developed a quota system to control the growing harvest of polar bears for the fur trade (Schweinsburg, 1981). Nunavut inherited its harvest management system from the NWT when the NWT was divided in 1999. Both Nunavut and the NWT continue to follow a quota system based on science and traditional knowledge data on population size and trends that includes reporting of all anthropogenic mortality of polar bears (Dowsley & Wenzel, 2008). Each Nunavut community decides how much (if any) of their hunting quota to devote to sport hunting. This system aims to maintain harvest levels at biologically sustainable levels. Market forces may encourage Inuit communities to devote more of their quota to the sport hunt, but economic considerations cannot increase the total number of bears harvested beyond the sustainable limit.

The second concern about sport hunting is the possible effects of removing ‘trophy sized’ males. Research has examined a possible reduction in recruitment rates due to a loss of males in the hunted population, and the social effects of dominant male removal (McLoughlin, Taylor, & Messier, 2005; Milner, Nisen, & Andreassen, 2007; Whitman, Starfield, Quadling, & Packer, 2004). Possible long-term effects of sport hunting on polar bears need to be monitored carefully; however, there are currently no indications of demographic effects on any polar bear population from a male-selective harvest or removal of trophy males, including populations depleted by a male-selective overharvest (Molnar, Derocher, Lewis, & Taylor, 2007; Taylor, McLoughlin, & Messier, 2008). Nunavut’s polar bear management system and sport hunt industry satisfy the biological concerns regarding sport hunting.

The term ‘conservation hunting’ has emerged to highlight those hunting programmes that promote conservation by: inclusion of local governance structures in decision-making, scientifically based harvest quotas and profit sharing with conservation

programmes (Freeman, Hudson, & Foote, 2005). The polar bear sport hunt industry of Nunavut has been classified as conservation hunting due to these features and the fact that it satisfies the biological concerns (Freeman & Wenzel, 2006). Conservation hunting falls under several definitions of ecotourism, including Hetzer's (1965) four pillars of: minimum environmental impact, maximum respect for host cultures, maximum benefits to local people and maximum recreational satisfaction to participants (as cited in Fennell, 1998). Nunavut's polar bear conservation hunt does not increase the total number of bears harvested. Concerns about its inclusion in ecotourism must therefore focus only on the morality of hunting. Yet even these abstract arguments are difficult to maintain in the face of cultures with different histories and worldviews. The study of sport hunting provides an excellent opportunity to explore some of those cultural differences.

Wight's ecotourism characteristics that involve values and ethics (such as numbers 5, 6, and 8) provide interesting discussion points in an Aboriginal ecotourism situation, because such abstract features are culturally specific. It is the entire experience that sport hunters seek, rather than merely the killing of an animal (Radder, 2005), thus sport hunting organised as Aboriginal ecotourism provides an attractive product to the niche market of international sport hunters, precisely because of the cultural differences between the hunter and his/her hosts. Some of the cultural conflicts faced by Inuit as they develop this industry are outlined below.

### **The sport hunt industry and the northern mixed economy**

Nunavut is home to a majority Inuit population and is also the result of a federal Canadian land claim settled with the Inuit. In 2005, 89.9% of the budget of the Nunavut government came from the Canadian federal government (Simialak, 2005). Canadian federal transfers to the territory exceed \$900 million/year, which is calculated at over \$30,000 per territorial resident (Department of Finance, Government of Canada, 2007). This is \$10,000 greater than the second highest transfer payment receiver, the NWT. Economic growth for Nunavut is thus an important concern for both Nunavummiut and all Canadians.

Because Nunavut is poorly situated geographically to develop a manufacturing sector, the development of the natural resources sector has been encouraged (Grekin & Milne, 1996; Myers, 2000). Unfortunately, non-renewable resource exploitation, in particular mining, suffers from boom and bust cycles and Inuit have made up only a small percentage of the workforce due to educational deficiencies and poor retention (Hobart, 1982; Wenzel, 1983a). One of the reasons Inuit offered for not working in the mining industry, or quitting after a short time, was their desire to continue to work in the subsistence economy. Addison (1996) identifies the development of guided tourism, cultural tourism and development of the traditional economy as crucial to an effective transition to the contemporary wage economy. Such development would provide a more diverse economic base and would be a better fit than mining with traditional subsistence practices.

There are two types of consumptive commercial use of wildlife: the sale of wildlife products, and the sale of the hunting experience. Up until the early 1980s, the sale of products (i.e. seal and polar bear skins, narwhal tusks) was the primary source of income for most NWT families. This 'traditional economy' provided enough cash to cover hunting expenses, and also to support hunters and their families with other essential goods and services (Wenzel, 1991). Unfortunately, sustainable harvesting is no longer even self-sustaining because most international markets have been closed to trade (Wenzel, 1991). Harvesting of the same species, however, continues, and skins and tusks that are by-products of the subsistence hunt are sold to a smaller market to offset some of the costs

of subsistence hunting. It is the second use, the sale of the hunting experience, which, due to its local value-added nature, now offers the most potential for economic growth.

