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Curbing carbon emissions can save polar bears, new study says

By Juliet Eilperin

Significant cuts in greenhouse gas emissions over the next two decades could give polar bears a chance of surviving over the long term by preserving the Arctic sea ice on which they depend, according to a new study published online Wednesday in the journal Nature.

The findings come just a week before the Obama administration faces a court-imposed deadline on whether to upgrade polar bears' status under the Endangered Species Act from "threatened" to "endangered." The Interior Department formally added polar bears to the endangered species list in May 2008 on the grounds that warming temperatures were eroding the sea ice the bears need to survive, but department officials under both President Obama and George W. Bush have refrained from using the listing as justification for limiting greenhouse gases linked to climate change.

The question of whether to impose economy-wide federal limits on carbon dioxide and other greenhouse gases has dominated the debate over polar bear conservation ever since scientists began warning that the melting sea ice they depend on to hunt for prey was jeopardizing their existence. In 2007 a group of federal scientists led by Steven C. Amstrup, an emeritus researcher with the U.S. Geological Survey, projected that if greenhouse gas emissions continued to rise as projected, only one-third of the world's 22,000 polar bears might be left by 2050, and all of them could be gone by the end of the century.

But when the Interior Department listed the polar bear as threatened it also adopted what is known as the "4D rule," which allows it to disregard how activities outside a species' immediate range could affect its survival. The federal government is not able to invoke this rule for endangered species, which is why a coalition of environmental groups are seeking to upgrade the bears' status to endangered in federal court.

"Global warming is not just a future threat for the polar bear or for the rest of us. It's here now," said Kassie Siegel, who directs the Climate Law Institute at the Center for Biological Diversity and whose group is the lead plaintiff in the suit over the bears' status. "The Obama government needs to acknowledge the reality that global warming has arrived and grant the polar bear the 'endangered' status it desperately needs."

Amstrup, who is the lead author of the new Nature article, said the analysis he and six other U.S. researchers have just completed suggests that if policymakers can cut greenhouse gas emissions enough to stabilize atmospheric concentrations of carbon dioxide at or below 450 parts per million, enough Arctic ice is likely to remain during the late summer and early autumn to allow polar bears to survive. Current carbon dioxide concentrations are now at roughly 390 parts per million.

"Conserving polar bears appears to be largely a matter of curbing temperature rise," Amstrup told reporters in a conference call Tuesday. "We also do realize this will take some considerable effort to do so."

The scenario the researchers have mapped out in the paper is more ambitious than the greenhouse gas reductions leaders of 193 nations reaffirmed Saturday in Cancun as part of the ongoing U.N. Framework Convention on Climate Change. To meet the target these scientists have identified, industrialized and developing nations will have to increase their reduction targets by as much as 50 percent in the coming decades.

Still, Amstrup said he wanted the public to know that the 2007 Geological Survey projections were based on a "business as usual" scenario that did not incorporate steep emissions cuts.

"If people and leaders think there's nothing to do, they will do nothing," said Amstrup, who now serves as a senior scientist with the Montana-based conservation group Polar Bears International. "We have now shown there is something that can be done to save polar bears. This problem is not irreversible. "

Chris Tollefson, a spokesman for the U.S. Fish and Wildlife Service, said the study shows there is no specific point at which the loss of Arctic sea ice becomes irreversible but it does not change the administration's approach to protecting polar bears.

"It's encouraging to see in the study they saw no evidence of a sea-ice tipping point in the modeling they employed," Tollefson said. "These new scientific findings add to the information available to us, but they don't alter our understanding of the threats posed to polar bears by climate change, or challenge our decision to list them under the" Endangered Species Act.

And when it comes to using the bears' predicament to trigger sweeping curbs on carbon dioxide, Tollefson said, "the issue of mitigation, that's a policy decision and isn't appropriate to address under the Endangered Species Act. This doesn't alter that."

Late last month, Interior designated more than 187,000 square miles of onshore barrier islands, denning areas and offshore sea ice as critical habitat for polar bears in Alaska or U.S. waters. Some of the area designated hosts oil and gas drilling activities and could come under closer federal scrutiny as a result.