



How the Traditional Knowledge of Native Americans Can Inform Environmental Policy

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The native peoples of the Americas have a long and rich history of striving to understand the natural environment. Their traditional ecological knowledge includes everything from oral narratives describing hunting practices to observations about abundant or scarce natural resources and the migration patterns of wildlife.

Traditional knowledge is a misunderstood and underappreciated resource for modern policymakers and other government officials working on environmental issues. To tap its potential, civic leaders and officials must learn what traditional ecological knowledge is, study the legal precedents that potentially support it, and appreciate the ways this body of knowledge can be used today and tomorrow in a respectful and effective manner.

Forms and Value of Traditional Ecological Knowledge

Traditional ecological knowledge represents a particular category of tribal understanding focused on the health of the environment. Such understandings come in the form of verbal comments, visual representations, written records, oral storytelling, and other narrative forms. By noticing and learning to make sense of such sources, policymakers have the opportunity to involve indigenous communities in decision-making to improve the environment for all. Equity is also at stake. Many indigenous communities depend on the land and sea to sustain their livelihoods and cultural ways of life, and they stand at risk for suffering the harshest impacts of environmental woes accompanying climate change. Thus it is vital that policy decisions include native voices and wisdom in efforts to confront environmental challenges.

Legal Precedents

In *Chevron v. Natural Resources Defense Council, Inc.*, the Supreme Court famously laid out the boundaries of official discretion for government agencies. This ruling set the precedent that courts will accept reasonable agency interpretations of unclear laws they are charged to implement. Judicial deference to agencies is the open door through which traditional ecological knowledge can enter the rulemaking process, because in many cases agency officials may be able to include traditional knowledge as part of the information they assemble when making rules about climate change, wildlife and fisheries, environmental impacts, water quality, and environmental cleanups.

Is such agency reliance on traditional ecological knowledge arbitrary, as some might claim? When policymakers or other government officials face scientific uncertainty, legal precedent suggests that courts will support the use of a wide range of available information, without requiring that only the most technologically

advanced or complex studies serve as the basis for agency decisions. In the Supreme Court case *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, the Court upheld this type of agency discretion.

How to Tap Traditional Ecological Knowledge Responsibly

Traditional ecological knowledge must be combined with other sources such as experimental science in a transparent and fair way. Such an approach requires:

- Clear presentations of traditional knowledge in documents supporting policy decisions.
- Respecting the rights of the tribal members who provide the information – and using such knowledge only when tribal members offer it.
- Ensuring that native views are solicited as part of a meaningful consultation that includes a discussion of what must be part of the public record.

Some traditional ecological knowledge is observational, directly applicable, and easy to lay out in public documents. For example, accounts from Selawik elders describe caribou migration patterns in Northern Alaska that could be vital to the preservation of the species and could inform decisions about whether or not to permit activities like logging.

In the 1980s, Inupiat hunters told the International Whaling Commission that, based on traditional ecological knowledge, they believed the population of Bowhead whales in the Pacific Ocean to be in the thousands. The International Whaling Commission had estimated much lower figures, and instead of using their traditional ecological knowledge spent a decade and \$10 million on Western scientific research to confirm that the population was actually close to 10,000 whales.

At other times, traditional and other sources of knowledge must be balanced and assessed. Certain sources of traditional ecological knowledge are less directly observational and, from a Western perspective, are probably more akin to art or literature than science. The Kwakiutl people of British Columbia have a cautionary allegory, warning those who peel the bark from trees about a curse that would befall them if they harvest too much. The story teaches the proper care for and harvesting of cedar trees. This story and stories like it could inspire new approaches to environmental stewardship.

New Opportunities

Legal precedents combined with guidelines such as those just presented for respectful use of traditional knowledge sources can form the basis for innovative and deeply informed environmental policymaking. This proposition may soon be put to the test. In July of 2015, the Commission for Environmental Cooperation, an international organization comprised of representatives from Mexico, Canada, and the United States, set up a new panel of traditional ecological knowledge experts to advise policymaking. The work of that panel has jump-started international discussions and may very well open doors to the wider deployment of traditional ecological knowledge in the United States and beyond – in an era of unprecedented environmental challenges for all societies.

Read more in Anthony Moffa, "**Traditional Ecological Rulemaking**," *Stanford Environmental Law Journal* 35, no. 2, June 2016.