



Polar Bear

This icon of the north is losing ground as global warming melts its sea ice habitat

In some areas of their Arctic home, polar bears are in decline. Their drop in population can be traced to another decline: that of sea ice, reduced by global warming. Sea ice is the polar bears' primary habitat and they rely on it for survival. Unless major actions to reduce global warming are taken, two-thirds of the world's polar bears are likely to be gone by 2050.

What are the problems polar bears face?

Climate change: The burning of fossil fuels, the release of sequestered hydrocarbons into the Earth's atmosphere, and extensive agriculture and deforestation are causing climate change, which in turn is causing the biggest threat faced by polar bears: the rapid loss of Arctic sea ice.

Since 1978, scientists have recorded a decline in late summer Arctic sea ice area of 7.7 percent per decade, as well as a decline in the perennial sea ice area of up to 9.8 percent per decade. In some places, a thinning of the Arctic sea ice of as great as 32 percent or more from the 1960s and 1970s to the 1990s has been shown.

More important, ice is melting earlier in the year and reforming later as a result of climate change. Thus, the time available for bears to hunt on the ice and store up fat reserves for the summer and autumn is decreasing. As the periods polar bears must go without food become longer, their overall body condition declines. Habitat loss due to global warming in the Arctic is by far the most important factor potentially affecting the future survival of polar bears.



Oil and gas: Petroleum industry activities in the Arctic are another human disturbance factor stressing bears in their habitat. There are already large oil and gas operations in the Arctic, and the industry is set to expand in the years ahead - especially offshore. Onshore Arctic oil installations are currently found in Russia, Canada and Alaska.

Disturbances due to seismic exploration, construction, transportation and the operation of facilities, as well as contamination from oil spill cleanup operations, may negatively impact polar bears. Furthermore, exploration for oil and gas continues to pollute the atmosphere with carbon dioxide, which is the leading cause of global warming and the loss of the polar bear's sea ice habitat.

Toxic pollution: As top predators, polar bears are exposed to high levels of pollutants through the food chain. Seals, their preferred prey, are often contaminated with the persistent organic pollutants (POPs) that are prevalent in Arctic waters. When a polar bear eats a seal contaminated with POPs, the chemicals become concentrated in the bear's fat and are stored in its vital organs. Bears with high levels of some POPs have low levels of vitamin A, thyroid hormones, and some antibodies, which are important for biological functions such as growth, reproduction, behavior and the ability to fight off disease.

Hunting: The International Agreement on the Conservation of Polar Bears allows the hunting of polar bears by indigenous people using traditional methods and exercising traditional rights. WWF respects the rights of indigenous peoples to harvest marine mammals in a responsible manner. Most hunting is done in a sustainable manner, but overhunting is an additional stress on some polar bear populations. Currently, the hunting of polar bears by nonnative sport hunters is legal in Canada and Greenland.

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Historically, hunting was the biggest challenge faced by polar bears. But according to the U.S. Geological Survey, hunting has become less of a stressor. It does remain an important factor as the sea ice retreats, because retreating ice will make once-remote habitats more accessible and more bears will occupy terrestrial habitats. As harsh conditions become milder in certain areas, people will have new access to remote lands and the potential for human-bear interactions will likely increase.

Reducing threats to polar bears in the wild

WWF works in all of the Arctic countries inhabited by polar bears and has participated in their conservation for 20 years. Our strategy focuses on supporting field research, educating the public, and reducing threats to polar bears, their habitat, and their prey. We also call on governments, corporations and individuals to reduce their carbon dioxide and other greenhouse gas emissions, the main cause of warming in the Arctic.

Protecting habitat: WWF has provided technical support to the Wrangel Island Nature Reserve in the Russian Arctic, a place known as “the polar bear nursery” for its high concentration of maternity dens. In 2004, WWF successfully nominated the reserve as a UNESCO World Heritage Site. WWF works with scientists and communities to identify and protect important habitats along the Russian Arctic coast. In the Beaufort Sea, WWF Canada’s marine program is working to create a national network of marine protected areas designed to protect species and marine habitat.

As we have for more than two decades, WWF will continue to work to preserve the Arctic National Wildlife Refuge in Alaska. WWF, along with our conservation partners, will also advocate for protecting key polar bear habitats from offshore oil and gas development in other parts of the Arctic.

