Frequently Asked Questions
U.S. Fish and Wildlife Service Proposal to List Polar Bears as Threatened Species

Where do polar bears live?

Polar bears evolved to utilize the Arctic sea ice niche and are distributed throughout most ice-covered seas of the Northern Hemisphere, which include areas of the United States, Canada, Greenland, Norway, and Russia. They are generally limited to areas where the sea is ice-covered for much of the year. They are not evenly distributed throughout this Arctic habitat, nor do they comprise a single nomadic population, but rather occur in 19 relatively discrete populations. Scientists have described the boundaries of these populations based on behavioral and ecological factors and after decades of intensive scientific studies and information from Native communities. These populations often cross international boundaries; the United States, for example, shares polar populations with both Russia and Canada.

Polar bears are most abundant near the shore in shallow-water areas, and in other areas where currents and ocean upwelling increase marine productivity and serve to keep the ice cover from becoming too solidified in winter. Over most of their range, polar bears remain on the sea ice year-round or spend at most only short periods on land. They occur throughout the East Siberian, Laptev, and Kara Seas of Russia, Fram Strait and Greenland Sea, Barents Sea of northern Europe, Baffin Bay between Canada and Greenland, through most of the Canadian Arctic archipelago, and in the Chukchi and Beaufort Seas located to the west and north of Alaska.

What is the current status of world polar bear populations?

The total number of polar bears worldwide is estimated to be 20,000-25,000. Within Alaska, there are an estimated 4,700 animals shared with Canada and Russia in three populations – 1,500 in the Southern Beaufort Sea, 1,200 in the Northern Beaufort Sea, and 2,000 in the Chukchi Sea. The former two populations are shared with Canada, and the latter with Russia. There are no overall data on global polar bear population trends. However, long-term scientific studies in Canada's Western Hudson Bay have identified reduced adult weights and cub survivorship, resulting in a decline of that population to an estimated 935 animals -- a 22% decline -- correlated with loss of sea ice. More recent studies of the estimated 1,200 individuals in the Southern Beaufort Sea population in Alaska do not currently show a statistically significant decline, but this population is now experiencing the same pattern of reduced adult weights and cub survival as Western Hudson Bay. While such detailed studies are not available for other polar bear populations, the Service believes they may be facing the same situation, given their similar life history.

The projected threat to polar bears is the worldwide loss of their sea ice habitat. Recent data indicate a rapid and unprecedented retreat of Arctic sea ice (including earlier spring melt, later fall freeze-up and overall thinner ice) and there are projections of an ice-free Arctic Ocean within the foreseeable future. Since polar bears live on sea ice for a majority of the year and depend upon sea ice habitats for their key life functions, loss of sea ice would detrimentally affect all polar bears, world-wide.

This primary potential threat to polar bears appears to be unique because it stems from conditions

throughout the Arctic rather than in any one localized area. The future status of the species is being predicted through models of the projected effects of sea ice change on polar bear populations which still need further development, testing, and enhancement before a final decision can be made about their future status.

What is the process for addressing a petition to add a species to the list of threatened and endangered species under the Endangered Species Act?

The Endangered Species Act requires that the Fish and Wildlife Service (Service) make a finding on whether a petition to list, delist, or reclassify a species presents substantial information indicating that the petitioned action may be warranted. This finding is based on information contained in the petition, supporting information submitted with the petition, and information otherwise available to the FWS at the time of the finding. To the maximum extent practicable, the Service makes this finding within 90-days of the receipt of the petition and publishes this 90-day finding promptly in the *Federal Register*. If the Service finds that substantial information is presented, it commences a review of the status of the species which is to be completed, if feasible, within 12 months of receipt of the petition. In the 12-month finding, one of three determinations can be made: (1) the petitioned action is not warranted; (2) the petitioned action is warranted, but precluded by other pending listing actions; or (3) the petitioned action is warranted, and the species is proposed for listing.

What is the Fish and Wildlife Service's decision on the petition to list the polar bear as a threatened species under the Endangered Species Act?

Today, the Service is not making a final decision on this petition. However, the Service finds, based on currently available data, that there is sufficient scientific evidence of a global threat to the polar bear to warrant proposing it for listing as a threatened species under the ESA. This is the next step in a lengthy process which was initiated in 2005 and which will still require much additional work to enhance existing scientific models and analyses before a final decision can be made on whether to list the species.

