# Polar bears from space

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Polar bear population estimates based on satellite images are similar to aerial estimates, according to a study published July 9, 2014 in the open-access journal *PLOS ONE* by Seth Stapleton from United States Geological Survey and colleagues.

The potentially severe impacts of climate change in the Arctic may threaten regional wildlife. Scientists trying to develop efficient and effective wildlife monitoring techniques to track Arctic populations face great challenges, including the remoteness and associated logistical constraints of accessing wildlife. In this study, scientists evaluated high-resolution satellite imagery to track the distribution and abundance of polar bears on a small island in northern Canada in an attempt to develop a tool to monitor these difficult to reach populations. Specifically, the authors examined satellite images of the island with a high density of

bears, during the ice-free summer and compared the images to aerial and ground surveys collected on different dates.

The estimate of ~90 bears based on satellite imagery was similar to an abundance estimate of ~100 bears made from an aerial survey conducted a few days earlier. These findings support satellite imagery as a tool for monitoring polar bears on land, which could potentially be applied to other Arctic wildlife. The authors suggest that further automated detection developments and testing in different landscapes may provide information about benefits for large-scale application of the technology.

**More information:** Stapleton S, LaRue M, Lecomte N, Atkinson S, Garshelis D, et al. (2014) Polar Bears from Space: Assessing Satellite Imagery as a Tool to Track Arctic Wildlife. *PLoS ONE* 9(7): e101513. DOI: 10.1371/journal.pone.0101513

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