

Understand the Arctic before exploiting it

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America's Arctic has long been a place of myth and dream, where the Inupiat Eskimos have thrived, explorers endured and artists found inspiration. While competing visions of the Arctic have clashed in the past, we are now on a collision course between industrial development and the unspoiled environment that has supported Alaska Natives' traditional culture.

Nowhere is this predicament more apparent than in the waters off northern [Alaska](#), America's only [Arctic](#) coastal region. Today, the rapid loss of sea ice due to [climate change](#) has created unprecedented access to this area, opening up previously remote Arctic waters to massive offshore oil and gas development.

Polar bears, walrus and beluga whales all flourish in the Chukchi and Beaufort seas -- animals that live only in the Arctic and have captured the imagination of people around the world. Beyond these iconic mammals, America's Arctic waters are home to millions of seabirds, to myriad creatures that are absolutely dependent on sea ice and to dozens of species that have been discovered only within the past few years.

But for all the outstanding scientific investigation conducted in the region over the last century, crucial questions about the Arctic Ocean remain unanswered. For instance, in 2007, thousands of walrus came ashore on land instead of ice in northern Alaska to rest, breed and avoid predators -- for the first time in recorded history. We need to discover, as sea ice retreats further, if they will switch from living on ice in summer to living on land.

That same year, a Shell Oil seismic report estimated there were as many as 5,000 bowhead whales in an area of the Chukchi Sea, where the company hopes to begin offshore oil development. An endangered species, the total population of bowhead whales in the Chukchi-Beaufort-Bering seas is only about 11,800.

In one case, a bowhead whale tagged with a satellite tracking device veered away from a ship performing seismic investigation and then swam back after testing ceased. It's possible that the booming underwater noise caused by firing powerful air gun blasts during such testing hinders whale-to-whale communication or alters migration patterns, and we need to know for sure.

If we can't answer these simple questions about walrus and bowhead, we certainly cannot assess how an array of drilling platforms, survey ships, supply vessels, aircraft traffic and pipelines will affect all the marine mammals. Noise, pollution, habitat disruption and other effects of industrial activities could impact the sensitive Arctic ecosystem, but without full information, we can't pretend that drilling comes without consequence.

We do know, however, that an oil spill in the Arctic Ocean's pristine waters and its fragile marine ecosystem would be disastrous. Adequate technologies simply don't exist to clean up oil that is spilled amid [sea ice](#) -- oil that would spread and affect every link in the food chain, from plankton, through whales and polar bears, to people. A recent U.S. federal government report estimated the risk of a major oil spill at 30 percent to 50 percent in the region, should development proceed.

In recent years, aggressive offshore oil and gas leasing and development was pursued in the Arctic, often over the objections of the Inupiat who live there. But this autumn, Interior Secretary Ken Salazar has a chance to take a precautionary, science-based approach to such activities.

Before permitting any new oil and gas development, he should require thorough research about the Chukchi and Beaufort Seas, their ecosystems and the impacts of industrial expansion on the environment and traditional cultures of local people. If he decides to proceed with any energy resource development in these waters he also bears the responsibility to put in place sustained environmental monitoring and to fully engage Arctic communities in a comprehensive plan that will help avoid serious ecological damage.

The U.S. Arctic Ocean's oil and gas reserves will remain unharmed while we weigh the costs and benefits of extracting them. The people of the Arctic, and the marine mammals, seabirds and fish that abound in northern waters, however, may not have that chance if we plunge ahead into the unknown.

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