

We Must Act for an Environmentally Sustainable Future

Valuing Indigenous Knowledge

The National Union of Public and General Employees (NUPGE) is a family of 11 Component and 3 affiliate unions. Taken together we are one of the largest unions in Canada. Most of our 390,000 members work to deliver public services of every kind to the citizens of their home provinces. We also have a large and growing number of members who work for private businesses.

Larry Brown, President

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Indigenous peoples have an essential role to play in a sustainable future. Not only must Indigenous rights be respected, but Indigenous knowledge and practices have much to offer in tackling the environmental challenges we face.

Indigenous peoples have been at the forefront of (and raising the alarm on) environmental challenges like water contamination, food insecurity, fossil fuel extraction, and sea ice melting. As the original inhabitants of this land, Indigenous rights in these matters must be respected, and the communities must be part of decision-making.

Indigenous peoples have always needed to respond to environmental changes. They have also lived sustainably on this land, which we now call Canada, for countless generations. It is, therefore, important to respect and value the immense knowledge of Indigenous communities.

First, we must be careful not to frame Indigenous peoples or knowledge as singular or frozen in time.¹ Indigenous communities and knowledge systems are many, diverse and evolving; and thus, it is important to consider the local and context-specific ways in which they can contribute to environmental sustainability.² This backgrounder provides a broad overview and some specific examples we can draw upon.

The Intergovernmental Panel on Climate Change (IPCC) has concluded that “indigenous, local and traditional knowledge systems and practices, including indigenous peoples’ holistic view of community and environment, are a major resource for adapting to climate change.”³ Many Indigenous worldviews adopt a holistic approach. Indigenous worldviews offer a holistic way of understanding humans’ relationship with nature, a relationship that is deeply and inherently intertwined.⁴ Indigenous ways of thinking also incorporate a long-term, multigenerational perspective on sustainability that can help shape actions and policies for the future.

There is an immense opportunity to combine Indigenous knowledge with Western scientific knowledge.⁵ Experts have called for knowledge sharing among scientists, policy-makers, and practitioners, such as farmers, food workers, consumers, and Indigenous peoples.⁶

Indigenous ways of life have depended on understandings and assessments of the surrounding environment. Local knowledge and community-based assessments of water quality, species and habitat loss, and changing weather patterns can make contributions to climate science and policy-making, such as to protect local species.⁷ In the Arctic, Inuit have for years been reporting environmental changes, including thawing sea ice, changing weather events, and biodiversity loss. These direct local observations can help foster adaptation to changes in biodiversity and human health.⁸

Indigenous peoples are bearing the brunt of climate change and environmental degradation, as they disproportionately experience the negative effects. Indigenous communities are responding, however, with solutions that draw upon local knowledge and cultural values, such as using traditional crop varieties. According to the IPCC, “integrating [Indigenous] forms of knowledge with existing practices increases the effectiveness of adaptation.”⁹ For example, Inuit knowledge and skills related to the land, environment, and species, developed and passed down through generations, have been shown to play an important role in communities’ ability to adapt to climate change, particularly its effects on hunting and animal species.¹⁰

To acknowledge this complex experience of Indigenous peoples, we must aim to “understand how communities are both vulnerable and adapting to rapid environmental change.”¹¹ Illustrated here is both the resiliency of Indigenous communities and the value of their systems of knowledge and governance.

There is an opportunity for Indigenous and non-Indigenous actors to collaborate in fostering sustainable ecosystems. The Sahtuto’ine biosphere reserve in Canada is a leading example, where the Indigenous population has led the reserve’s management plan in cooperation with various agencies and organizations.¹² Indigenous groups in Canada have also engaged in dialogue with non-Indigenous scientific researchers on resource management, environmental contaminants, community health, environmental monitoring, climate change, and biodiversity.¹³ When rooted in trust and respect, these relationships have fostered effective problem solving.

Relatedly, there is growing recognition of involving Indigenous communities in sustainable forestry and conservation efforts worldwide.¹⁴ In Canada, over 70% of Indigenous communities live in forested areas. Scholars, organizations, and governments have begun to acknowledge the importance of integrating Indigenous knowledge and values into sustainability efforts, such as the model of “Indigenous community forestry” being employed in northern Manitoba.¹⁵

Experts and advocates have also highlighted the need to recognize and incorporate Indigenous knowledge to foster just and sustainable food systems, particularly regarding ecologically sustainable growing and harvesting practices.¹⁶ Evidently, ecological and social issues such as food insecurity, environmental degradation, erosion of culture, and socio-economic inequality are intimately linked.

Indigenous peoples’ self-governance will be an essential component of Indigenous communities’ and leaders’ effective participation in environmental management, policy-making, and on-the-ground responses to environmental change.

As we face growing environmental crises, Canadian society and governments have much to learn from the Indigenous peoples who lived sustainably on this land for

countless generations. In order to advance environmental justice and economic, social, and ecological sustainability, Indigenous knowledge must not only be acknowledged but respected and valued.

¹ Emilie S. Cameron, "Securing Indigenous politics: A critique of the vulnerability and adaptation approach to the human dimensions of climate change in the Canadian Arctic," *Global Environmental Change* 22, no. 1 (2012): 103-114.

² Cuthbert Casey Makondo and David S.G. Thomas, "Climate change adaptation: Linking indigenous knowledge with western science for effective adaptation," *Environmental Science & Policy* 88 (2018): 83-91.

³ https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf

⁴ http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/ILK_ex_publication_E.pdf

⁵ Fikret Berkes, "Indigenous ways of knowing and the study of environmental change," *Journal of the Royal Society of New Zealand* 39, no. 4 (2009): 151-156.

⁶ http://www.ipes-food.org/_img/upload/files/NewScienceofSusFood.pdf

⁷ http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/ILK_ex_publication_E.pdf

⁸ https://foodsecurecanada.org/sites/foodsecurecanada.org/files/2010_arctic_biodiversity.pdf

⁹ https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf

¹⁰ Tristan Pearce, James Ford, Ashlee Cunsolo Willox, and Barry Smit, "Inuit Traditional Ecological Knowledge (TEK), Subsistence Hunting and Adaptation to Climate Change in the Canadian Arctic," *Arctic* 68, no. 2 (June 2015): 233-45.

¹¹ https://foodsecurecanada.org/sites/foodsecurecanada.org/files/foodsecurity_fullreporten.pdf

¹² http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/ILK_ex_publication_E.pdf

¹³ Berkes, "Indigenous ways of knowing and the study of environmental change."

¹⁴ <http://www.fao.org/3/ca4293en/ca4293en.pdf>

¹⁵ Julia H. Lawler and Ryan C. L. Bullock, "A Case for Indigenous Community Forestry," *Journal of Forestry* 115, no. 2 (March 2017): 117-25.

¹⁶ http://www.ipes-food.org/_img/upload/files/NewScienceofSusFood.pdf ; Marney E. Isaac et al, "Agroecology in Canada: Towards an Integration of Agroecological Practice, Movement, and Science," *Sustainability* 10, no. 9 (2018): 3299.



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