The Service now will actively seek additional scientific and commercial data, information, and comments on the proposed rule. The Service will accept comments for 90 days following the publication of the 12-month finding in the *Federal Register*, and will also hold one or more public hearings where the public can obtain information and offer comments. A copy of the proposed rule and other information about the proposal is available on the Internet at http://alaska.fws.gov. A final decision will take into account these comments and any other new information the Service obtains, and will be published one year from the date of this proposed rule.

What are the criteria for listing a species as threatened or endangered under the ESA?

The Service's current proposal is to list the polar bear as "Threatened" throughout its range. As we evaluate public comments and any new information, we will consider all possible actions. By definition in the ESA, an "Endangered" species is likely to go extinct within all or a significant portion of its range, while a "Threatened" species is likely to become Endangered in the foreseeable future. Under threatened status the species is protected and managed for recovery, but FWS may also adopt special rules tailored to the conservation needs of the species.

The ESA requires that a species be listed if it is imperiled by one or more of the following five criteria:

- Present or threatened destruction, modification or curtailment of its habitat or range;
- Overutilization for commercial, recreational, scientific or educational purposes;
- Disease or predation;
- Inadequacy of existing regulatory mechanisms; or
- Other natural or manmade factors affecting its continued existence.

Thus identification of any one of these factors as a threat to a species can require the listing of the species under the ESA. In the case of the polar bear, the melting of sea ice is the potential threat to the species. The ESA does not discriminate between natural or manmade causes.

Which of these ESA criteria is judged to be most important to the future status of the polar bear?

In the case of polar bears, the decision to propose this listing as Threatened is based on the future effect of the continued expected modification or curtailment of its habitat or range, specifically from receding sea ice, and the absence of any known regulatory mechanisms at the national or international level effectively addressing this threat to polar bear habitat.

The ESA uses the term: "foreseeable future"; what is this?

The ESA does not define "foreseeable future." In other ESA listings, it has often been interpreted to be a function of generations of the species in question and/or habitat regeneration cycles. In this status review, based on the opinion of polar bear experts, the Service has adopted three generations as the upper limit. Using this measure, since a polar bear generation is defined as 15 years, the "foreseeable future" addresses the next 45 years.

If the final decision is made to list the polar bear under the ESA, how would this listing help the species?

The ESA requires that decisions be made solely on the basis of the five listing criteria outlined above, without regard to the level of knowledge or ability to address the threats to the species. A final decision to list the polar bear as threatened would not have any direct effect on the predicted reduction in sea ice habitat. However, listing would require the initiation of a recovery planning process, unless it is determined that this would not promote the conservation of the species. This planning process would include the cooperative efforts of International, Federal, State and local officials and agencies, Arctic Native groups, industry, and private entities to identify practical and feasible measures to provide for conservation of the species. These efforts would help increase public awareness about the status of polar bears and would assist in developing and implementing future polar bear management strategies. Listing would also require Federal agencies to consult (under Section 7 of the ESA) with the Service for any actions which might affect polar bears within the United States.

Is sport hunting or subsistence harvesting of polar bears legal today?

Hunting polar bears is prohibited by Norway and Russia, although some illegal harvest is occurring in

Russia. Canada and Greenland allow subsistence take by Native communities as well as regulated sport hunting of certain populations. In the United States, the Marine Mammal Protection Act prohibits sport hunting, but subsistence harvest of polar bears by Alaskan Natives is allowed. A user group management agreement is in place between the Inupiat of Alaska and the Inuvialuit of Canada to help ensure that subsistence harvest of the shared Beaufort Sea polar bear population is sustainable. Legislation to implement a bilateral agreement between the United States and Russia, which would provide for joint management and regulation of harvest of shared populations in the Chukchi Sea, has passed Congress and is now awaiting presentation to the President for signature.

If polar bears may be threatened, how can we allow any harvest or utilization at all?

