

# Polar Bear

Status of the

**Because forces that are being felt by Polar Bears worldwide are without precedent, leaving humans without historical evidence and experience to draw from, the questions and controversy surrounding the bear's future will continue to swirl like an arctic blizzard.**

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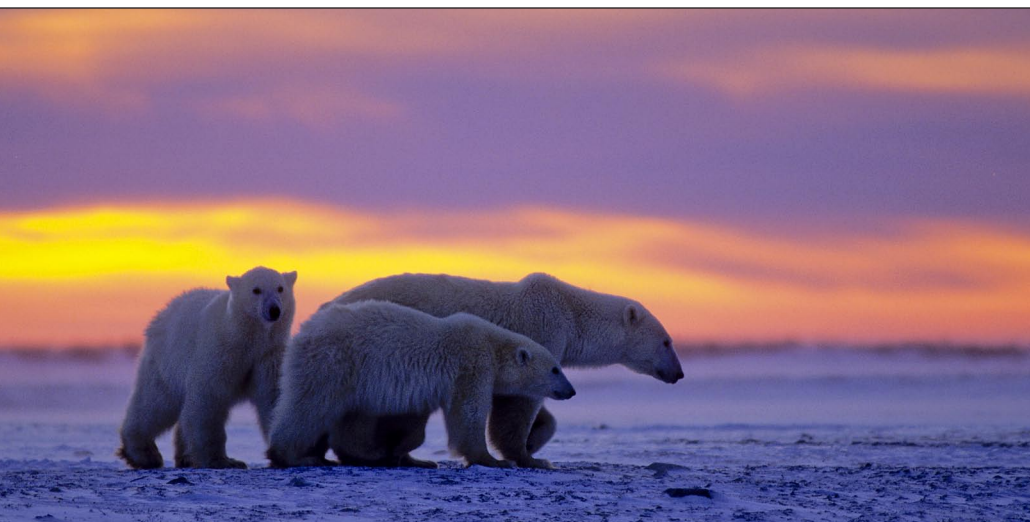
Is the polar bear—the majestic top predator in the Arctic ecosystem—doomed to certain extinction because of problems caused by humans—sometimes humans in lands far away from the bear's native habitat? Or is the “Great White Bear of the North” simply retrenching and evolving to meet the challenges that are being put upon it by the demands of our 21st century society?

Although polar bears are not in immediate danger of extinction, they face threats common to all large predators: human encroachment on their habitat, poaching, and chemical contaminants in their prey. A new potential threat appears to be climate change, which some believe may be affecting the polar bears' habitat by reducing the total ice cover in the Arctic, thinning the permanent pack ice of the central polar basin, and changing the timing of freeze-up and break-up in more southerly areas.

However, the inherent complexity that exists in large-scale ecosystems such as those found in the circumpolar North in which polar bears exist, seems to suggest that several interrelated factors need to be considered when managing for this species.

## **The Top Carnivore**

Without question, the polar bear is one of the most unpredictable, cunning, stealthy, and



**Polar bear with cubs at sunset in the Canadian Arctic.**

Photographs by John Pitcher

ferocious predators on our planet. It is the top carnivore of the Arctic and is a force to be reckoned with by all northern animals and peoples. Many people perceive it as the big, white, fluffy, and even friendly “Bear of the North.” But it is the largest land carnivore in the world, with adult males weighing as much as 1,300 pounds, and standing as tall as 11.5 feet, with females roughly half that size. It can kill a seal or a walrus with a simple swipe of its massive front paw.

The polar bear evolved from other bear family members about 200 thousand years ago, as it diverged from the brown bear grouping and exploited the Arctic niche that it still occupies today. The polar bear is the most carnivorous member of the bear family, and the one that is most likely to prey on humans as food. This bear species developed special adaptations as it evolved in its northern climate, and continues to impress northern peoples and visitors alike with its tremendous abilities to survive in what is perceived to be one of the world’s harshest environments.

### **How Many Bears Are There?**

Though it spends time on land and ice, the polar bear is a circumpolar, marine mammal that is found in and around the Arctic Ocean, its southern range limited by pack

ice. Their southernmost point is James Bay in Canada, and their northernmost point is the North Pole. The overall global population is estimated to be between 20,000 to 25,000 bears.

