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Facts and Fallacies about Polar Bears

Polar Bear Listing – Dispelling Fallacies with Facts



World Wildlife Fund (WWF) has worked around the world's Arctic regions for over 25 years to protect Arctic wildlife such as walrus, whales, seals and polar bears. Today, many species are facing new threats as climate change warms and alters arctic habitats. In late 2006, the U.S. Fish and Wildlife Service (USFWS) proposed listing the polar bear as threatened under the Endangered Species Act of 1973. Because there is confusion and misinformation reported about polar bears and the effects of global warming on their habitat, WWF has compiled the following facts to clarify inaccuracies from truths.

Fallacy 1:

"There are still 20,000-25,000 polar bears in the wild. That's too large a number to allow for considering the species to be endangered."

Facts:

- The Endangered Species Act (ESA) specifies that the listing of a threatened or endangered species is justifiable when any of the following criteria are met:
 1. The present or threatened destruction, modification, or curtailment of its habitat or range;
 2. Overutilization for commercial, recreational, scientific, or educational purposes;
 3. Disease or predation;
 4. The inadequacy of existing regulatory mechanisms;
 5. Other natural or manmade factors affecting its continued existence.

WWF believes that the proposal by the USFWS is based on a logical and science-based case, to which many respected experts from around the world have contributed.

- The listing of the polar bear as a threatened species is warranted chiefly because of the "threatened destruction, modification, or curtailment" of polar bear habitat or range, i.e., the sea ice. Sea ice is anticipated to decrease significantly over the next 45 years. As of December 12, 2007 NASA climate scientist Jay Zwally predicts that summer sea ice may be entirely gone by 2012.

Fallacy 2:

"The listing should be made on the current status of the bear - not on the potential, future loss of habitat."

Facts:

- The life history of polar bears is intricately tied to the Arctic sea ice. While polar bears are found in most ice-covered areas in the northern hemisphere, they appear to prefer annual sea ice in shallow, productive waters. In recent decades, sea ice has been diminishing at an unprecedented rate. In fact, records for sea ice decline were broken in August, 2007, signaling a major loss of the polar bear's most important habitat. Although 20,000-25,000 seems like a big number, experts predict that based on projections of continued sea ice decline, as early as mid-century, two-thirds of the world's polar bears could be lost.
- Under the Endangered Species Act, a threatened species is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Accordingly, USFWS is required to analyze not only the current status of a species but also its status into the foreseeable future.

Fallacy 3:

“Listing won’t really help the polar bear because it won’t stop the melting of sea ice.”

Facts:

- The ESA was intended by Congress to provide a means to protect endangered and threatened species as well as the ecosystems on which they depend.
- Listing the polar bear under the ESA requires the federal government to take actions not available under other pertinent regulatory mechanisms for the protection of listed species. For example, if the polar bear is listed, USFWS will be required to identify and protect critical habitat for the polar bear. USFWS will also be obligated to develop a recovery plan, which provides a science-based “road map” that guide managers responsible for the species. A recovery plan should include site-specific actions, estimates of time and cost of the recommended measures and criteria for “de-listing” the species.
- Additionally, if the polar bear is listed as threatened, the federal government will be required to identify and designate “critical habitat” for the polar bear. The ESA defines “critical habitat” as “specific areas within the geographical area occupied by the species” which contain “physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection. Critical habitat can also include “specific areas outside the geographical area occupied by the species.”
- In addition to these legal measures, the public discussion about listing the polar bear has attracted world-wide attention to the issue of sea ice decline and global climate change. Only through such broad awareness and engagement of the public will it be possible to reduce the production of the “greenhouse gases” that have led to the current trends in warming that we are witnessing today.



Fallacy 4:

“If polar bears are listed as threatened under the ESA in the United States, all hunting of polar bears will be stopped, and local communities will be negatively impacted.”

Facts:

- For thousands of years, indigenous peoples of the Arctic have harvested marine wildlife for sustenance as well as clothing and handicrafts. In Alaska, Canada and Greenland, indigenous people harvest polar bear for subsistence purposes. In Russia, a new U.S.- Russia treaty that was legally enacted in September 2007 opens the possibility for Russian native people to conduct a harvest, pending recommendations from scientists. In the United States, Alaskan native rights to harvest marine mammals for subsistence and use in handicrafts are protected under the Marine Mammal Protection Act (MMPA). This right will not be suspended if the bear is listed.
- Currently the native harvest of polar bears in the Southern Beaufort Sea is managed by an international agreement between the Inupiat people of Alaska and the Inuvialuit people of Canada, who share a quota of polar bears. In Canada, a part of the quota is apportioned to recreational hunting permits.
- The majority of recreational hunters in Canada are U.S. citizens, and in 1994 an amendment to the MMPA was made to allow these hunters to import their legally taken trophies into the United States. If the polar bear is listed as threatened, U.S. hunters who participate in such a sport hunt will not be able to import the hide of any polar bear harvested. The MMPA prohibits sport and commercial hunting of polar bears in Alaska. Greenland allows only full-time hunters living a subsistence lifestyle to hunt polar bears.