Subsistence harvest of polar bears is of great social, cultural and economic importance to Native peoples throughout much of the Arctic, and the proposed rule finds that subsistence harvest is not a threat to the species. Therefore, maintaining a harvest within sustainable limits, in relation to population sizes and trends, remains a priority for the Service. If the species is listed as threatened, the subsistence harvest by Alaskan natives currently allowed under the Marine Mammal Protection Act would continue to be allowed under the Endangered Species Act. This situation would change only if there was a change in subsistence harvest which resulted in a material, negative impact on polar bear populations. If the species is listed, the Service would also be willing to consider a special rule allowing export of polar bear handicrafts.

Some Native communities in arctic Canada also obtain significant financial benefits from allocating a portion of their overall subsistence quota to trophy hunters from the United States and other nations, and from providing guiding services to such hunters. Under standards set by the Marine Mammal Protection Act, the Service currently allows the import of sport-hunted trophies only from those Canadian populations which have a sustainable harvest. If the species is listed as threatened, the Service would work with the Marine Mammal Commission, Congress, and all interested parties to consider a special rule allowing continued import of trophies from healthy populations.

Is it true that Native groups in some of these areas claim that traditional knowledge indicates that local polar bear populations are actually increasing?

The Service respects and makes use of traditional knowledge in all of its decision-making processes, and will evaluate information from Arctic Native communities in Baffin Bay, Davis Strait, Western Hudson Bay, and other areas of Canada, which have recently reported increasing numbers of bears present on land. These traditional hunters believe this indicates an increased population, though others note that this could just be the result of a change in polar bear distribution. 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.

Are there reliable figures for changes in the Arctic sea ice cap over the last several decades?

Observations have shown a decline in late summer Arctic sea ice to the extent of 7.7 percent per decade and in the perennial sea ice area of 9.8 percent per decade since 1978. Observations have

likewise shown a thinning of the Arctic sea ice of 32 percent from the 1960s and 1970s to the 1990s in some local areas.

Why is the sea ice melting?

The predominant reasons for amplified decreases in the extent of sea ice are: (a) the sea ice albedo effect (i.e., less sea ice cover, which has a high reflectivity, causes more absorption of solar radiation in the ocean and hence more heat storage in the ocean, and a warmer ocean further delays formation of new sea ice cover in the fall); (b) the thinning of the sea ice (including the reduction in perennial ice), which leads to more rapid melting of sea ice; (c) an increase in melt season length, which enhances the ice albedo feedback, and decrease in ice season length, which limits the winter ice extent and the average thickness of ice during the season; and (d) the movement of ice out of the Arctic Ocean. The National Snow and Ice Data Center in Boulder, Colorado, using satellite images, estimates that the Arctic ice cap has shrunk by 20% since 1979.

Why couldn't polar bears adapt to these changes in their habitat?

Genetic research indicates the polar bears evolved from an isolated population of the grizzly or brown bears 250,000 years ago. They are usually considered marine mammals since they are highly adapted to life on sea ice. Their fur, short snout, and small ears are adaptations to the cold; their teeth are specialized for a completely carnivorous diet (primarily of arctic seals); their feet have tiny papilae and "suction cups" for increased traction on ice; and their claws are shorter and more curved than grizzly bears. Their body structure and locomotion is adapted to walking on ice and swimming between ice flows, and they are not as efficient in walking or running on land as grizzly bears. If polar bears had to adapt to spending more of their lives on land, they would have to compete with grizzlies and other predators for prey items for which they are not as well adapted. Some polar bears spend portions of their on land waiting for the ice to return – for example, the Western Hudson Bay population – but during these periods when they do not have access to their regular food supply, they typically do not eat and instead live off their stored fat reserves. All of these factors would mean that it could be difficult for polar bears to adapt to living without ice.

What is the perspective of the Administration on climate change, in light of this proposal to list the polar bear due to threats of sea ice melting?

The President treats climate change very seriously and recognizes the role of greenhouse gases in climate change. The Administration is taking aggressive steps to implement a sensible course of action, promoting a widespread use of the best of today's technologies and accelerating the time when new technologies are available to make even greater progress.

The President is committed to a portfolio of actions. The President have dedicated more than $29 billion to climate science and research, and more than 60 mandatory, incentive based, and voluntary programs and smart choices by consumers to meet the President's goal of reducing green house gas intensity 18% by 2012.