Both of these uses of wildlife are typically embedded within the social economy of Inuit communities and often include personal use of some of the animal products, especially the meat (Armitage, 2005; Marquardt & Caulfield, 1996; Reeves, 1993). Thus, the subsistence and market uses of wildlife are intertwined. Furthermore, the monetary and subsistence aspects of the economy are more generally linked through the necessity to provide money to support subsistence hunting and the strong cultural interest in engaging in subsistence harvesting and traditional methods of distribution and consumption of wildlife products, even among wage-earning individuals (Collings et al., 1998; Condon, Collings, & Wenzel, 1995; Samson & Pretty, 2006).

Economically, sport hunting generates considerably more money for local economies per visitor than non-consumptive tourism (Baker, 1997a, 1997b; Milne, Tarbotton, Woodley, & Wenzel, 1997). It also requires less infrastructure (Lindsey et al., 2006), allowing it to be carried out in remote areas, such as the fly-in communities of the Canadian Arctic. In 1995, the total gross trophy hunting receipts for the Baffin region were valued at approximately \$1 million (Bourgouin, 1998). As well, trophy hunters spent more money than other tourists during their visit to that area (Bourgouin, 1998). In one Nunavut community, seven sport hunters contributed eight times the amount of cash to the local community as 30 non-hunting ecotourists visiting for the same amount of time (Wenzel & Bourgouin, 2002). Polar bear sport hunting, the most expensive type of sport hunt offered in Nunavut, provides monetary returns to Inuit communities on the order of 20 times the returns provided by the subsistence polar bear hunt, while also providing meat for the local subsistence economy through traditional sharing networks.

Sport hunting is also more compatible with the traditional economy than other forms of tourism and wage labour. It takes place in fall or spring, when Inuit are more likely to be free from subsistence work than during the busy summer months, when other tourists visit. As well, guiding hunts is a different allotment of time to wage labour than other options. It involves up to 2 weeks away from home, but may permit subsistence hunting during the trip and also allows for blocks of non-work days between sport hunts and several months of non-work days in other seasons that allow the workers to participate in the subsistence economy. Full-time wage labour, on the other hand, demands a daily commitment over a long period of time with only weekends off to hunt. Such short blocks of time are often not sufficient to effectively harvest animals due to the low density of arctic game animals, weather and distance constraints. There are also other non-cash benefits to sport hunt guiding, such as gifts received from sport hunters (typically hunting equipment), and the cultural value of preserving traditions like handling dog teams (which are required for the sport hunt) and sewing skin clothing (which are often warmer than the clothing the sport hunters bring). The non-monetary benefits of sport hunting, as well as the cash are appreciated by Inuit:

We like it [sport hunting], because the money goes to the community and the meat goes to the community and because we are out here keeping our culture alive (Adam Qanatsiaq, Igloodik guide; Chivers, 2002, p. 41).

After sport hunting began in 1970, the number of sport hunts grew only very slowly until the mid-1980s when markets for sealskins and narwhal tusks were closed in Europe (Wenzel, 1991) (Table 1). The subsequent economic collapse resulted in government support to develop guided outfitting and encouraged Inuit to consider this type of activity.

Table 1. Breakdown of Canada's polar bear harvest by percentage of each type of harvest for 5-year periods.

	Subsistence hunt (% of total)	Sport hunt (% of total)	Defence kill (% of total)	Total harvest
1970–1974	94.7	1.1	4.2	1897
1975–1979	92.9	0.8	6.4	2350
1980–1984	90.1	3.3	6.6	2709
1985–1989	84.6	9.1	6.3	2514
1990–1994	84.6	9.2	6.1	2316
1995–1999	75.9	18.7	5.4	2157
2000–2004	69.1	22.3	8.6	2162

Source: PBTC (1970–2005).

Note: Values may not sum to 100% due to rounding.

The next major increase in the number of sport hunts offered occurred in 1995 after the United States Marine Mammal Protection Act was amended (in 1994) to allow importation of polar bear trophies from some Canadian populations into the USA. These populations were selected because they were deemed to be sustainably managed. American sport hunters have composed approximately 70% of visiting polar bear hunters to Nunavut since 1995.

Each polar bear sport hunt is worth approximately \$19,000 CAN to a Northern community (Wenzel & Bourgouin, 2002). The total value in 2005 (110 sport hunts) was approximately \$2,090,000. The potential annual value, if all hunts were sport hunts (using the average harvest from 2000 to 2004 of 432) would be \$8,208,000.

Despite the strong economic incentive to develop the sport hunt industry, Inuit communities in Nunavut still assign only a little over 20% of their polar bear hunting tags to a long waiting list of sport hunters (Dyck et al., 2006; Peacock, Dyck, & Piugattuk, 2007; Wenzel, 2005). The retention of the remaining polar bear tags for subsistence hunting illustrates the importance of cultural aspects of the subsistence hunt; the Inuit struggle to balance this industry within their cultural–ethical framework of appropriate human–polar bear interactions.

