



# species factsheet

## | species introduction |

**Common name: Polar bear (sea bear)**

Scientific name: *Ursus maritimus*

The polar bear is the apex predator of the Arctic marine ecosystem, highly adapted for survival on its sea ice habitat. Polar bears prey primarily on ringed seals, and to a lesser degree, bearded seals. The sea ice is the platform from which they are able to hunt the seals. Polar bears are only found in the Arctic regions of our planet. There are five nations with polar bears: Canada, the United States, Russia, Greenland, and Norway.

Polar bears are built for life in the Arctic where winter temperatures can plunge to  $-45^{\circ}\text{C}$ . They are insulated by two layers of fur and also have a thick fat layer. Their ears and tail are both small and compact in order to reduce heat loss. Polar bear paws are furred between the pads while the pads themselves are covered with small bumps called *papillae* that may help to keep them from slipping on ice. Their sense of smell is powerful for detecting seals, and their strong claws and teeth can haul a 40-90kg seal from the water for food.



## | status in the wild |

The polar bear is classified as *Vulnerable* on the IUCN World Conservation Union's Red List of Threatened Species. In the United States, the polar bear is listed as a *Threatened* Species under the Endangered Species Act. Canada and Russia list the polar bear as a *species of special concern*. While overhunting was a concern in the past and contaminants remain a concern, scientists have concluded that the main threat to polar bears today is loss of their sea ice habitat resulting from human-caused global warming. Polar bears depend on sea ice for hunting, breeding, and in some cases, denning. Scientists predict that as the Arctic continues to warm, two-thirds of the world's polar bears could disappear by mid-century—although hope remains *if sufficient* action is taken in time to greatly reduce greenhouse gas emissions.

## | species reproduction |

Mating takes place on the sea ice in April or May, but the fertilized egg does not implant until the following autumn; this is called delayed implantation. Females usually have two cubs about two months after they enter the maternity den, usually by early January.

New-borns are 30–35cm long and weigh little more than 0.6kg. Cubs grow rapidly on their mother's rich milk. The family remains in the den until late March or early April. During her entire time in the den (four to five months, depending on where in the Arctic she lives) the mother bear doesn't eat or drink. Her success at hunting is critical for both her own needs and those of her cubs as they cannot hunt until they are much older. During that time however, they observe her and try, fairly ineffectively, to hunt as well. This experience does help to teach cubs to find food for themselves when the time comes. On average, cubs remain with their mother for 2.5 years.

## | species habitat |

Polar bears need a platform of sea ice from which to access and hunt the prey that sustains them: ringed and bearded seals. But not all sea ice is equal: some sea ice lies over more productive hunting areas, specifically the relatively shallow continental shelf or channels between the islands of various Arctic archipelagos. Although some ice remains over the deep water of the central Arctic Ocean, it is too biologically unproductive to support many seals and bears. In some areas, polar bears must fast on land for several months during summer and autumn because the ice melts completely. In those areas, ice breakup is becoming earlier and freeze-up later so that the open water period is getting longer and making it more difficult for bears to live on their stored fat reserves. In 2012, there was a record low amount of ice remaining in the polar basin at the end of summer.

## | species food |

The polar bear's main prey is the ringed seal. Ringed seals are the most abundant seal in the circumpolar region north to the Pole. Polar bears usually hunt ringed seals by waiting for the seals to surface to breathe at openings (*leads*) in the ice or at breathing holes called *aglus*. In winter and spring, polar bears locate breathing holes hidden beneath the snow with their powerful sense of smell and lie in wait for the seals to surface. Polar bears have to be smart and patient because the wait can be long. The average hunt is about an hour or so but sometimes bears will remain at a site for several hours without moving. Bears also stalk ringed seals that are basking on the ice. The bear walks slowly and steadily in a straight line toward the seal, holding its head low, but does not stop moving when the seal raises its head. At about 30-40 meters from the seal, the bear sprints toward it and tries to seize it before it can escape. Adult ringed seals have a thick layer of blubber and reach an average length and weight of 1.3 meters and 68 kilograms. In the more northerly areas' summer, when ice floes retreat, polar bears follow the ice—sometimes traveling hundreds of miles—to stay with their food source. However, if the ice goes further offshore than the northern edge of the continental shelf, they enter a zone of lower biological productivity and fewer seals. Polar bears stranded on land in summer must stay put until the ice forms again in the autumn. On land, bears face lean times. They rarely catch seals in open water. Polar bears' lives are a cycle of feasting and fasting. When hunting is good, polar bears eat only the seal's blubber and skin. They can eat 45 kilograms of blubber in a single sitting! Younger, less experienced scavenge on the remains, as do Arctic foxes.

## **| threats |**

Climate change is the single biggest threat facing polar bears. The Arctic is experiencing the warmest air temperatures in four centuries, and sea ice losses in the summer of 2012 broke all previous records. The Arctic's shrinking sea ice is linked to a build-up of greenhouse gases in the atmosphere caused by human activity. Scientists predict a mostly ice-free Arctic summer by 2040 unless we take action to reduce greenhouse gas emissions. Sea ice is critical to polar bears because they rely on the ice as a platform from which to access the seals they prey upon. Other threats include pollution, poaching, and industrial impact. Hunting could become a threat if it was not well regulated.

## **| conservation |**

Thank you for everything you're doing to reduce your carbon footprint. Scientists say it's not too late to reduce greenhouse gas emissions to save the polar bear's sea ice habitat—and you can do your part. But, we must ACT NOW to help polar bears. Each of us must act to reduce CO<sub>2</sub> and other greenhouse gases. Begin by saving energy and producing as little garbage as possible! And demand that governments and businesses change their policies and practices to reduce dependence on a carbon-based economy.

## **| find out more |**

**Polar Bears International** [www.polarbearsinternational.org](http://www.polarbearsinternational.org)

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For more information go to [www.poletopolecampaign.org](http://www.poletopolecampaign.org) or email [info@poletopolecampaign.org](mailto:info@poletopolecampaign.org)