Although some local populations of polar bears have been shrinking, their total global population has been growing. Between the 1970s and 2007, the total global population of polar bears increased from 5,000 to 25,000. On the west coast of Hudson Bay in Canada, for example, there were an estimated 1,200 polar bears in 1987, and 950 in 2007.

**The purpose of this article is to share what is known about the bear’s status worldwide, as a benchmark for contemplating its future in a rapidly changing world.**

In most of the areas of the circumpolar North that they occupy on our planet, polar bears are a potentially threatened species. They range from Russia to Alaska, from Canada to Greenland, and onto Norway’s Svalbard archipelago. No adequate census exists on which to base a worldwide population estimate, but biologists use the working

figure of 20,000 to 25,000 bears, with about 60 percent of those living in Canada.

Debate continues among scientists about whether there are distinct polar bear subspecies, and also about the number of populations—possibly as many as 20—worldwide. Their main population centers are:

- Wrangell Island and western Alaska
- Northern Alaska
- Canadian Arctic archipelago
- Greenland
- Svalbard-Franz Josef Land
- North-Central Siberia

As such, the Committee on the Status of Endangered Wildlife in Canada has designated the polar bear as a Species of Special Concern in Canada because of characteristics that make it particularly sensitive to human activities and/or natural events.

### **How Hunting Fits In**

In the 1960s and 1970s, hunting was thought to be the major threat to the bears. At the time, polar bears were under survival pressure from hunters so that a landmark international accord was reached, despite

**Polar bear coming onto rock island from the sea in Wager Bay, Canadian Arctic.**



the tensions and suspicions of the Cold War. The International Agreement on the Conservation of Polar Bears was signed in Oslo, November 15, 1973, by the five nations with polar bear populations: Canada, Denmark (Greenland), Norway, the U.S., and the former U.S.S.R. The agreement came into effect in 1976.

The polar bear nations agreed to prohibit random, unregulated hunting of polar bears and to outlaw hunting the bears from aircraft and icebreakers, as had been common practice. The agreement also obliged each nation to protect polar bear denning areas and migration patterns and to conduct research relating to the conservation and management of polar bears.

Finally, the nations agreed to share their polar bear research findings with each other. Since 1965, an international group of scientists specializing in studying polar bears has been coordinating research and management of polar bears throughout the Arctic under the auspices of the International Union for Conservation of Nature and Natural Resources (IUCN), also known as the World Conservation Union. Member scientists of the Polar Bear Specialist Group now meet every three to four years to coordinate their research on polar bears throughout the Arctic. They also provide advice on international aspects of research and conservation to the IUCN and to the nations that signed the Polar Bear Agreement.

The Oslo agreement was one of the first and most successful international conservation measures enacted in the 20th century. Its legacy continues today, with member scientists from each nation

continuing to work together in the face of new threats to the bears including climate change, pollution, industrial activities, and poaching.

Conservation of polar bears requires international cooperation, as several populations are shared between countries and as problems such as contaminants and climatic change are affecting the whole Arctic.

Thus, hunting of polar bears has been highly regulated through International treaties and agreements since the 1970s. In Canada, Nunavut Territory has over

**If all the Arctic nations continue to abide by the terms and intent of the various Polar Bear Agreements that have been enacted, the future of this magnificent species should be secure.**

50 percent of the world's polar bears, and around 80-85 percent of the world's polar bear harvest. As such, Nunavut is significant in terms of implementing polar bear harvest and management strategies. Polar bears in Nunavut are harvested either by Inuit (i.e., regular hunt), or as an Inuit-guided sport hunt where a non-Inuit can harvest a bear. Nunavut's polar bears are harvested at a 2:1 male-female ratio during regular or sport hunts where sport-hunted bears are usually older and larger. In recent years, hunters throughout the world have killed fewer than 1,000 polar bears each year. Between 500 and 600 of these are taken by Inuit and other Aboriginal hunters in Canada under a system of annual quotas that is annually reviewed by the various jurisdictional authorities.

### **Current Conservation Status**

The Polar Bear Specialist Group of the IUCN recently concluded that the IUCN Red List classification of the polar bear should be upgraded from Least Concern to Vulnerable. The recommendation is based on a projected 30 percent decline in the polar bear population over the next 50 years.

The principal cause of this projected decline involves the theory of climatic change and its negative impact on the sea ice habitat of polar bears.

