

**Contributions of Traditional Knowledge to
Understanding Climate Change in the Canadian Arctic**

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December 2000

ABSTRACT

Despite much scientific research, a considerable amount of uncertainty exists concerning the rate and the extent of climate change in the Arctic, and how change will affect regional climatic processes and northern ecosystems. Can an expanded scope of knowledge and inquiry augment understandings of climate change in the North? The extensive use of the land and the coastal ocean in Inuit communities provides a unique source of local environmental expertise that is guided by generations of experience. Environmental change associated with variations in weather and climate has not gone unnoticed by communities that are experiencing change firsthand. Little research has been done to explore the contributions of traditional knowledge to climate change research. Based in part on a collaborative research project in Sachs Harbour, Western Canadian Arctic, we discuss five areas in which traditional knowledge may complement scientific approaches to understanding climate change in the Canadian Arctic. These are the use of traditional knowledge (i) as local scale expertise; (ii) as a source of climate history and baseline data; (iii) in formulating research questions and hypotheses; (iv) as insight into impacts and adaptation in Arctic communities; and (v) for long term, community-based monitoring. These five areas of potential convergence provide a conceptual framework for bridging the gap between traditional knowledge and Western science, in the context of climate change research.