These actions include:

- voluntary partnerships with 15 trade associations representing 14 industry sectors to meet specific goals to address greenhouse gases;
- an international methane-to-markets partnership with specific reduction targets for methane;
- new fuel standards for light trucks;
- new mandatory appliance efficiency standards;
- the awarding by the Treasury of $1.3 Billion in tax credits to leverage over $10 Billion in clean coal, low carbon energy;
- an Asia-Pacific partnership with 6 nations that include half the world's populations and half the greenhouse gas emissions to advance clean energy, reduce greenhouse gas emissions, and enhance economic development.

Much of the science cited in the document proposing listing of the polar bear regarding sea ice conditions was generated as part of this Administration's unprecedented levels of investment in climate research.

The President has acknowledged that the globe is warming and that human factors are a contributing factor. [See below for "What President Bush Has Said About Climate Change."]

Specifically, how does loss of sea ice threaten polar bears?

Although some females will use snow dens on land for birthing cubs, polar bears are almost completely dependent upon Arctic sea-ice for survival. They use sea ice as a platform from which to hunt and feed upon seals, to seek mates and breed, to move to maternity denning areas on land, and to travel long distances. Thus any significant changes in the abundance, distribution, or existence of sea ice would have profound effects all stages of the animal's life cycle.

Are polar bears currently recognized as being an at-risk species by any nations or organizations?

Polar bears are listed as species of concern in both Canada and in Russia. In addition, in June 2005, the IUCN World Conservation Union's Polar Bear Specialist Group – which includes the world's leading polar bear scientists – reclassified polar bears under the IUCN's "Red List of Threatened Species" to be a species vulnerable to global extinction due to sea ice change, with prediction of more than a 30% population decline in the next 45 years.

What is currently being done to protect polar bears in Alaska?

There are three polar bear populations in Alaska: the Southern Beaufort Sea population, estimated 1,500 animals, shared with Canada; the Northern Beaufort Sea population, estimated at 1,200 animals, also shared with Canada; and the Chukchi Sea population, estimated 2,000 animals, shared with Russia.

Management of these polar bears is already the responsibility of the Service under the Marine Mammal Protection Act, and the U.S. Geological Survey (Survey) is also actively involved in research. The Service and the Survey are pursuing an active program, in cooperation with a broad

array of organizations, which includes studying population status and trends, learning more about polar bear relationship to sea ice habitat, monitoring subsistence harvest, and minimizing bear-human conflicts, among many other topics, all designed to help conserve polar bears in the face of a changing environment. Key partners in these local, national, and international cooperative efforts include the State of Alaska, Alaskan Natives, the oil and gas industry, other bureaus within the Department of Interior, other countries, and non-governmental conservation organizations.

In early December, Congress passed new legislation, the United States-Russia Polar Bear Conservation and Management Act of 2006, which will implement a bilateral agreement negotiated with Russia for the joint management of subsistence harvest of polar bears in the Chukchi Sea population. This will establish a coordinated management regime for the shared population, including determination and implementation of sustainable harvest levels.

What additional research efforts would most benefit polar bears?

Current projections of the future status of polar bears are based on models of the effects of a changing environment on polar bear populations. Much new information and effort is needed to develop and enhance these models and improve confidence levels in our understanding of the future of polar bears. This will play a key role in the decision about what is needed to ensure the conservation of polar bears.

How would oil and gas development affect polar bears?

There is an extensive data base of knowledge about how to incorporate measures to ensure the conservation of polar bears from oil and gas development in the North Slope. Based on mitigation measures in place now and likely to be used in the future, historical information, the lack of direct quantifiable impacts to polar bear habitat from these activities, and the localized nature of these potential development activities or spills, the proposed listing of the polar bear finds that these activities will not threaten the species throughout all or a significant portion of its range.

The Service and the industry have worked cooperatively for many years to develop and implement regulations specifying appropriate safety measures for both workers and polar bears. Mitigation measures and polar bear encounters are tracked and evaluated through the Service's Marine Mammal Protection Act Incidental Take Program. Similarly successful cooperation is ongoing between the Service and the oil and gas industry for two species of ducks already listed under the ESA, the spectacled and Steller's eiders.