### Relationships between Inuit and polar bears

Inuit and related cultural groups have traditionally viewed wildlife and humans as integrated in one economic and social system in which animals were conceived as sentient and active participants (Stairs & Wenzel, 1992; Usher & Bankes, 1986; Wenzel, 2005). For Inuit, hunting was traditionally considered necessary to maintain relationships with animals and to maintain relationships between people through sharing the products of the hunt (Nuttall, 2000; Stairs & Wenzel, 1992). Respect for that relationship included the prohibition against taking more than was needed, as well as other restrictions on behaviour and thoughts regarding animals (Rasing, 1994). Hunting levels then were controlled by the quality of the human relationship with animals including choices made by the animals to engage hunters, as well as respect paid by humans. Many of these conceptualisations continue to be expressed among Inuit today (Dowsley & Wenzel, 2008).

Inuit have interacted with the polar bear not only in the physical sense as co-dominant predators of the Arctic sea ice environment, but also in an abstract sense through the use of the polar bear as a symbol of power and of the links between people and their environment (Randa, 1986; Sandell & Sandell, 1996; Wenzel, 1983b). Polar bears are considered to have



many features and behaviours similar to, or superior to, humans, and thus are categorised differently from other animals and treated with more respect (Randa, 1986; Wenzel, 1983b). It is this special relationship between Inuit and polar bears that sport hunters are able to experience firsthand in Nunavut.

### **Challenges of developing an Aboriginal conservation hunting industry**

While sport hunters benefit from the cultural experience of hunting a polar bear in Nunavut, Inuit themselves are struggling to develop the industry in a culturally appropriate way. Inuit moral concerns differ somewhat from those in western society; they stem from the structure of the traditional Inuit socioeconomic system that involves both humans and bears as active participants. Three main concerns that have been expressed are: a fear that polar bears may be treated as a private commodity, the ethics of hunting for sport and of having a quota, and worries over the response of sentient bears to these perceived mistreatments. Concurrently, new values are arising in the case study communities from Inuit involvement in polar bear management and sport hunting tourism, while the use of polar bears as international symbols of the impacts of climate change threaten both the sustainable conservation hunting industry and Inuit subsistence hunting.

### ***Privatisation***

Polar bears, as a natural resource, are considered to have no owner under the guiding philosophy of Nunavut (GN, 2004; Wenzel, 2004). People are, instead, encouraged to share and avoid disputes. However, due to the limit on the number of bears that may be killed, hunting tags must be assigned to individuals, preventing everyone from accessing polar bears when they wish. This is a topic of discussion in many communities and various mechanisms have been employed to reduce this conflict between biological rules and cultural norms. For example, some communities have implemented short tag-holding periods of 1–2 days and random draws as a method to disburse tags (Dowsley, 2008; Tyrrell, 2006). The conservation hunting industry exhibits a similar problem relating to who receives the economic benefit of running conservation hunts, while the community at large suffers the loss of tags that would otherwise be used for subsistence hunting.

Each Nunavut community Hunters' and Trappers' Organization (HTO) decides whether to hold conservation hunts and then decides how to outfit such hunts. The HTO membership (all community hunters are eligible) votes to either run the hunts through the HTO, or to allow a private outfitter to organise them. Under the first option, profits return to the community through the HTO by such means as selling hunting and survival equipment below cost, sponsoring contests and draws, running a community freezer or purchasing large items, such as boats, to be used in communal hunts. Typically, the second option of privatising outfitting involves the payment of fees either to the HTO or to individual hunters who would otherwise receive hunting tags. The remaining profits of the hunt are kept by the private outfitter.

Private outfitting of conservation hunts provides an economic environment in which to maximise returns from sport hunting because the company wants to maximise its profit and its personnel are engaged over the long term in organising the hunts, dealing with southern hunt wholesalers and sourcing supplies (Dowsley, 2008). On the other hand, HTO-run sport hunt outfitting is done by the HTO secretary-manager, who may have little time, experience or interest in maximising returns from sport hunts, and who sees none of the profit personally in any case.

Despite the greater economic efficiency of privatisation, HTO memberships in several communities, including Clyde River, have frequently changed the number of tags allotted to private outfitters (reducing the ability of the business to plan ahead), or have retaken control of outfitting from the private companies. These decisions were often made after discussions of too much benefit from a commonly held resource accruing to only a few individuals (Dowsley, 2008; Wenzel, 2005).

Decisions regarding who should work as guides on sport hunts are another point of community discussion. Sport hunt regulations require non-mechanised transport to pursue the bear. This has usually been interpreted as travelling by dog team. Thus, the few dog team owners available in each community receive employment while other skilled hunters may not, or may receive lower-paid jobs as hunt assistants. One case study community, Qikiqtarjuaq, has attempted to open guiding opportunities to more hunters by allowing a boat to transport the sport hunter to a hunting area where he can then pursue the bear on foot (Dowsley, 2008). These economic concerns are again centred on the idea of fairness of economic opportunities.

