# DOUBLE TROUBLE FOR POLAR BEARS:
## Melting Arctic Sea Ice and Offshore Oil Development

NATIONAL WILDLIFE FEDERATION
NORTHERN ALASKA ENVIRONMENTAL CENTER

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**Polar bears are facing multiple threats.** The combination of disappearing Arctic sea ice, due to global warming, and continued development of oil and gas in critical habitat areas spells double trouble for Alaska's polar bears.

**Arctic sea-ice essential for polar bear survival continues to decline.** In November 2009 coverage of Arctic sea ice was near the record low set in 2006. Thicker more stable multi-year sea ice, which is more suitable for polar bears, was at an all-time low. Fall sea ice has declined the most just offshore and over the continental shelf, areas that typically offer the highest quality polar bear habitat. The rapid sea-ice decline during recent years was an important factor for the Department of the Interior proposing to designate critical habitat, including offshore sea ice, for polar bears.

**Oil and gas development is underway in areas proposed as critical polar bear habitats.** Two huge offshore areas in the Beaufort and Chukchi Sea have been designated by the Department of the Interior for oil and gas development, including some locations approved for drilling in summer 2010. Ironically, the Department of the Interior is permitting oil and gas development in the same areas it is proposing as polar bear critical habitat. In hopes of exploiting offshore oil and gas, the State of Alaska continues fighting to reverse federal designation of the polar bear as a threatened species. The zeal for exploiting offshore oil and gas in polar bear critical habitat will only further contribute to global warming pollution, causing even more rapid Arctic sea-ice melting.

**We must give polar bears a fighting chance.** The Department of the Interior should move forward with its proposed critical habitat designation for polar bears and thereby require more careful review of oil and gas development and other proposed disturbances in areas essential for the polar bear's survival. It is also imperative that Congress take action to reduce global warming pollution, promote alternatives to the burning of fossil fuels and invest in strategies to help safeguard wildlife threatened by climate change.

NATIONAL WILDLIFE FEDERATION

Northern Alaska Environmental Center

CONFRONTING GLOBAL WARMING

Report

# Oil and Gas Development Threatens Polar Bears

The Endangered Species Act calls for designation of critical habitat to help protect and recover species federally listed as threatened or endangered. Under court order, the U.S. Department of the Interior has proposed to designate 202,541 square miles of critical habitat for the polar bear, which consists of coasts, barrier islands and sea-ice that provide habitat for America's only two polar bear populations.[1]

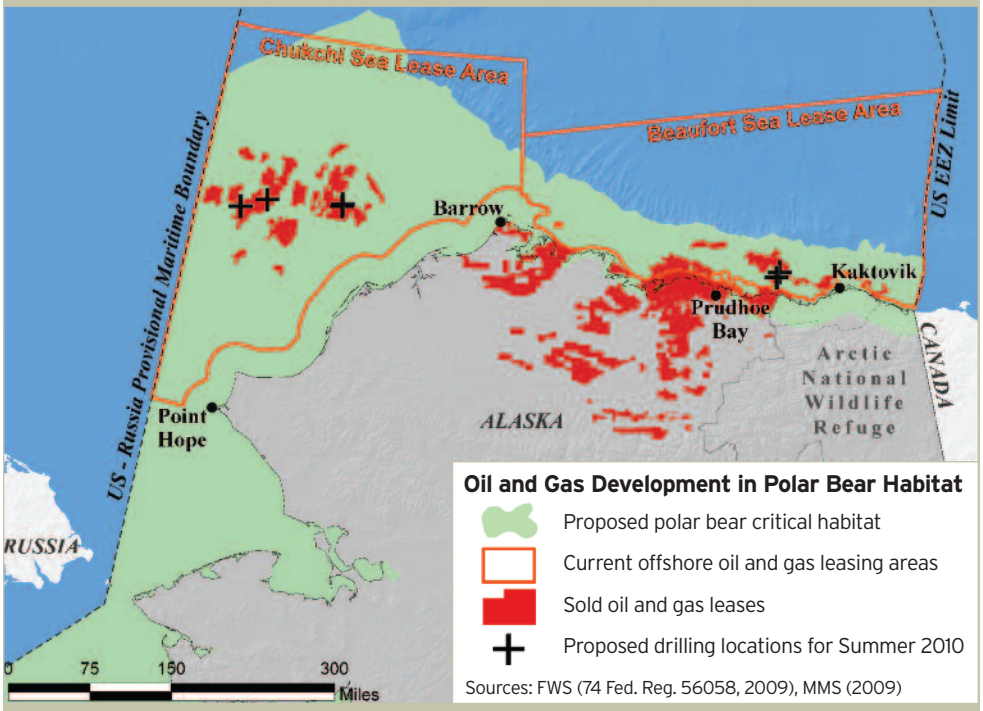
The Endangered Species Act requires all federal agencies to ensure that the actions they permit, fund, or carry out do not destroy or adversely modify critical habitat. By officially designating critical habitat for polar bears, there will be additional scrutiny of federal activities in the area, with the requirement that these activities be modified to avoid any adverse effects. Designation of critical habitat will help minimize non-climate stressors on polar bears as they struggle to survive in an environment where increasing global warming pollution is causing their habitat to literally melt away.

