



Polar Knowledge Canada's 2020 to 2025 Research Plan and Strategic Plan

Input from Wildlife Conservation Society (WCS) Canada

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These comments and recommendations are in response to a request for input from Polar Knowledge Canada (POLAR), which is in the process of developing its next 5-year Research Plan and broader agency-wide Strategic Plan to guide the agency's future funding, programs and activities from 2020 to 2025.

WCS Canada's (www.wcscanada.org) mission is to save wildlife and wild places in Canada through science, conservation action, and inspiring people to value nature. Our trademark is "muddy boots" biology, which we do by getting in the field and conducting the necessary research to fill key information gaps on Canada's fish, wildlife, and ecosystems. We then use relevant information and our expertise, working with Government and regulatory agencies, conservation groups, indigenous communities and industry, to resolve key conservation issues.

WCS Canada is a national affiliate of the Wildlife Conservation Society, which has been working in the Arctic since 2002, with the Arctic Beringia program formally established in 2011. Our work in the Canadian Arctic has focused to a large extent on what can be learned from passive monitoring of the acoustic environment of Arctic waters; gathering information on the activities of marine mammals, fish and ships, and the impact of ship traffic on the behaviour of the wildlife, and using that knowledge to model impacts and the efficacy of mitigation measures.

Our comments and recommendations address four of the key sections in the Call for Input issued by POLAR.

Identifying future research priorities

The impacts of anthropogenic noise in coastal ecosystems, and particularly to marine mammals is an area of growing concern, and a research priority should focus on the chronic and acute impacts of marine noise to key subsistence species (marine mammal and fish) in a manner that supports effective management and policies to mitigate those impacts.

Ensuring research and Indigenous knowledge are used in decision-making

This objective can be best achieved by ensuring that research and knowledge-gathering programs are co-created with both local residents and the decision-making entities that ultimately need to use this information, in order to address policy-relevant questions requiring management decisions. Some of those policy-relevant questions include:

- managing ship traffic so as to minimise impacts of ship noise on marine mammals;
- identifying Key Biodiversity Areas in the marine environment, using criteria recently established by IUCN and useful in this context to build on and refine the work previously done to identify Ecologically and Biologically Significant Areas (EBSAs) in the marine environment; and
- identifying and managing Marine Protected Areas and Other Effective Area-Based Conservation Measures (OECMs), in consideration of the CBD Aichi Targets and subsequent targets to be set for the 2020-2030 period.

These are some of the management issues likely to be faced by decision-makers in the coming decades, where a solid foundation of sound science and Indigenous knowledge can help to ensure that the best possible decisions are made.

Supporting northern community-based research and monitoring

There is currently a patchwork of community-based monitoring (CBM) projects across the Arctic, of varying quality and spatial and temporal scales, largely supported by short-term funding opportunities. These projects are valuable in the short term, with benefits such as connecting youth with elders, supporting community commitments to stewardship, etc, but it is not an ideal model for ensuring the application of the information collected into policy and decision-making processes. POLAR could play an important role here; with clear protocols and funding security, the capacity can be developed for supporting valuable community-based data on specific ecological indicators that are also of key importance to each community can be sustained over broader scales and potentially longer time periods. Such goals also feed into community desires for greater roles and responsibilities in management.

Supporting training and capacity building

Community-Based Monitoring, if supported and sustained over the long term, has benefits that extend beyond the specific relevance of the information collected. CBM employs youth, teaches them skills and gets them out on the land so they can more effectively contribute to the stewardship of local wildlife and their habitats.. And it achieves these benefits within or close to the communities, thus helping to sustain both ecological well being in the north as well as functional communities.