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GENERATION OF PRIORITY RESEARCH QUESTIONS TO INFORM CONSERVATION POLICY AND MANAGEMENT AT A NATIONAL LEVEL

ABSTRACT

Integrating knowledge from across the natural and social sciences is necessary to effectively address societal tradeoffs between human use of biological diversity and its preservation. Collaborative processes can change the ways decision makers think about scientific evidence, enhance levels of mutual trust and credibility, and advance the conservation policy discourse. Canada has responsibility for a large fraction of some major ecosystems, such as boreal forests, Arctic tundra, wetlands, and temperate and Arctic oceans. Stressors to biological diversity within these ecosystems arise from activities of the country's resource-based economy, as well as external drivers of environmental change. Effective management is complicated by incongruence between ecological and political boundaries and conflicting perspectives on social and economic goals. Many knowledge gaps about stressors and their management might be reduced through targeted, timely research. We identify 40 questions that, if addressed or answered, would advance research that has a high probability of supporting development of effective policies and management strategies for species, ecosystems, and ecological processes in Canada. A total of 396 candidate questions drawn from natural and social science disciplines were contributed by individuals with diverse organizational affiliations. These were collaboratively winnowed to 40 by our team of collaborators. The questions emphasize understanding ecosystems, the effects and mitigation of climate change, coordinating governance and management efforts across multiple

jurisdictions, and examining relations between conservation policy and the social and economic well-being of Aboriginal peoples. The questions we identified provide potential links between evidence from the conservation sciences and formulation of policies for conservation and resource management. Our collaborative process of communication and engagement between scientists and decision makers for generating and prioritizing research questions at a national level could be a model for similar efforts beyond Canada.

Web Of Science Times Cited

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