

Critically endangered Barents Sea Bowhead Whales in a changing Arctic environment:

Investigating increasing human impacts at the frontier of climate change

Bowhead whales (*Balaena mysticetus*) are endemic to the arctic and subarctic regions of the Atlantic Ocean, and the Bering, Beaufort, Chukchi, and Okhotsk Seas. They live in close association with the sea-ice edge (see map). Intense whaling activity over several centuries dramatically reduced the populations of this once abundant species. Although there is currently no reliable estimate of population size, the Svalbard-Barents Sea sub population (in Norwegian and Russian waters) may only number in the tens; a stark figure considering back-calculated records suggest a pre-exploitation population of between 25,000 and 100,000 individuals. Although the Svalbard stock has been protected from hunting since 1931, the International Union for Conservation of Nature (IUCN) lists this subpopulation of bowhead whales as Critically Endangered. Recovery of this population is unlikely without improved understanding of their distribution and increased conservation measures.



A bowhead whale swimming through sea ice © Wildlife Conservation Society

This research is being planned as part of a collaborative expedition to the high Arctic – combining culture, the arts and educational outreach with science. The expedition aims to highlight how the rapid changes in the Arctic due to climate change are impacting biodiversity, ecology, and culture. Our goal is to increase protection of this unique and critical ecosystem. Partners and collaborators include international climate change charity Cape Farewell, scientists from the Russian National Parks Department, and the Norwegian Polar Institute. The whale research goals are 1) to provide new information on the presence and distribution of Svalbard-Barents Sea bowhead whales, including habitat use and threats e.g. shipping and noise pollution, 2) raise awareness amongst local and international communities of the multiple impacts of climate change, and 3) support conservation efforts on this critically endangered subpopulation by identifying priority actions towards their protection.



*Map: Range of bowhead whales: Svalbard-Barents Sea population (red circle)
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