



Polar Bears on Thin Ice

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Perfectly at home in one of the world's most forbidding environments, most polar bears drift along the Arctic on large chunks of floating ice, finding mates, hunting for seals, and fattening themselves up for the winter. Without these thick rafts of sea ice, the world's largest bear could not survive. Yet at this moment, the polar bear's Arctic habitat is literally melting away beneath it due to global warming. The polar bear is also under pressure from over-hunting, industrial development, and toxic chemicals such as PCBs. The international community must take swift action to protect the polar bear from global warming and other man-made threats.

The polar bear could become the first mammal to lose 100 percent of its habitat to global warming. Scientific data from NASA and the National Oceanic and Atmospheric Administration (NOAA) shows that over the past three decades, more than a million square miles of sea ice (1,609,344 kilometers)—an area the size of Norway, Denmark, and Sweden combined—has disappeared. In some areas, the sea ice that is left is melting about three weeks earlier than in

the past—a loss of critical weeks that leaves the bears less time to hunt and store up fat for the five to seven months females spend ashore in summer, preparing to enter their maternity dens.

Scientists at the U.S. Center for Atmospheric Research predict that, if the current rate of global warming continues, the Arctic could be ice-free in the summer by 2040. As a result, wild polar bears could face global extinction by the end of this century.



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“The continued decline of summer sea ice is likely to push the populations of polar bears... toward extinction in this century.”

THE ARCTIC CLIMATE IMPACT ASSESSMENT

Range State	Current Polar Bear Protection	Challenges	New or Proposed Actions
United States 	Marine Mammal Protection Act – aims to maintain or restore healthy subpopulation levels and regulates importation of polar bear parts from Canada.	Currently, harvest is not regulated unless the subpopulation is considered depleted. Laws provide little or no habitat protection and do not address global warming.	In January 2007, the U.S. proposed listing the polar bear as threatened under the Endangered Species Act (ESA).
Canada 	Committee on the Status of Endangered Wildlife (COSEWIC) designated the polar bear as a species of “Special Concern” in 2002.	Does not provide protection of the polar bear or their habitat. Quotas are set for hunting, but some are too high.	Listing and protections under Species-at-Risk Act, including possible threatened status for some populations, under consideration for 2008.
Norway 	Under the Svalbard Environmental Protection Act, polar bears are protected from harvest and from disturbance that would expose either bears or humans to danger.	These laws do not protect the bear from the impact of climate change on the Barents Sea population and destructive development by the petroleum industry.	
Denmark / Greenland  	The Greenland Home Rule Government introduced quotas for the first time in 2006 under the Executive Order on the Protection and Hunting of Polar Bear.	Actual polar bear take tends to be slightly higher than the biological recommendation (Western Greenland) or the quota (East Greenland).	The Greenland Home Rule Government in December 2006 passed a three-year plan to reduce quotas in West Greenland and is considering introducing sport hunting of polar bears as a means of optimizing income potential for local communities.
Russia 	Hunting has been banned since 1956. Polar bear subpopulations are listed in Russia’s Red Data Book as “rare,” “uncertain status,” and “rehabilitated and rehabilitating.”	Illegal poaching poses a serious threat to the populations.	Russia is considering reintroducing subsistence hunt.

Polar Bears' High Risk of Extinction Is Recognized Internationally

There are 19 polar bear subpopulations throughout the Arctic region and across the United States, Canada, Denmark/Greenland, Norway, and Russia. The total number of polar bears is thought to be between 20,000 and 25,000, and 25 percent of the populations has already been classified as "declining" by the World Conservation Union's Polar Bear Specialist Group, the world's preeminent scientific body for the conservation and management of the species. And the Union (known as IUCN) has found that the number of polar bears in decline could jump to more than 30 percent over the next 45 years. The dwindling number has led IUCN to formally classify polar bears as a "vulnerable species," defined as a species at "high risk of extinction in the wild in the medium-term future."

The Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) currently lists the polar bear in Appendix II, which recognizes "species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid over utilization incompatible with their survival." However, according to the Arctic Climate Impact Assessment, scientifically reliable studies have shown that with the onslaught of global warming, "polar bears are unlikely to survive as a species"—meaning that the CITES listing is no longer adequate.

Threats to Polar Bears Are Increasing

Global Warming: Early retreat of summer ice due to global warming reduces the bears' hunting time, while fragmentation and reduction of sea ice makes it more difficult for polar bears to travel and den. Polar bear prey, such as the ringed seal, are also negatively affected by the decline in sea ice, decreasing the amount of food available to bears. Decreased sea ice extent also forces polar bears in some populations to swim longer distances between land and ice, leading to drownings during storm events. And as the overall sea ice available to polar bears shrinks, polar bears are forced to spend longer periods of time on land, leading to more interactions with humans and potentially increased mortality.

Toxic Chemicals in the Food Chain: Because they are at the top of the food chain, polar bears have accumulated considerable amounts of industrial chemicals and pesticides in their bodies. Pollutants such as PCBs and DDTs may harm the bears' hormonal systems and their reproduction and immunological functions.

