

December 14, 2010

Secretary Ken Salazar  
Department of the Interior  
1849 C Street NW  
Washington, DC 20240

Dear Secretary of Interior Salazar,

As scientists engaged in climate change research, we are writing to express our concern that climate change currently imperils the Arctic sea-ice habitat of the polar bear.

Scientific studies and observations indicate that climate change is more rapid and pronounced in the Arctic than in other areas of the world. Data and modeling studies repeatedly document that the geography, ice albedo feedback and cloud feedbacks make this region extremely sensitive to climate forcings. The IPCC Fourth Assessment Report (AR4) found that the Arctic has warmed at twice the rate of the rest of the globe on average, and some areas have warmed even faster. Mean annual temperatures in Alaska have increased by 1.9 degrees Celsius in the past 50 years, almost three times the global average over the same time period, and by 3.5 degrees Celsius in winter, as reported by the U.S. Global Change Research Program.

As a consequence of Arctic warming, the sea-ice habitat of the polar bear is declining in extent, thinning, and becoming shorter in seasonal duration. The loss of summer sea ice has been particularly rapid. Sea-ice extent varies from year to year, but as reported by the National Snow and Ice Data Center (NSIDC), the average rate of decline of September sea-ice extent over the period 1979 to 2010 is now 81,400 square kilometers per year, or 11.5% per decade relative to the 1979 to 2000 average. At the end of the summer 2010, less than 15% of the ice remaining in the Arctic was more than two years old compared to 50 to 60% during the 1980s, according to NSIDC. Virtually none of the thicker, old ice (at least five years old) remains in the Arctic; by 2010 less than 60,000 square kilometers remained compared to 2 million square kilometers during the 1980s. Under current greenhouse gas emissions trends, Arctic summer sea ice has been projected to disappear in the 2030s or before, as reported by several recent studies.

In short, the best-available science indicates that Arctic sea ice has already declined in extent, thickness and duration, and that, absent significant reductions in anthropogenic greenhouse gases, warming and sea-ice loss will continue and accelerate. We urge the Fish and Wildlife Service to acknowledge that anthropogenic climate change poses not just a distant, future threat to Arctic sea ice, but a current threat to this important habitat of the polar bear and other ice-dependant species.

Sincerely,

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