Public hearings into a U.S. proposal to list polar bears as "threatened" under its Endangered Species Act were initiated in March 2007. The U.S. Fish and Wildlife Service (USFWS) began holding the hearings after it received a petition from three American environmental groups, saying polar bears are at risk because of climate change.

During the past year, the USFWS has received more than 250,000 letters and e-mails from the public. The U.S. government will make its final decision on the status of polar bears by the end of 2007.

In Russia, the polar bear is listed as an endangered species and receives considerable protection. Wrangel and Herald Islands have the largest number of polar bear dens in the Russian Arctic. From 350-500 pregnant bears den on the two islands, or 80 percent of the breeding population, in the Chukotka region. Some areas support 6 to 12 bears per square kilometer. The majority of the bear population remains at sea throughout the year searching for prey on the ice, returning to land only when the ice floes have melted completely. In the far north of Russia, a United Nations agency, the UN Development Program, works with local communities to protect areas where polar bears live. People are involved in management of the ecosystems that polar bears and other species depend on for their survival. Indigenous peoples hunt the polar bear all year around, but since they use traditional methods, the numbers killed are not a threat to its survival.

In Norway, there are no plans to change the bears' status as a protected species, even though their numbers are now known and the population has risen a bit in the past 32 years. The polar bears have been a protected species since 1973, when hunting was forbidden and their population was estimated at around 2,500. The current size of the Norwegian polar bear popula-



**Polar bear swimming through an ice flow in the Canadian Arctic.**

tion have now been placed at 3,000 in the Norwegian sector of the Arctic, according to researchers from the Norwegian Polar Institute (Norsk Polarinstitutt).

The polar bears in Greenland, a self-governing dependency of Denmark, have been widely protected since 1973. Only registered hunters are permitted to hunt polar bears, with hunting permitted from July 1 through August 31, and with some exceptions, polar bears younger than two years and females accompanying young bears, may not be killed. Greenland officials decided on a hunt quota of 150 polar bears for 2006. In the past, subsistence hunters in Greenland were allowed to kill as many bears as they wanted, and the government did not keep track of the number of bears killed.

While setting a quota and keeping records is a positive step, some scientists at the Greenland Nature Institute suggest that the quota is too high. Reports also suggest that the government plans to introduce polar bear sport hunts for tourists in 2007 and may start with a quota of 10 bears per year. And according to the Agreement on the Conservation of Polar Bears and Their Habitat, Greenland has established the Melville Bay Natural Reserve, where hunting is not allowed, to protect the ecosystem. Melville Bay is the main denning and feeding site for polar bears in Greenland.

In areas where long-term studies are available, populations seem to be showing some signs of stress. Canada's Western Hudson Bay population has dropped 22 percent since the early 1980s. A long-term study of the Southern Beaufort Sea population, which spans the northern coast of Alaska and western Canada, has revealed a decline in cub survival rates and in the weight and skull size of adult males.

Some Native communities in Canada have been reporting increasing numbers of polar bears on land. Traditional hunters believe this indicates an increased population, although the increased presence on land may, in fact, be related to shrinking sea ice and changes in the bears' distribution patterns. Data is needed to understand the change.

The U.S. Fish and Wildlife Service states, "In the declining polar bear population of Canada's Western Hudson Bay, extensive scientific studies have indicated that the increased observation of bears on land is a result of changing distribution patterns and a result of changes in the accessibility of sea ice habitat."

In early 2005, Greenland and Nunavut Territory in Northern Canada

announced plans to allow larger numbers of polar bears to be killed by sport hunters. Greenland, which has no history of sport hunting its great white bears, has decided to allow a trophy hunt for the first time, and Nunavut increased its hunting quotas by as much as 28 percent, based solely on hunters' reports that more bears are being seen near villages.

### The Future for Polar Bears

Polar bears play an important cultural, spiritual, and economic role in the lives of many northern peoples the world over. Inuit societies use all parts of the animal in various ways. Polar bears are also highly

valued as display animals in zoos in more southerly areas.

As suggested in Canadian Wildlife Service reports, at present, the polar bear is one of the best managed of the large arctic mammals. If all the Arctic nations continue to abide by the terms and intent of the various Polar Bear Agreements that have been enacted, the future of this magnificent species should be secure. ■

# Polar Bear

Status of the

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