Supporting science: Around the Arctic, WWF is involved in a variety of projects that are revealing important information about polar bear behavior and distribution, and about the impacts of habitat loss on the species. WWF supports research on the polar bear population in Canada’s Western Hudson Bay, where studies have demonstrated the direct relationship between diminishing sea ice and population numbers. Since 2001, WWF has supported the Norwegian Polar Institute’s research on polar bears and climate change. On our Polar Bear Tracker website (www.panda.org/polarbears), we track radio-collared polar bears to gather information about polar bear behavior. WWF has also donated satellite collars to the U.S. Geological Survey Alaska Science Center for a similar study in the Beaufort Sea.

Engaging governments and communities: WWF addresses the protection of polar bears at the international, national and local levels. Internationally, we facilitate cross-border information exchanges in support of the U.S.-Russia Agreement on the Conservation and Management of the Alaska-Chukotka Polar Bear Population. In Russia, we are aiding in the creation of a National Polar Bear Strategy. In the United States, WWF supports the U.S. Fish and Wildlife Service’s proposal to list polar bears as “threatened” on the U.S. Endangered Species List, as well as Canada’s similar proposal to list the species as “threatened” under Canada’s Species at Risk Act.

We also recognize that, because indigenous people continue to depend heavily on marine resources for survival, the participation of native communities is critical to polar bear conservation and management strategies. WWF supports efforts to engage these communities in the necessary science and monitoring and in reducing human-bear conflict.

Focus project – the polar bear patrol: In the remote Arctic village of Vankarem, a small community of 140 on Russia’s Chukotka Peninsula, residents have been observing growing numbers of polar bears on land each fall. When a young girl was killed by a polar bear in a neighboring town in early 2006, Vankarem leaders and WWF initiated a “polar bear patrol” to help protect both people and bears.

In its first field season in fall 2006, the experimental Umky Patrol (Umky is the Chukchi word for polar bear) proved to be highly successful. About 180 bears nearly surrounded the village for several weeks, but neither humans nor bears were harmed, thanks to the vigilant patrol members. With scientists providing some guidance, local people also used the opportunity to collect important information about the bears.

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Through close cooperation with local hunters, leaders and residents of Vankarem and other coastal communities, WWF has piloted additional projects. In a village survey conducted in 2006, residents expressed widespread support for the creation of a protected area around a large walrus “haul-out” - or resting place - where tens of thousands of walrus concentrate in the fall. WWF worked with local and regional authorities, and in 2007 the Cape Vankarem protected area was approved by the Chukotka regional government.

What can I do to help protect polar bears?

- Reduce CO₂ (and other greenhouse gas) emissions in your everyday life.
- Support and vote for political decisions that aim to achieve considerable and swift greenhouse gas reductions.
- Demand from the Arctic states that human activities there are managed in ways that take into account biodiversity conservation.

Polar bear facts

Population status: There are 20,000 to 25,000 polar bears. They are classified on IUCN's Red List as vulnerable and they are on Appendix II of the Convention on International Trade in Endangered Species.

Where they live: Greenland, Svalbard (Norway), northern Canada, Alaska (United States) and Russia.

Biology: Polar bear fur appears white but actually is transparent. This fur combines with their black skin, which absorbs sunlight, to make them superbly adapted to the harsh Arctic environment, where temperatures rarely exceed 10°C (50°F) in summer and hover around -30°C (-22°F) in winter. Their lifespan is 20 to 30 years. Adult males measure 200 to 250 cm (6.5 to 8 ft) in length and weigh 400 to 600 kg (880 to 1,300 lbs). Adult females measure 170 to 200 cm (5.75 to 6.5 ft) and weigh 150 to 300 kg (330 to 660 lbs). Standing on its hind legs, a polar bear is as tall as a small elephant.

Hunting habits: In fall, winter and spring, polar bears dwell near the edge of the pack ice, where they are most likely to find food. In the summertime, as the southern edge of the Arctic ice cap melts, some bears follow the retreating ice north to stay close to prey, while others spend their summers on land, living off body fat stored from hunting. Bears that spend their summers on land always head back to hunting off the sea ice when it reforms close to the coast in the fall.

Reproduction: The mating season for polar bears is March through May; however, pregnancy is delayed so that gestation will last into the winter months. Around November or December, the female digs a maternity den in a snowdrift. Soon she gives birth to cubs - often twins - that take refuge in her thick fur. New mothers cease to feed in winter months and instead live off their stored fat. Their milk, high in fat content, enables the cubs to keep warm and grow rapidly before leaving the den in March or April.



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