

# Polar Bear and Pacific Walrus Conservation in a Changing World

## ABSTRACT

Rapid seasonal changes in sea ice directly affect distribution and local abundance of ice-dependent marine mammals, notably polar bears and Pacific walrus. As the sea ice retreats in the late summer and fall, animals spend time along the coast with the result of greatly increased interactions with people. Such changes necessitated development of new conservation and management strategies to minimize additional effects to the animals as well as address safety concerns specifically with polar bears. Some management strategies are simply an enhancement of existing programs, such as polar bear patrols in both the US and in Russia. In contrast, changes in walrus distribution and habitat use required development of new approaches; for example, compilation of potential sources of disturbance to newly developing walrus haulouts with associated strategies to minimize these types of disturbance events. Notably, effective strategies involve local peoples and have the flexibility to adapt as environmental variation remains high. In most cases, existing resource management statutes provide sufficient authorities to develop these types of new management strategies that address the immediate responses to environmental changes but do not address the root cause of the change. As such, these approaches are intended to address immediate threats and minimize, where possible, additional impacts that may occur as species respond to climate change.

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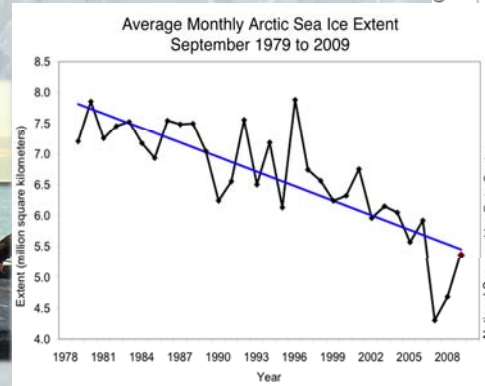


INCREASED USE OF COASTAL HABITATS



## TOURISM

Predictable congregations along the coast increase opportunities for wildlife observation necessitating development of viewing protocols and knowledgeable guides for safety of both animals and public.

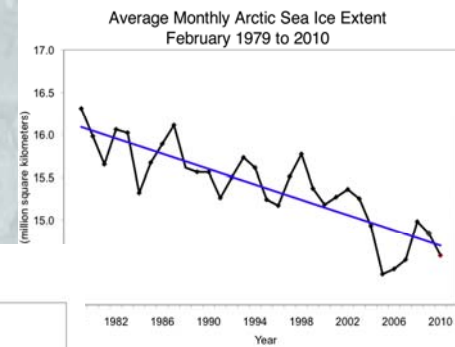


## NEW SENSITIVE HABITATS

As sea ice retreats off the continental shelf, walrus congregate in tremendous numbers along the coast. Walrus are vulnerable to disturbance and prone to "stampedes", which can result in mortalities, often of smaller and younger animals. Public service announcements, flight advisories, and local management initiatives are used to minimize disturbances to walrus along the Chukchi coast.

## EXPANDING DEVELOPMENT

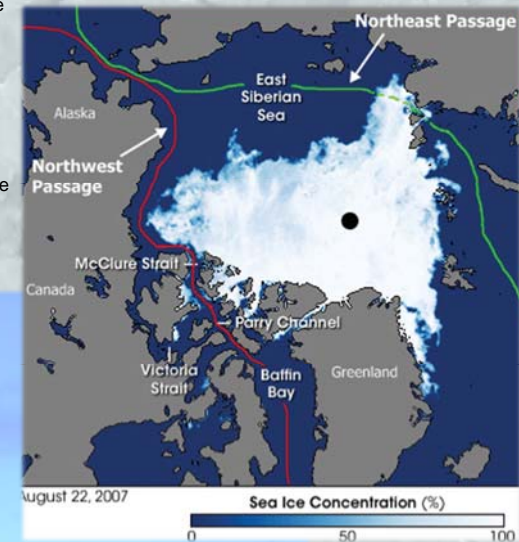
As ice conditions moderate, commercial activities along the Arctic coastline and continental shelf waters become viable, raising the potential for increased human interactions with polar bears and walrus. Current expansion of oil and gas exploration activities and potential opening of new polar shipping routes through previously ice covered seas raise concerns about potential impacts from oil or fuel spills and the introduction of invasive species and contaminants.



## HABITAT AVAILABILITY

Sea ice extent in recent decades declined significantly in both the winter and summer, reducing the amount of habitat available for ice-dependant species.

## TRANS-POLAR SHIPPING ROUTES



## CONSERVATION GOAL

Identify and protect seasonally important habitat areas recognizing that these areas may be dynamic in time and space. Seek partnerships between local, state and federal governments, Native groups and international organizations to develop site-specific and season specific management strategies.

