

Polar bears in southern Beaufort Sea spending more time on land and open water

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A long-term study showing the changes in habitat associations of polar bears in response to sea ice conditions in the southern Beaufort Sea has implications for polar bear management in Alaska.

Karyn Rode, a [polar bear](#) biologist with the U.S. Fish and Wildlife Service in Anchorage, Alaska and one of the study's authors, says data collected between 1979 and 2005 show that polar bears in the region are occurring more frequently on land and in open water and less frequently on ice during the fall. This means there are increased chances for human/bear interaction. The paper was published in the December issue of Arctic - the journal of the Arctic Institute of North America.

Polar bears were observed over the 27-year period by U.S. government Minerals Management Services staff as part of the fall bowhead whale aerial survey conducted annually in the southern [Beaufort Sea](#). Ice conditions were also recorded.

Data showed that as ice conditions changed, bears were being found on different habitats. Between 1979 and 1987, 12% of bear sightings were associated with no ice. Between 1997 and 2005 however, 90% of bear sightings were associated with no ice.

"When bears were seen, they were more often seen in open water and on land than on sea ice. At the same time, changes were observed in ice, suggesting that these observations are connected," says Rode.

In addition, the number of bears sighted steadily increased from 138 bears in the years 1979-1987, to 271 bears between 1988 and 1996, and finally to 468 bears between 1997 and 2005. Rode warns that this study was not designed to estimate the number of bears using the nearshore area. Data were drawn from studies created to track bowhead whale migration routes, not polar bear populations. Therefore, it should not be concluded that more bears are occurring in the nearshore waters off the Southern Beaufort Sea coast.

However, Rode states that "Our results do suggest that bears that use the nearshore area are more likely to occur on land in recent years because their preferred habitat, [sea ice](#), is unavailable.

"This is one of the few data sets available over such a long time frame. It shows there has been a shift in habitat use," she says.

In the Beaufort Sea region, there was less ice in 2005 than when the study period began in 1979. In general, freeze up is later and spring melt comes earlier with measurements showing since 1979 the summer melt period has increased by 13 days per decade. This is one reason for the region's rapid retreat of multi-year ice, which provides a thicker, more stable platform for hunting and denning.

This work is helpful in highlighting the need to proactively develop programs to manage bear-human interactions in coastal areas. Bear-human interactions in Native villages and with industry in Alaska have been on the rise in recent years.

Provided by Arctic Institute of North America

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