Longer-term concerns about conservation hunt employment and the level of sport hunting that should be allowed include discussions of loss of hunting skills. Too much privatisation of polar bear hunting could result in the loss of community-held skills and bear hunting could become a specialised task only carried out by sport hunt guides. This would reduce wage and subsistence opportunities for other people and such a change would, based on Inuit ethics, potentially have negative repercussions in the wider social economy by upsetting the human–polar bear relationship.

### ***Ethics***

The more abstract Inuit concerns about modern interactions between humans and polar bears centre on ethics. Discussions on the topic relate to both the idea of a quota system and the hunting of bears for recreation. Wenzel (in press) describes the concerns about the quota system expressed in Clyde River as relating to disrespecting bears. He explains that having a quota was interpreted negatively in three ways. First, it predicts how many bears will be killed in a given time period. This is arrogant, given the understanding that the bears are, or should be, involved in that decision. Second, it prevents humans from hunting bears that might present themselves after the quota is filled. This again disrespects the decision of the bear to engage a hunter. Finally, by assigning tags to individual hunters, the quota system determines who is given access to bears. These actions remove polar bears from the traditional relationship with humans whereby hunter and polar bear communicate their intentions to one another and the bear either agrees to engage the hunter or leaves the area.

The final concern has been dealt with in some communities through not assigning tags until a hunter harvests a bear. The hunter receives a tag upon his return to the community, rather than before he goes out on a hunt. The original intention of the tags, developed from a Western perspective, was to distribute them before hunts occurred in order to prevent an overharvest. The assignment of tags after hunts runs the risk of overharvest and subsequently the reduction in the number of bears that may be harvested the next year. Despite this possibility, some communities obviously feel the trade-off is worthwhile.

The use of polar bears for sport hunting involves an additional ethical dilemma. Sport hunting is interpreted by some Inuit as disrespectful in that it is playing with animals.

In the old days you were told to only kill what we needed. I'm so against how it is now. We were told not to play with animals, now there's sport hunting and fishing derbies. (M.A., Qikiqtarjuaq Elder, informal interview 2004)

The anxiety over ‘managing’ polar bears by controlling Inuit access and by selling hunting rights to people who want to ‘play’ with bears raises very serious concerns about what polar bears, as sentient non-human persons, might do in response.

### ***Response of bears***

Polar bears are considered very intelligent and have the ability to hear people’s words and even thoughts. A common understanding of bear behaviour is:

Polar bears are dangerous and if a person curses a polar bear even without the polar bear’s hearing, the bear knows and will come to your tent and attack you. (M.K., Qikiqtarjuaq Elder, informal interview 2004)

The systemic problem of perceived mistreatment of bears that arises through quotas, management regulations and sport hunting raises concerns about a systemic response from polar bears. Two possible courses of action for the bears are attacking humans or leaving the area in order to prevent hunters from being successful. The recent increase in the number of bears observed by Inuit in the case study communities (Dowsley, 2007) and the increase in defence kills in roughly the past decade (Table 1) result from polar bears coming around humans and destroying property more than in the past, which could be interpreted as revenge by the bears. When case study communities along the eastern coast of Baffin Island were told that Greenland (with whom the Baffin Bay polar bear population is shared) had increased their harvest sharply, Inuit responded that perhaps the increase was because polar bears had gone to Greenland where there were no quotas and thus Greenlanders were more respectful (Dowsley & Wenzel, 2008). Greenland has since instituted a quota system, but there has been little decline in their harvest.

Discussions on all of these topics are further complicated by the tradition of non-interference in the affairs of other people, and the understanding that many people are suffering economically. As a result, sport hunting is not entirely banned nor it is fully embraced.

### ***New values***

The development of ecotourism creates not only challenges in the incorporation of the new economic activity into the existing social economy, but also new values and social relations (Stronza, 2007). Inuit traditionally correlated hunting success with proper behaviour, rather than the population size of the targeted species. The idea that hunting pressure might reduce the population of a species was not considered. Concerns over the improvements in technology and growth in human populations, however, have resulted in the non-Inuit development of formal top-down management systems in order to prevent overharvesting. Though connecting harvest levels with animal population levels is not yet the dominant viewpoint (Dowsley, 2008; Gilchrist, Mallory, & Merkel, 2005), some Inuit hunters are beginning to consider this in their interactions with the quota system for polar bears.

Q: Is it good or bad that you can’t hunt polar bears with cubs?

A: It doesn’t seem to be a problem because we have to think of future generations. (E.K. Qikiqtarjuaq Elder, informal interview 2004)

### ***Climate change***

A new problem for Inuit is climate change and the use of polar bears as a symbol for the potentially negative effects of warming. Climate change has been observed to reduce the

population parameters of 2 of the 19 polar bear populations in the world (Regehr, Lunn, Amstrup, & Stirling, 2007; Regehr, Lunn, & Stirling, 2006; Stirling, Lunn, & Iacozza, 1999; Stirling & Parkinson, 2006). The World Conservation Union (International Union for the Conservation of Nature/Species Survival Commission (IUCN/SSC)) uplisted the species to vulnerable in 2006 due to possible climate change-linked impacts (Schliebe, Wiig, Derocher, & Lunn, 2006), while in Canada, which is home to over half the world's polar bears, the Committee on the Status of Endangered Wildlife in Canada recommends maintaining polar bears in the 'special concern' category (McLoughlin, Taylor, & Dowsley, 2008). Special concern means a continuation of the present management system.

