

Future Retreat of Arctic Sea Ice Will Lower Polar Bear Populations and Limit Their Distribution

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Contact Information:

U.S. Department of the Interior, U.S. Geological Survey
Office of Communication
119 National Center
Reston, VA 20192

Future reduction of sea ice in the Arctic could result in a loss of 2/3 of the world's polar bear population within 50 years according to a series of studies released today by the U.S. Geological Survey.

Last December, Secretary of the Interior Dirk Kempthorne announced that the U.S. Fish and Wildlife Service (Service) was proposing to list the polar bear as a threatened species under the Endangered Species Act. In January 2008, following a one-year review period, the Service is expected to make a recommendation to Secretary Kempthorne on whether or not to list the polar bear as threatened. To assist the Service in making that recommendation, Secretary Kempthorne requested USGS leadership in studies to inform the Service's deliberations on polar bear status. This information summarizes and integrates the results from a series of studies on polar bear populations, range-wide habitats and changing sea ice conditions in the Arctic.

In making the announcement last December, Secretary Kempthorne said: "I am directing the U.S. Fish and Wildlife Service and the U.S. Geological Survey to aggressively work with the public and the scientific community over the next year to broaden our understanding of what is happening with the species. This information will be vital to the ultimate decision on whether the species should be listed."

Specifically the USGS has improved knowledge on the status of three polar bear sub-populations, projected numbers of polar bears into the future in relation to sea ice and integrated the information into a range-wide assessment of polar bear status under scenarios of future climate change.

The newly-released USGS information, presented to the Service in the form of nine administrative reports to be open for public comment, will now be considered within the context of the Fish and Wildlife Service's one-year review. The Service will analyze it and other information provided by scientists, government agencies and the public in order to arrive at an informed and scientifically justifiable decision. That decision is due in January.

The team investigating the future of polar bears and their habitat included scientists from the USGS, other American and Canadian government agencies, academia and the private sector.

"This team has done a tremendous job in furthering polar bear science through the use of long-term observational measurements on polar bears, their habitats, and many other factors integrated into a range of new and traditional models," said Mark Myers, Director of the U.S. Geological Survey.

During a six-month period of intensive analysis of both existing and new data, the team documented the direct relationship between the presence of Arctic sea ice and the survival and health of polar bears. Polar bears depend on sea ice as a platform to hunt seals, their primary food. But sea ice is decreasing throughout their Arctic range due to climate change. Models used by the USGS team project a 42 percent loss of optimal polar bear habitat from the Polar Basin during summer, a vital hunting and breeding period, by mid-century.

In addition to forecasts, declines in habitat have been recorded throughout the Polar Basin over the past 20 years of observations. To project future sea ice conditions, USGS scientists used 10 general circulation models that best approximated observed trends in sea-ice loss and could be expected to do the best job of simulating future conditions. Scientists characterize their conclusions as conservative because even the best available models are believed to underestimate the actual decline in Arctic sea ice.

The reports are available to the public at Polar Bear Finding Web page.

Quelle/Source: US Geological Survey
<http://www.usgs.gov/newsroom/article.asp?ID=1773>