

Knowing Nanuut: Local knowledge and community-based monitoring of polar bears within a modernizing community and dynamic icescape

Dan Slavik

Panel: Discovering resilience in conflict: drivers of reorganization in adaptive governance of natural resources

On the frontlines of climate change, the Inuvialuit of Canada's Western Arctic are active observers to changes in the northern ecosystems. For nine months of each year, the coastal communities are surrounded by sea ice, creating a dynamic icescape that provides both peril and prize. While in the past, communities would frequently use the sea ice for travel, hunting, and camping, today, Inuvialuit generally only travel onto the sea ice for one purpose- hunting polar bears (*Ursus maritimus*; Inuvialuktun - Nanuut).

Polar bear hunting is a proud tradition to the Inuvialuit. It is a coming of age for young men and a reason for celebration within the community. It remains in many elders' memories, the times when they would rely on polar bears for food for themselves and their dog teams throughout the long winters. More recently, hunting polar bears for their hide and guiding sports hunters provided a culturally-relevant source of income. Today, polar bear is not as essential for survival as it was in the past, but it is important to keep the tradition alive - not purely for cultural preservation, but in order to maintain and build upon the wealth of knowledge, observations, and complex analyses that local people make to monitor both the polar bears and the sea-ice.

Community-based monitoring and the inclusion of local knowledge in decision-making are both a mandate and a necessity to polar bear management and governance in Canada. Changes in the sea ice and in local socio-economic conditions has resulted in a declining number of hunters going out on the ice over a smaller hunting range. These socio-economic challenges couple with ecological and technological change, creating a need to explore how modern Indigenous peoples are monitoring complex ecological changes, and how their observations can be incorporated in environmental management and decision-making.

Examining how participants in wildlife management form and inform their understanding of ecological change is essential in order to have a better appreciation of the dialogue and (conflicting) perspectives on the health and future of polar bear populations in the Western Arctic. This presentation will discuss how Inuvialuit methods for monitoring, understanding, and communicating polar bear population health and sea ice are evolving through social, ecological, and technological changes. It will explore how resilient communities in the Western Arctic are using a combination of traditional and modern means to make sense of complexities in the Arctic environment that, at times, cause conflicting interpretations and a disconnect between the local residents and foreign scientists.