Should international concerns about possible climate change impacts result in the closure of international trade in polar bear trophies or skins, Nunavut communities risk considerable financial losses, but polar bears would not be better off. Canada's commitment to continue scientific monitoring and to allow harvesting at sustainable levels would result in hunting moratoriums only on those populations that could not support a hunt. Sustainable hunting would continue in other populations, but with a much reduced market, and the economic value of the species would be minimal.

If Canada were to more fully embrace the unfounded symbol of the dying (often drowning) polar bear that is driving international concerns about the species' conservation, and ignore scientific evidence to the contrary, it could implement hunting moratoriums more widely. However, these would result in higher population levels for some populations resulting in stress from density effects. Hunting moratoriums would also remove all economic benefits of polar bears, making it difficult to garner community support for the costly scientific monitoring programmes currently in place in Nunavut that are necessary to make biologically rational decisions about harvest levels and conservation needs.

The system in place in Nunavut already protects polar bear populations by only allowing harvesting at sustainable rates. As, or if, climate change affects a population, the quota will be reduced or a moratorium will be put in place, if necessary (Dowsley & Wenzel, 2008). A reduction in conservation hunting or the importation of skins from Nunavut's polar bear populations would have no effect on the number of polar bears killed each year, nor would this action 'save' polar bears from climate change. In fact, reducing sport hunting would probably reduce community support for the current science-based management system because regulations and the scientific monitoring of the harvest burden Inuit with reporting and require them to follow rules foreign to their cultural perspective. Science-based regulations are currently accepted partly because of the economic returns available from a sanctioned conservation hunting industry.

## **Conclusions**

Conservation and Inuit rights legislation that allowed the development of an Aboriginal-run sport hunt industry in Nunavut have provided Inuit with an important economic opportunity. This particular sport hunt supports conservation and local people and thus fits the definitions of conservation hunting and ecotourism. It greatly increases the financial return from the sustainable harvest of polar bears and supports Inuit hunters by providing them with wage labour opportunities as hunt guides, workers and outfitters. This in turn supports the subsistence economy because the senior hunters who typically work in the industry disproportionately contribute to the non-market all-species subsistence economy (Wenzel, 1991). They have higher than average harvesting rates and subsequently widely distribute fish and meat to the community through traditional kinship-based sharing networks. The conservation hunting industry also fits well within the subsistence seasonal cycle and requires

the maintenance of traditional skills that encourages young people to learn and take pride in those skills (Dowsley, 2008).

The decentralised nature of the polar bear hunt industry allows for discussions regarding conservation hunting to be held in each community, providing the opportunity to balance cultural values with economic need. This balance is by no means simple, nor are the decisions temporally stable, but each community may modify its decisions at any time. This arrangement allows the industry to meet more of the characteristics of conservation hunting programmes and of ecotourism because Inuit are able to negotiate values and ethics on their own terms among themselves.

Inuit in Nunavut and elsewhere are struggling to adapt to a monetary economic system that is mainly beyond their control. The polar bear conservation hunt provides one ecotourism industry that is truly aboriginal and provides a value-added option to wildlife use. Despite this, the idea of sport hunting causes social tensions in Inuit communities as people struggle to accommodate much-needed economic opportunities within cultural frameworks that provide a very different view of economy and appropriate relationships between people and animals when compared with those of the dominant non-Inuit society. Despite these concerns, Nunavut Inuit success in developing a conservation hunting industry has become an incentive for Aboriginal peoples in several other jurisdictions, including Alaska, Québec and Greenland, to improve polar bear management in order to possibly start the industry in their areas. Such developments would go much further in promoting sound conservation of polar bears than would the use of polar bears in symbolic politics relating to climate change. The strengths of Nunavut's polar bear sport hunt are that it is biologically sustainable and flexible enough to allow for cultural concerns to be accommodated. It therefore meets most definitions of ecotourism and is considered conservation hunting. More generally, the inclusion of sport hunting as ecotourism encourages the industry to develop as conservation hunting, and opens room for discussion among Aboriginal groups on how to utilise their natural resources in both culturally and economically profitable ways.