**Paradoxically, the agency charged with protecting polar bears is the same one putting bears at risk.** Two huge offshore areas that overlap with proposed polar bear critical habitat have been designated by the Department of the Interior for oil and gas development. The Chukchi Sea and Beaufort Sea Planning Areas are 40 million and 33 million acres in size, respectively.[2] Under heavy pressure from Alaska's Congressional Delegation,[3,4] oil companies[5] and Alaska Governor Sean Parnell[6] the Department of the Interior is moving forward with extensive oil and gas leasing and drilling in the very same areas identified as critical habitat for polar bears. Recent actions include:

**Oil and gas drilling on an artificial island in the Beaufort Sea.**

- In October 2009 Shell Oil received conditional approval to drill two wells for an exploration project in the Beaufort Sea.[7]
- In December 2009 Shell Oil received conditional approval to drill three exploratory wells in the Chukchi Sea.[8]
- The Department of the Interior is considering whether or not to offer four more offshore lease sales in the Beaufort and Chukchi Seas.[9]

Oil and gas development poses many threats to polar bears. Of greatest concern is the risk of oil spills. The U.S. Fish and Wildlife Service has reported that "a major Beaufort Sea oil spill would have major effects on polar bears and their primary prey, ringed seals."[10] An average of 453 oil and other toxic spills per year occurred between 1996 and 2008 in the North Slope oil fields.[11] Oil can kill a polar bear in two ways: one, by poisoning the bear when it tries to lick the oil off its fur; and two, by destroying the insulating quality of the fur that polar bears require to keep warm. Combined with the fact that there are no proven

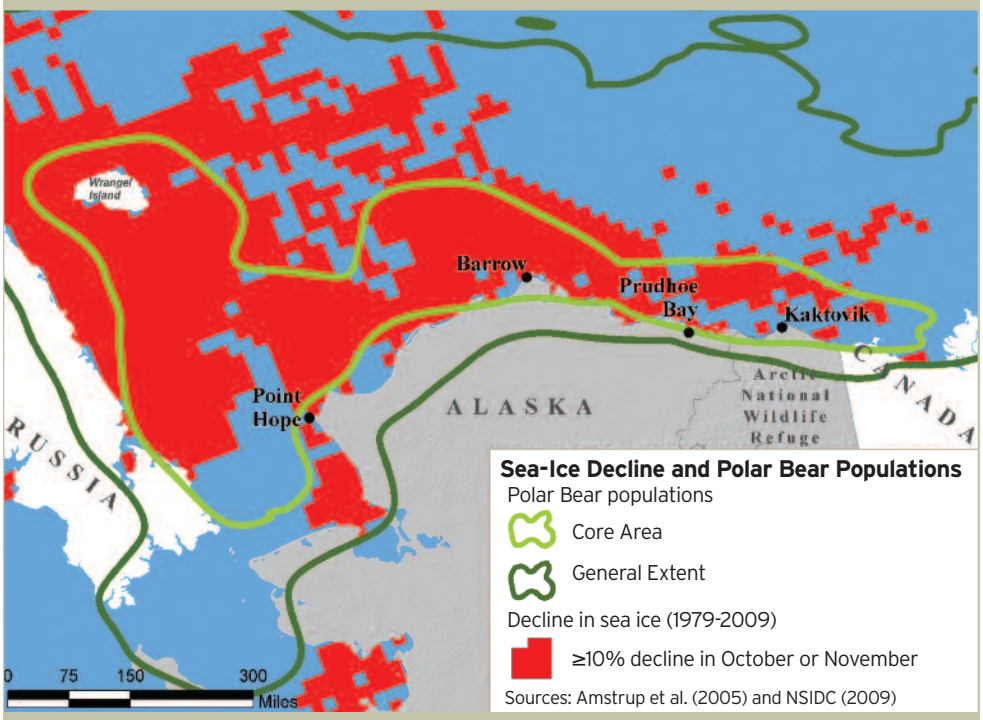



**The area proposed by the U.S. Department of the Interior as critical habitat for polar bears (green shading) overlaps extensively with areas the agency has also designated for oil and gas development, including several locations recently permitted for exploratory drilling.[22, 23]**

effective methods for cleaning up oil in the harsh Arctic environment, the threat of oil spills is a serious risk to polar bears.

A major oil spill in polar bear critical habitat, and climate change, would impact countless other species as well. Numerous marine mammals including walruses, seals, beluga whales, gray whales, countless sea birds, fish and others all depend in one way or another on the Arctic's sea-ice environment to survive. The Beaufort and Chukchi Seas are also important habitat areas for the endangered bowhead whale.