Fallacy 5:

“Canadian scientists and governments strongly oppose the listing of polar bears under the ESA.”

Facts:

- The government of the Canadian province of Nunavut and its biologists have gone on record in opposition to the listing of the polar bear as a threatened species. However, other Canadian scientists and governments support such protections as listing the polar bear as threatened. Two of the world’s leading polar bear biologists, Dr. Ian Stirling and Dr. Andrew Derocher are supportive of additional protective measures for polar bear populations. The Minister of Natural Resources David Ramsay has warned that continued climate change may lead to the extinction of polar bears in southeastern Canada.
- Canada currently lists the polar bear as a “species of concern” and in April of 2008, the government will determine whether to add the polar bear to the Canadian Species at Risk Act (SARA) list, which is similar to the ESA.



Fallacy 6:

“Legislation currently in place in the United States is adequate to protect the polar bear and therefore it is not necessary for the USFWS to list the polar bear under the ESA.”

Facts:

- In its proposal to list the polar bear as threatened, the USFWS acknowledges that the regulatory mechanisms directed specifically at managing immediate threats to polar bears do exist in all of the range states where the species occurs. However, polar bears are most threatened by the accelerating loss of Arctic sea ice habitat as a result of climate warming. There are no existing regulatory mechanisms requiring the conservation of sea ice habitat in the Arctic and current energy policies in the countries, China and the U.S., which are the leading polluters, are inadequate to curb greenhouse gas emissions.
- There is one avenue available to protect the principal habitat of polar bears -- the designation of “critical habitat” but this requires first listing the polar bear under the ESA.
- Other measures that are not in place, but which WWF is promoting, include an Arctic-wide treaty that would help to protect the entire range of the polar bear and would regulate other threats to the polar bear and its habitat. Also, WWF joins many other conservation organizations in promoting a global reduction of CO2 emissions.



Fallacy 7:

“Polar bears will be able to adapt to hunt and live on land, where alternative food sources can be found.”

Facts:

- On average, an adult polar bear needs approximately 2 kg (4.4 lbs) of seal fat per day to survive. Sufficient nutrition is critical and is stored as fat that helps polar bears survive the harsh arctic winter.
- Polar bears are carnivores, preying heavily throughout their range on ice seals, primarily ringed seals and bearded seals. Polar bears also have been known to kill much larger animals such as walruses, narwhal, and belugas.
- As the Arctic sea ice continues to decline, polar bears will have less access and time to forage on these important food sources. In the western Hudson Bay, where the ice breaks up three weeks earlier than it did 20 years ago, scientists have recorded nutritionally stressed bears and lower survival in the population.
- In some areas and under certain conditions, prey and carrion other than seals may supplement a polar bear's diet. Polar bears will eat human garbage, and when confined to land for long periods they will consume coastal marine and terrestrial plants and other terrestrial food if necessary. However, these sources are nutritionally poor compared to the high fat content of ice seals, and would not be adequate to replace the polar bears' preferred food. In addition the sea ice habitat is changing too rapidly for polar bears to evolve to a terrestrial life style. In summary, there is no scientific evidence indicating that polar bears can sufficiently adapt to a life without ice seals and maintain viable populations.



Fallacy 8:

“Polar bears survived warming periods before, and some warming may actually benefit polar bears.”

Facts:

- As a species, polar bears have survived at least two warming periods in the past. For example, 6,000 to 10,000 years ago, summer temperatures were two to three degrees Celsius warmer than today. However, there were also periods (140,000 and 20,000 years ago) when temperatures were much colder - as much as 10 degrees Celsius.
- Although we do not know how polar bears survived those warming periods, we do know that the species' survival is closely dependent on Arctic sea ice, which is rapidly diminishing in much of the Arctic.
- If any warming is to benefit bears, this may be for those which occupy the northernmost regions where sea ice is present year-round. But in places where sea ice is receding, bears are forced to spend more time on land or on the remaining pack ice over the relatively deep and unproductive waters in central polar basin and thus are deprived from their key food sources for longer periods.
- Unlike past warming periods, polar bears now face additional anthropogenic threats such as pollutants and various forms of human disturbance.