## References

- Addison, L. (1996). An approach to community-based tourism planning in the Baffin region, Canada's far north. In L.C. Harrison & W. Husbands (Eds.), *Practising responsible tourism: International case studies in tourism planning policy and development* (pp. 296–312). Toronto, ON: John Wiley and Sons.
- Armitage, D.R. (2005). Community-based narwhal management in Nunavut, Canada: Change, uncertainty, and adaptation. *Society and Natural Resources*, 18(8), 715–731.
- Baker, J.E. (1997a). Trophy hunting as a sustainable use of wildlife resources in southern and eastern Africa. *Journal of Sustainable Tourism*, 5(4), 306–321.
- Baker, J.E. (1997b). Development of a model system for touristic hunting revenue collection and allocation. *Tourism Management*, 18(5), 273–286.
- Bourgouin, F. (1998). *The economic significance of outfitted polar bear hunts in Nunavut: A preliminary review of information needs for economic planning*. Unpublished Report to the Department of Sustainable Development, Government of Nunavut, Iqaluit.
- Canada Treaty Series (1976, No. 24, p. 10). *Conservation: Agreement on the Conservation of Polar Bears*. Oslo, November 15, 1973. Canada's instrument of ratification deposited December 14, 1974. Entered into force May 26th 1976.
- Chan, H.M., Fediuk, K., Hamilton, S.E., Rostas, L., Caughey, A., Kuhnlein, H.V., et al. (2006). Food security in Nunavut, Canada: Barriers and recommendations. *International Journal of Circumpolar Health*, 65(5), 416–431.
- Chivers, C.J. (2002, August 25). A big game. *The New York Times Magazine*, 38–41.

- Collings, P., Wenzel, G., & Condon, R.G. (1998). Modern food sharing networks and community integration in the central Canadian Arctic. *Arctic*, 51(4), 301–314.
- Condon, R.G., Collings, P., & Wenzel, G.W. (1995). The best part of life: Subsistence hunting, ethnicity, and economic adaptation among young adult Inuit males. *Arctic*, 48(1), 31–46.
- Department of Finance, Government of Canada. (2007). *Major transfers to provinces and territories*. Retrieved June 14, 2007, from <http://www.fin.gc.ca/FEDPROV/mtppe.html#Nunavut>
- Dietrich, U. (1992). Situation and perspectives for conservation and game management in Uruguay. *Zeitschrift für Jagdwissenschaft*, 38(1), 42–54.
- Dowsley, M. (2007). Inuit perspectives on polar bears (*Ursus maritimus*) and climate change in Baffin Bay, Nunavut, Canada. *Research and Practice*, 2(2), 53–74. Retrieved March 27, 2009, from <http://www.researchandpractice.com/articles/2-2/dowsley-1.pdf>
- Dowsley, M. (2008). *The development of multi-level governance for the management of polar bears in Nunavut territory, Canada*. Ph.D. thesis, Department of Geography, McGill University, Montreal.
- Dowsley, M., & Wenzel, G. (2008). 'The time of the most polar bears': A co-management conflict in Nunavut. *Arctic*, 61(2), 177–189.
- Dyck, M., Frame, P., McLoughlin, P., Piugattuk, F., Shewchuk, D., & Taylor, M. (2006, February 6–8). *Nunavut submission to the Federal/Provincial Polar Bear Technical Committee*, St. John's, NL: Government of Nunavut Department of Environment, Wildlife Division.
- Fennell, D.A. (1998). Ecotourism in Canada. *Annals of Tourism Research*, 25(1), 231–235.
- Fikkan, A., Osherenko, G., & Arikainen, A. (1993). Polar bears: The importance of simplicity. In O.R. Young & G. Osherenko (Eds.), *Polar politics, creating international environmental regimes* (pp. 96–151). Ithaca, NY: Cornell University Press.
- Franklin, A. (2008). The 'animal question' and the 'consumption' of wildlife. In B. Lovelock (Ed.), *Tourism and the consumption of wildlife: Hunting, shooting and sport fishing* (pp. 31–44). New York: Routledge.
- Freeman, M.M.R., Hudson, R.J., & Foote, L. (2005). *Conservation hunting: People and wildlife in Canada's North*. Edmonton, AB: CCI Press.
- Freeman, M.M.R., & Wenzel, G.W. (2006). The nature and significance of polar bear conservation hunting in the Canadian Arctic. *Arctic*, 59(1), 21–30.
- Freese, C.H., & Trauger, D.L. (2000). Wildlife markets and biodiversity conservation in North America. *Wildlife Society Bulletin*, 28(1), 42–51.
- Gilchrist, G., Mallory, M., & Merkel, F. (2005). Can local ecological knowledge contribute to wildlife management? Case studies of migratory birds. *Ecology and Society*, 10(1), 20.
- GN (Government of Nunavut). (2004). *Pinasuaqtavut 2004–2009: Our commitment to building Nunavut's future*. Retrieved April, 2008, from <http://www.gov.nu.ca/english/pinasuaqtavut/>
- Grekin, J., & Milne, S. (1996). Toward sustainable tourism development: The case of Pond Inlet, N.W.T. In R. Butler & T. Hinch (Eds.), *Tourism and indigenous peoples* (pp. 76–106). London: International Thomson Business Press.
- Hobart, C.W. (1982). Inuit employment at the Nanisivik Mine on Baffin Island. *Etudes/Inuit/Studies*, 6(1), 53–74.
- Kuhnlein, H., & Receveur, O. (2007). Local cultural animal food contributes high levels of nutrients for arctic Canadian indigenous adults and children. *Journal of Nutrition*, 137(4), 1110–1114.
- Leopold, A. (1949). *A Sand County Almanac*. New York: Oxford University Press.
- Lewis, D.M., & Alpert, P. (1997). Trophy hunting and wildlife conservation in Zambia. *Conservation Biology*, 11(1), 59–68.
- Lindsey, P.A., Frank, L.G., Alexander, R., Mathieson, A., & Romañach, S.S. (2006). Trophy hunting and conservation in Africa: Problems and one potential solution. *Conservation Biology*, 21(3), 880–883.
- Lovelock, B. (Ed.). (2008a). *Tourism and the consumption of wildlife: Hunting, shooting and sport fishing*. New York: Routledge.
- Lovelock, B. (2008b). An introduction to consumptive wildlife tourism. In B. Lovelock (Ed.), *Tourism and the consumption of wildlife: Hunting, shooting and sport fishing* (pp. 3–30). New York: Routledge.
- Marquardt, O., & Caulfield, R.A. (1996). Development of west Greenlandic markets for country foods since the 18th century. *Arctic*, 49(2), 107–119.
- McLoughlin, P., Taylor, M.K., & Dowsley, M. (2008). *Update status report on polar bear in Canada*. Ottawa, ON: Committee on the Status of Endangered Wildlife in Canada.