Oil Development Encroaching on Habitat: Polar bears are sensitive to disturbances to their denning sites and may even abandon the den and their young. Oil development increases the amount of disturbances, with ship traffic and ice-breaking vessels, and an accidental oil spill would directly affect the bears and their prey. In addition, with decreased availability of offshore denning sites, polar bears will depend more on areas like the 1002 Area of the Arctic National Wildlife Refuge in Alaska, which is continually under major pressure from big oil.

Over-Harvesting: In 2001, IUCN's Polar Bear Specialist Group (PBSG) found that mean annual kill exceeded sustainable kill in seven populations. Oftentimes, there is limited information on population sizes, making it difficult to know where to set hunt limits.

Strong Scientific Evidence Shows Polar Bears Are Threatened by Extinction

The IUCN "vulnerable" listing and the growing concerns among the range states are based on scientific evidence that polar bears are increasingly threatened with extinction. Wild polar bears live only in the Arctic and are totally dependent on Arctic sea ice for all of their essential needs, including locating mates, finding food, and raising their young. Many polar bear subpopulations are already feeling the negative impacts of global warming and are considered threatened; five of 13 Canadian subpopulations are deemed to be in decline already.



Recent Evidence of Polar Bear Decline

1987-2004: According to the IUCN PBSG, the polar bear population in the Arctic's Western Hudson Bay declined from approximately 1,200 bears in 1987, to 1,100 bears in 1995, and then to fewer than 950 bears in 2004, due in large part to ice loss.

September 2004: U.S. Minerals Management Service survey of an area in the Beaufort Sea documented the drowning of at least four polar bears when the sea ice retreated a record 160 miles (257.5 kilometers) off the northern coast. The U.S. Fish and Wildlife Service found that as many as 27 bears may have drowned during the event.

Spring 2006: Scientists located the bodies of several bears that had starved to death; reduced food availability due to global warming has also resulted in polar bear cannibalism off the north coast of Alaska and Canada.

April 2006: The U.S. National Snow and Ice Data Center reported that winter sea ice—defined as the area with sea ice concentrations of 15 percent or greater—has shrunk in the past year by over 115,000 square miles (14.8 million square kilometers) reaching a new record low of 5.60 million square miles (14.5 million square kilometers).

December 2006: Scientists from the U.S. National Center for Atmospheric Research said that the Arctic could be ice-free in summer as early as 2040, and in the next 20 years the extent of Arctic summer sea ice will be reduced by 80 percent.

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We Can Do More to Protect the Polar Bear

Act now to reduce global warming pollution:

Global warming is not only the biggest threat to polar bears, but it is also the leading environmental threat to our planet as a whole. It is imperative that states set mandatory limits on global warming pollution, while promoting energy efficiency and renewable energy usage.

Enhance protections across all range states:

Starting with listing polar bears under the U.S. Endangered Species Act and under the Canadian Species at Risk Act.

Protect the polar bear under CITES: Address the global warming threat to species under CITES and start a consultation to move the polar bear from CITES Appendix II to CITES Appendix I (species threatened with extinction).

Implement the 1973 International Agreement on the Conservation of Polar Bears including through development of a range-wide polar bear conservation plan: The treaty implementation needs to meet current needs by focusing on habitat conservation and threats from global warming.

Polar Bears' Connection to the Arctic's People

The polar bear has great significance for Aboriginal Peoples in the Arctic region. Aboriginal Peoples have traditionally engaged in environmentally sustainable hunting of polar bears for cultural and subsistence purposes, and more recently to help support their economies through sport hunting enterprises. However, the

modern world now poses major threats to the survival of polar bears, and polar bear hunting has put significant pressure on some polar bear populations. Inuit traditional knowledge is also witnessing rapid and major changes to both sea ice habitats and polar bear behaviors—exactly in line with scientific data on ice

and polar bears. Increased protections for polar bear from modern threats such as global warming can help preserve the ability of Aboriginal Peoples to continue to engage in environmentally sustainable hunting.



More Polar Bear Resources

NRDC: www.polarbearsos.org

IUCN/SSC Polar Bear Specialist Group (PBSG): <http://pbsg.npolar.no/>

- Proceedings of the 14th Working Meeting of the IUCN/SSC Polar Bear Specialist Group, 20–24 June 2005, Seattle, Washington, USA: <http://pbsg.npolar.no/docs/PBSG14proc.pdf>
- IUCN Red List of Threatened Species, Polar Bear Assessment Information: <http://www.iucnredlist.org/>

Arctic Climate Impact Assessment: <http://www.acia.uaf.edu/>

- Arctic Climate Impact Assessment: Impacts of a Warming Arctic, 2004: <http://amap.no/acia/>
- Arctic Climate Impact Assessment Scientific Report, 2005: <http://amap.no/acia/>

U.S. Fish and Wildlife Service:

- Range Wide Status Review of the Polar Bear, USFWS, December 2006: http://alaska.fws.gov/fisheries/mmm/polarbear/pdf/Polar_Bear_%20Status_Assessment.pdf
- Proposed Rule 12-Month Petition Finding and Proposed Rule To List the Polar Bear (*Ursus maritimus*) as Threatened Throughout Its Range, January 9, 2007: <http://alaska.fws.gov/fisheries/mmm/polarbear/issues.htm>