Fallacy 9:

“Climate modeling is speculative and there is a lack of agreement on climate warming.”

Facts:

- In the last two years, several major studies have been co-authored and peer-reviewed by hundreds of well-respected scientists that document evidence of global climate change. These experts have reached widespread agreement that:
 1. Climate change is real;
 2. Human-caused pollution is the main contributing factor and that;
 3. The Arctic is one of the regions to experience climate change most acutely.
- Observations have shown a decline in late summer Arctic sea ice extent of 7.7 percent per decade and in the perennial sea ice area of up to 9.8 percent per decade since 1978. In some places, a thinning of the Arctic sea ice of as great as 32 percent or more from the 1960's and 1970's to the 1990's has been shown. More importantly, the rate of sea ice decrease is accelerating, with record low minimum extents in the sea ice recorded in 2005 and even lower in 2007.
- One widely accepted scientific study suggests that abrupt reductions in the extent of summer ice are likely to occur over the next few decades, and that near ice-free September conditions may be reached as early as 2040. In December, 2007, Dr. Jay Zwally of NASA predicted that summer sea ice may be gone as early as 2012.
- Besides diminishing sea ice, other impacts in the Arctic that are already being observed include: shrinking glaciers, thawing permafrost, and Arctic “greening” (encroachment of shrubs and trees into tundra ecosystems) validate - and in many cases - exceed predictions made regarding temperature trends, reductions to annual sea ice during the summer and winter periods, reductions to multiyear pack ice and reductions to ice thickness.



Fallacy 10:

“Polar bears can breed with grizzly bears to avoid extinction.”

Facts:

- Hybrid polar-grizzly bears are neither polar bears nor grizzly bears. Hybridization of the two bear species does not prevent one or the other from going extinct; rather it may actually facilitate extinction.

Fallacy 11:

“Polar bears can be moved --- to zoos or parks where they can be cared for, or even to Antarctica, where there is also snow and ice.”

Facts:

- Although zoos can play an important role in captive breeding and reintroduction of animals into the wild, this measure would be largely impractical and over the long-term, is not likely to help polar bears survive in the wild.
- The introduction of polar bears to Antarctica is also impractical. In addition to the unlikely potential of capturing polar bears and safely transporting an entire population to the southern hemisphere, such a measure would have great potential to significantly disrupt the existing ecosystem there. For example, introducing a predator such as the polar bear could jeopardize a variety of potential prey species such as penguins and seals.

Fallacy 12:

“Artificial platforms can be built in the Arctic Ocean that may be utilized by polar bears and ice seals in place of melting sea ice.”

Facts:

- This is a possible mitigation deserving more study; however, any such platforms would need to effectively mimic the habitat characteristics and uses that sea ice serves for polar bears and ice seals. Realistically, this is not likely to work in the harsh seas and rough weather in the Arctic.
- A fundamental fact is that polar bears catch seals, mainly at their breathing holes or birth lairs on the sea ice and seals could not make breathing holes in artificial/plastic sheeting covering thousands of km² of arctic ocean. The arctic ecosystem that polar bears have evolved in is driven by the ice-water interface. Furthermore, WWF could not condone creating new sources of marine debris to an ocean which already suffers from pollution.

Fallacy 13:

“Oil and gas development poses no discernable threat to polar bears or their habitat.”

Facts:

- The principal cause of climate change in the Arctic is global warming, which the scientific community has clearly linked to the increase of carbon dioxide into the atmosphere via human use of fossil fuels (e.g., coal, oil and gas).
- Thus, oil and gas development does indeed pose a discernable threat to sea ice and indirectly to polar bears by virtue of the extraction and development of sequestered hydrocarbons that are subsequently used by people for energy.
- Oil and gas exploration and development activities in the Arctic (e.g., Chukchi and Beaufort seas off Alaska and Canada) pose other hazards to polar bears, ice seals, and their sea ice habitats, the most notable threat being that of spilled oil which cannot be cleaned up effectively. Oiled bears and seals would likely suffer lethal and sub-lethal effects. 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 of oil and gas continues to add CO₂ into the atmosphere, which is the leading cause of the global warming and the loss of the polar bear's sea ice habitat.
- WWF urges individuals, corporations and governments to recognize the need for conservation and better use of fossil fuels in addition to the development of new cleaner air technologies to meet our ever increasing energy demands.



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