WHAT PRESIDENT BUSH HAS SAID ABOUT CLIMATE CHANGE:

" We -- first of all, there is -- the globe is warming. The fundamental debate: Is it manmade or natural. Put that aside. It is in our interests that we use technologies that will not only clean the air, but make us less dependent on oil. That's what I said in my State of the Union the other day. I said, look -- and I know it came as quite a shock to -- for people to hear a Texan stand up and say, we've got a national problem, we're addicted to oil. But I meant what I said.

Being addicted to oil is a problem for our economy. In a global economy, when burgeoning economies like India and China use more fossil fuels, it affects the price of gasoline here in America. In a

world in which sometimes people have got the oil we need, or don't like us -- it's kind of a undiplomatic way of putting it -- it means we've got a national security issue.

I have -- much of my position was defined early on in my presidency when I told the world I thought that Kyoto was a lousy deal for America. And I tell you why it was a lousy deal for America. It meant that we had to cut emissions below 1990 levels, which would have meant I would have presided over massive layoffs and economic destruction. I believe the best way to put technologies in place that will not only achieve national objectives like less addiction to oil, but also help clean the air, is to be wealthy enough to invest in technologies, and then to share those technologies with parts of the world that were excluded from the Kyoto Protocol.

And so I guess I should have started differently when I first became President, and said, we will invest in new technologies that will enable us to use fossil fuels in a much wiser way. And what does that mean? Well, it means that we've got to figure out how to use ethanol more in our cars. Ethanol is produced mainly by cane and corn. But we're near some breakthroughs that we can use sawgrass and biomass to be able to produce ethanol

That means we got to continue investing in hybrid batteries. Ours is a country where many people live in urban centers, like Washington, D.C., and it's possible to have a hybrid battery breakthrough which says that the first 40 miles of an automobile can be used by electricity alone. Right now the hybrid vehicles, as you know, switch between gasoline and electrical power. But that consumes gasoline, which means we're still reliant upon oil. The idea is to get off of oil.

On the electricity front, we need to be using nuclear power more in this country, in my judgment. It is a renewable source of energy that has zero gas emissions. We've got a great natural resource here in America called coal. We have 250-plus years of coal reserves. But we also recognize that by -- burning coal causes environmental problems, and so we're spending billions on research to come up with clean coal technologies. And we'd like to share those technologies with other nations of the world that are beginning to grow so that they are good stewards of the environment, as well.

And so I got a comprehensive plan that uses technologies to help this nation from a national and economic perspective, but also will help improve the global economy -- the environment from those new, burgeoning economies that are -- like China and India, to be exact."

March 29, 2006

"… [O]vercoming extreme poverty goes hand-in-hand with improving the environment. Stagnant economies are one of the greatest environmental threats in our world. People who lack food and shelter and sanitation cannot be expected to preserve the environment at the expense of their own survival. Poor societies cannot afford to invest in cleaner, more efficient technologies. India Gandhi spoke of poverty and need as the greatest polluters. The long-term answer to environmental challenges is the rapid, sustained economic progress of poor nations.

The best way to help nations develop while limiting pollution and improving public health is to promote technologies for generating energy that are clean, affordable and secure. Some have suggested the best solution to environmental challenges and climate change is to oppose development and put the world on an energy diet. But at this moment, about two billion people have no access to any form of modern energy. Blocking that access would condemn them to permanent poverty, disease, high infant mortality, polluted water and polluted air."

June 30, 2005

"Our alliance is determined to show good stewardship of the earth -- and that requires addressing the serious, long-term challenge of global climate change. All of us expressed our views on the Kyoto

protocol -- and now we must work together on the way forward. Emerging technologies such as hydrogen-powered vehicles, electricity from renewable energy sources, clean coal technology, will encourage economic growth that is environmentally responsible. By researching, by developing, by promoting new technologies across the world, all nations, including the developing countries can advance economically, while slowing the growth in global greenhouse gases and avoid pollutants that undermine public health. All of us can use the power of human ingenuity to improve the environment for generations to come."
February 21, 2005

"America and the world share this common goal: we must foster economic growth in ways that protect our environment. We must encourage growth that will provide a better life for citizens, while protecting the land, the water, and the air that sustain life.

In pursuit of this goal, my government has set two priorities: we must clean our air, and we must address the issue of global climate change. We must also act in a serious and responsible way, given the scientific uncertainties. While these uncertainties remain, we can begin now to address the human factors that contribute to climate change. Wise action now is an insurance policy against future risks….