In addition to the significant risk of major oil spills, oil and gas extraction and transportation activities in this sensitive area would create another source of stress to polar bears. In spite of these threats, at the same time that the Department of the Interior is proposing critical habitat designation, it is allowing oil and gas leasing and exploration to proceed.




**Sea ice in prime polar bear habitat areas has declined significantly over the past 30 years, especially during October and November, when sea ice and polar bears return to these areas where seals are most common.**[24, 25]

# Arctic Sea-ice Decline Threatens Polar Bears

Arctic sea-ice melting is one of the most striking signs that climate change is happening now. In 2007 scientists reported an alarming record low in late-summer Arctic sea ice, the time of year when sea-ice cover normally reaches its annual minimum. In September 2007 the sea ice was an astounding 39 percent smaller area than the average observed from 1979 to 2000.[12] Unusually extensive summertime melting of Arctic sea ice has become the new norm. All of the last eight years have been among the ten lowest September sea-ice extents since 1978, when satellite-based observations began.[13]

Although the 2009 sea-ice minimum did not set a new record low level, sea-ice extent during October and November was the third lowest on record, at 19 percent and 9 percent below the long-term average respectively.[14] **Furthermore, thicker, more stable multi-year sea ice was at an all-time low,**[15] **having been replaced by thinner annual sea ice less able to support polar bears.**[16] The declining sea ice continues the trend of reduced time available for polar bears to forage for seals, their primary food. Making the situation worse, sea ice has declined the most in near-shore areas over the continental shelf, which provide high quality habitat for polar bears and the seals they feed upon.

The recent melting of Arctic sea ice presents yet another threat to polar bears and other Arctic marine mammals. For the first time commercial cargo ships were able to traverse an increasingly ice-free Northeast Passage (over Europe and Russia) in 2009,[17] and the Northwest Passage (over North America) saw its first commercial use in 2008.[18] Commercial shipping traffic through these northern passages means additional disturbances to their fragile habitats and wildlife.

The rapid melting of Arctic sea ice has outpaced what was projected by climate models,[19] requiring that the models be revised. Less than three years ago the Intergovernmental Panel on Climate Change (IPCC) projected that the Arctic could be ice-free during the summer by as early as 2050, but perhaps not until after 2100.[20] In marked contrast to these recent projections, some scientists now say that the Arctic could be ice-free in late summer by as early as 2012.[21]

# Give Polar Bears a Fighting Chance

The plight of the polar bear echoes the plight of the entire planet. The future well-being of polar bears, many other species, and humans requires aggressive action to reduce global warming pollution. It will be challenging, but we will all have a much brighter future if appropriate actions are taken now.

### DESIGNATE CRITICAL HABITAT FOR POLAR BEARS

The Department of the Interior has taken a first bold step to identify the polar bear as a threatened species and to propose a designation for critical habitat. Now they need to go further. The area proposed for polar bear critical habitat should be expanded to include the entire coastal plain of the Arctic National Wildlife Refuge and the Beaufort Sea from Alaska's northern coast out to 200 miles (the northern edge of the Exclusive Economic Zone (EEZ)). Both areas provide important polar bear denning habitat and, as coastal sea ice recedes, are likely to become increasing important for polar bears. In addition, the coast of northwest Alaska should be designated as critical habitat. As sea ice further declines, polar bears in the Chukchi Sea may not be able to reach their traditional denning areas on Wrangel Island off of Russia's northern coast. Unable to cross the large expanses of open water, these bears may increasingly resort to denning along Alaska's northwest coast.

### PROVIDE STRICT OVERSIGHT OF OIL AND GAS DEVELOPMENT IN THE BEAUFORT AND CHUKCHI SEAS

It is imperative that, as required by the Endangered Species Act, all proposed oil and gas development activities within polar bear critical habitat be reviewed to ensure that polar bear critical habitat is not adversely modified. The activity must not be allowed when there will be adverse modification of critical habitat.

### REDUCE GLOBAL WARMING POLLUTION

It is vital that policy makers, industry, and individuals work together to reduce emissions from the burning of coal, oil, and gas by at least 80 percent below today's levels by 2050. This target is achievable with technologies either available or under development, but we must take aggressive action now to avoid the worst impacts to polar bears, other wildlife, and humans.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## ENDNOTES


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[6] www.gov.state.ak.us/100days.php

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[24] Amstrup, S.C., McDonald, T.L. and Durner, G.M., 2005. Using satellite radiotelemetry data to delineate and manage wildlife populations. Wildlife Society Bulletin, 32(3): 661- 679 (See Fig. 5). (Polar bear population boundaries derived from radio collar data using a kernel estimation technique. Beaufort Sea use by polar bears from Northern Beaufort Sea population is not shown.)

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