- McLoughlin, P., Taylor, M.K., & Messier, F. (2005). Conservation risks of male-selective harvest for mammals with low reproductive potential. *Journal of Wildlife Management*, 69(4), 1592–1600.
- Milne, S., Tarbotton, R., Woodley, S., & Wenzel, G. (1997). *Tourists to the Baffin region: 1992 and 1993 profiles* (McGill Tourism Research Group Industry Report No. 11). Montreal, QC: McGill University.
- Milner, J.M., Nisen, E.B., & Andreassen, H.P. (2007). Demographic side effects of selective hunting in ungulates and carnivores. *Conservation Biology*, 21(1), 36–47.
- Molnar, P.K., Derocher, A.E., Lewis, M.A., & Taylor, M.K. (2007). Modelling the mating system of polar bears: A mechanistic approach to the Allee effect. *Proceedings of the Royal Society, B-Biological Sciences*, 275(1631), 217–226.
- Myers, H. (2000). Options for appropriate development in Nunavut communities. *Études/Inuit/Studies*, 24(1), 25–40.
- Newsome, D., Dowling, R.K., & Moore, S. (2005). *Wildlife tourism*. Clevedon: Channel View Publications.
- Nuttall, M. (2000). Becoming a hunter in Greenland. *Études/Inuit/Studies*, 24(2), 33–45.
- PBTC (Canadian Federal–Provincial–Territorial Polar Bear Technical Committee). (1970–2005). *Harvest reports*. Edmonton, AB: Canadian Wildlife Service.
- Peacock, E., Dyck, M., & Piugattuk, F. (2007, February 6–9). *Government of Nunavut Submission to the Polar Bear Technical Committee*, Government of Nunavut Department of Environment, Wildlife Division, Edmonton, AB.
- Radder, L. (2005). Motives of international trophy hunters. *Annals of Tourism Research*, 32(4), 1141–1144.
- Randa, V. (1986). Au croisement des espaces et des destins: *nanuq* = marginal exemplaire? Un cas de médiation animale dans l'arctique central canadien. *Études/Inuit/Studies*, 10(1–2), 159–169.
- Rasing, W.C.E. (1994). 'Too many people', order and nonconformity in Iglulingmiut Social Process (Recht and Samenleving nr. 8), Nijmegen, The Netherlands: Katholieke Universiteit, Faculteit der Rechtsgeleerdheid.
- Rasker, R., Martin, M.V., & Johnson, R.L. (1992). Economics – theory versus practice in wildlife management. *Conservation Biology*, 6(3), 338–349.
- Reeves, R.R. (1993). The commerce in maktaq at Arctic Bay, northern Baffin Island, N.W.T. *Arctic Anthropology*, 31(1), 79–93.
- Regehr, E.V., Amstrup, S.C., & Stirling, I. (2006). *Polar bear population status in the southern Beaufort sea* (USGS Open-File Report 2006-1337, 20 pp.). Anchorage, Alaska: U.S. Geological Survey, Alaska Science Center.
- Regehr, E.V., Lunn, N.J., Amstrup, S.C., & Stirling, I. (2007). Effects of earlier sea ice break-up on survival and population size of polar bears in Western Hudson Bay. *Journal of Wildlife Management*, 71(8), 2673–2683.
- Roe, D., Leader-Williams, N., & Dalal-Clayton, D.B. (1997). *Take only photographs, leave only footprints: The environmental impacts of wildlife tourism*. London: Environmental Planning Group, International Institute for Environment and Development.
- Samson, C., & Pretty, J. (2006). Environmental and health benefits of hunting lifestyles and diets for Innu of Labrador. *Food Policy*, 31(6), 528–553.
- Sandell, H., & Sandell, B. (1996). Polar bear hunting and hunters in Ittoqqortoormiit/Scoresbysund, NE Greenland. *Arctic Anthropology*, 33(2), 77–93.
- Schliebe, S., Wiig, Ø., Derocher, A., & Lunn, N. (2006). *Ursus maritimus*. In IUCN 2007. 2007 IUCN red list of threatened species. Retrieved March 27, 2009, from <http://www.iucnredlist.org>
- Schweinsburg, R.E. (1981). A brief history of polar bear management in the NWT. *Northwest Territories Wildlife Notes*, 2, 1–5.
- Searles, E. (2002). Food and the making of modern Inuit identities. *Food and Foodways*, 10(1), 55–78.
- Simialak, D. (2005, March 31). *Public accounts: Consolidated financial statements*. Iqaluit, Nunavut: Government of Nunavut. Retrieved March 27, 2009, from <http://www.gov.nu.ca/finance/pa/pa2005.pdf>
- Simiyu, A., & Bennun, L.A. (2000). Gamebird hunting in Kenya: Developing local management models. *Ostrich*, 71(1–2), 56–60.
- Smith, T.G., & Wright, H. (1989). Economic status and role of hunters in a modern Inuit village. *Polar Record*, 25(153), 93–98.