Today, I'm confident that the environmental path that I announce will benefit the entire world. This new approach is based on this common-sense idea: that economic growth is key to environmental progress, because it is growth that provides the resources for investment in clean technologies.

This new approach will harness the power of markets, the creativity of entrepreneurs, and draw upon the best scientific research. And it will make possible a new partnership with the developing world to meet our common environmental and economic goals….

I reaffirm America's commitment to the United Nations Framework Convention and it's central goal, to stabilize atmospheric greenhouse gas concentrations at a level that will prevent dangerous human interference with the climate. Our immediate goal is to reduce America's greenhouse gas emissions relative to the size of our economy.

My administration is committed to cutting our nation's greenhouse gas intensity -- how much we emit per unit of economic activity -- by 18 percent over the next 10 years. This will set America on a path to slow the growth of our greenhouse gas emissions and, as science justifies, to stop and then reverse the growth of emissions….

[B]y giving companies incentives to cut emissions, by diversifying our energy supply to include cleaner fuels, by increasing conservation, by increasing research and development and tax incentives for energy efficiency and clean technologies, and by increasing carbon storage, I am absolutely confident that America will reach the goal that I have set.

If, however, by 2012, our progress is not sufficient and sound science justifies further action, the United States will respond with additional measures that may include broad-based market programs as well as additional incentives and voluntary measures designed to accelerate technology development and deployment.

Addressing global climate change will require a sustained effort over many generations. My approach recognizes that economic growth is the solution, not the problem. Because a nation that grows its economy is a nation that can afford investments and new technologies….

The hope of growth and opportunity and prosperity is universal. It's the dream and right of every society on our globe. The United States wants to foster economic growth in the developing world, including the world's poorest nations. We want to help them realize their potential, and bring the benefits of growth to their peoples, including better health, and better schools and a cleaner environment….

To clean the air, and to address climate change, we need to recognize that economic growth and environmental protection go hand in hand. Affluent societies are the ones that demand, and can therefore

afford, the most environmental protection. Prosperity is what allows us to commit more and more resources to environmental protection. And in the coming decades, the world needs to develop and deploy billions of dollars of technologies that generate energy in cleaner ways. And we need strong economic growth to make that possible."
February 14, 2002

"… my Administration's climate change policy will be science-based, encourage research breakthroughs that lead to technological innovation, and take advantage of the power of markets. It will encourage global participation and will pursue actions that will help ensure continued economic growth and prosperity for our citizens and for citizens throughout the world."
July 13, 2001

"The issue of climate change respects no border. Its effects cannot be reined in by an army nor advanced by any ideology. Climate change, with its potential to impact every corner of the world, is an issue that must be addressed by the world.

My Cabinet-level working group has met regularly for the last 10 weeks to review the most recent, most accurate, and most comprehensive science. They have heard from scientists offering a wide spectrum of views. They have reviewed the facts, and they have listened to many theories and suppositions. The working group asked the highly-respected National Academy of Sciences to provide us the most up-to-date information about what is known and about what is not known on the science of climate change.

First, we know the surface temperature of the earth is warming. It has risen by .6 degrees Celsius over the past 100 years. There was a warming trend from the 1890s to the 1940s. Cooling from the 1940s to the 1970s. And then sharply rising temperatures from the 1970s to today.

There is a natural greenhouse effect that contributes to warming. Greenhouse gases trap heat, and thus warm the earth because they prevent a significant proportion of infrared radiation from escaping into space. Concentration of greenhouse gases, especially CO2, have increased substantially since the beginning of the industrial revolution. And the National Academy of Sciences indicates that the increase is due in large part to human activity.

Yet, the Academy's report tells us that we do not know how much effect natural fluctuations in climate may have had on warming. We do not know how much our climate could, or will change in the future. We do not know how fast change will occur, or even how some of our actions could impact it.

For example, our useful efforts to reduce sulfur emissions may have actually increased warming, because sulfate particles reflect sunlight, bouncing it back into space. And, finally, no one can say with any certainty what constitutes a dangerous level of warming, and therefore what level must be avoided.

The policy challenge is to act in a serious and sensible way, given the limits of our knowledge. While scientific uncertainties remain, we can begin now to address the factors that contribute to climate change."
June 11, 2001