- Stairs, A., & Wenzel, G. (1992). 'I am I and the environment': Inuit hunting, community, and identity. *Journal of Indigenous Studies*, 3(1), 1–12.
- Stirling, I., Lunn, N.J., & Iacozza, J. (1999). Long-term trends in the population ecology of polar bears in western Hudson Bay in relation to climatic change. *Arctic*, 52(3), 294–306.
- Stirling, I., & Parkinson, C.L. (2006). Possible effects of climatic warming on selected populations of polar bears (*Ursus maritimus*) in the Canadian Arctic. *Arctic*, 59(3), 261–275.
- Stronza, A. (2007). The economic promise of ecotourism for conservation. *Journal of Ecotourism*, 6(3), 210–230.
- Taylor, M.K., McLoughlin, P.D., & Messier, F. (2008). Sex-selective harvesting of polar bears (*Ursus maritimus*). *Wildlife Biology*, 14(1), 52–60.
- Tremblay, P. (2001). Wildlife tourism consumption: Consumptive or non-consumptive? *International Journal of Tourism Research*, 3(1), 81–86.
- Tyrell, M. (2006). More bears, less bears: Inuit and scientific perceptions of polar bear populations on the west coast of Hudson Bay. *Études/Inuit/Studies*, 30(2), 191–208.
- Usher, P.J., & Bankes, N.D. (1986). *Property, the basis of Inuit hunting rights – a new approach*. Ottawa, ON: Inuit Committee on National Issues.
- Wenzel, G.W. (1983a). The integration of 'remote' site labor into the Inuit economy of Clyde River, N.W.T. *Arctic Anthropology*, 20(2), 79–92.
- Wenzel, G.W. (1983b). Inuit and polar bears: Cultural observations from a hunt near Resolute Bay, N.W.T. *Arctic*, 36(1), 90–94.
- Wenzel, G.W. (1991). *Animal rights, human rights: Ecology, and ideology in the Canadian Arctic*. Toronto, ON: University of Toronto Press.
- Wenzel, G.W. (2004). From TEK to IQ: Inuit *qaujimajatuqangit* and Inuit cultural ecology. *Arctic Anthropology*, 41(2), 238–250.
- Wenzel, G.W. (2005). Nunavut Inuit and polar bear: The cultural politics of the sport hunt. In N. Kishigami & J.M. Savelle (Eds.), *Indigenous use and management of marine resources*, Senri Ethnological Studies No. 67 (pp. 363–388). Osaka, Japan: National Museum of Ethnology.
- Wenzel, G.W. (in press). *Sometimes hunting can seem like business: Polar bear sport hunting in Nunavut*. Edmonton, AB: CCI Press.
- Wenzel, G.W., & Bourguoin, F. (2002). *Outfitted polar bear hunting, community economy and species conservation in the Kitikmeot and Qikiqtaaluk regions of Nunavut*. Iqaluit, Nunavut: Government of Nunavut Department of Sustainable Development.
- Whitman, K., Starfield, A.M., Quadling, H.S., & Packer, C. (2004). Sustainable trophy hunting of African lions. *Nature*, 428, 175–178.
- Wight, P. (1994). Environmentally responsible marketing of tourism. In E. Cater & G. Lowman (Eds.), *Ecotourism: A sustainable option?* (pp. 39–55). New York: John Wiley and Sons.
- Wilkie, D.S., & Carpenter, J.F. (1999). The potential role of safari hunting as a source of revenue for protected areas in the Congo Basin. *Oryx*, 33(4), 339–345.