

NATIVE ENVIRONMENTALISM AND THE ALBERTA OIL BOOM¹

Chris Wood©

In May, with a runaway well belching thousands of barrels of oil a day into the Gulf of Mexico, congressional leaders received a delegation from the opposite side of the country eager to exploit the contrast between the BP disaster and fossil fuels sourced from Canada. Crude extracted from Canada's oil sands, Canadian Environment Minister Jim Prentice assured U.S. consumers, is "a safe, stable, secure supply of energy." And, he noted, it was being developed "to the highest possible environmental standards."

That's not how it looks to many Cree, Chipewyan and Metis people living downstream from oil production in northeastern Alberta. Where the Athabasca River — tapped for millions of gallons of water daily to steam-clean the oil out of sand — flows into a vast freshwater delta at Lake Athabasca, the 1,000 residents of Fort Chipewyan have seen populations of muskrat, lake fish and migratory ducks plummet — and their own cancer rates soar — in a quarter-century of oil extraction. "Years ago, nobody died from cancer," 68-year-old Metis elder Ray Ladouceur observed over tea in his kitchen. "If they died, it was TB, accidental drowning, a gun accident or old age." Out on the once lush delta, he said, "many things that used to be there are gone. Bugs on the water. The birds that used to sing. It's silent out there now. Even the quality of the fish has changed, from hard meat to mushy. When you boil it, it falls apart."

The starkly different takes on how much damage oil extraction in Canada is doing to the environment have cast into sharp relief a policy in which the country and its top oil-producing province claim to be eco-friendly world leaders. Enshrined in Canada's federal Environmental Assessment Act and splashed across Alberta government websites are repeated commitments to give the experience of people like Ladouceur more weight in resource development. Alberta, the Canadian federal government and resource companies have paid intermediaries and interpreters millions of dollars to engage native-Canadian communities — called First Nations — and record their "traditional ecological knowledge," or TEK, so it can be used in projecting and mitigating environmental impacts. But as the stakes rise — Alberta is now the United States' top foreign source for oil — some critics question the very premise of that "progressive" policy. "A lot of so-called 'traditional knowledge' is bunk," says Tom Flanagan, a political scientist at the University of Calgary and occasional adviser to Canada's conservative government. "It's what anthropologists used to call 'folklore.'" Others question the sincerity of Canada's commitment to let traditional knowledge — even when factual and relevant — stand in big oil's way.

Although enshrined in Canadian law and part of official policy, traditional ecological knowledge is having only a minor impact so far on a massive rush for Alberta's oil sands that is making the sparsely populated province wealthy but also denuding hundreds of square miles of its forest wilderness. This reality raises two questions about the development of Alberta:

- (1) Will native environmental knowledge ever be more than a political sideshow to the oil rush?
- (2) Given the nonscientific nature of much traditional knowledge, should it be?

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Claims that traditional ecological knowledge should have a place in environmental policy start with an assertion that is hard to dispute: Indigenous peoples living in what is now Canada have survived in close relationship with their landscape and its plants and wildlife for thousands of years. “How can you doubt that they have huge reserves of applicable knowledge?” wonders Anne Gunn, a wildlife biologist who has worked closely with First Nations while studying northern caribou. Canada’s lead federal agency for environmental oversight echoes Gunn’s sentiment. “Aboriginal peoples have a unique knowledge about the local environment, how it functions and its characteristic ecological relationships,” the Canadian Environmental Assessment Agency asserts on its website. “This aboriginal traditional knowledge (ATK) is increasingly recognized as an important part of project planning, resource management, and environmental assessment.”

That official view is in step with a field of study endorsed internationally by UNESCO and the International Union for Conservation of Nature and increasingly influential in the decisions of Canadian courts. Tellingly though, the same federal Canadian agency that underscores the value of indigenous knowledge makes a point of sidestepping what exactly it is. “Although there are many different definitions in the literature,” the Environmental Assessment Agency’s Web page notes, “there is no one universally accepted definition.”

Clearly, the traditional beliefs of Canada’s First Nations differ from the mechanistic, human-centered and strongly individualistic ethos that dominates North American society — and that difference is especially clear in the oil patch. By traditional First Nations’ wisdom, *Homo sapiens* are neither the creator’s pet nor evolution’s alpha species — humans are merely one thread in a richly woven nature. “TEK is about sustaining a creative reciprocal relationship with all of creation,” writes Deborah McGregor, a geography professor at the University of Toronto who studies traditional knowledge, “and about fulfilling our lives as human beings in relation to creation.” More than that, she adds, “traditional knowledge is an authority system. To be sustainable means to take responsibility and be spiritually connected to all of creation, all of the time. Everyone and everything carries this responsibility and has duties to perform.”

In the Athabasca oil region, those traditional duties to creation stand in stark contrast to the giant machinery stripping away huge tracts of boreal forest for the oily bitumen beneath it. Mine operators have felled an area of virgin pine and spruce forest as large as Chicago, draining beaver ponds and evicting bear and endangered wood caribou along with smaller wildlife, and then bulldozed the underlying peat to expose the tarry grit below. Sprawling complexes of pipes and boilers, as gargantuan as everything else about the \$13.8 billion industry, wash out the usable oil and pump the grit and dirty wash-water into miles-wide “tailing” ponds. With America as thirsty as ever for fuel and a new, deep-pocketed bidder in China, development is under way to triple the scale of output from the area.

The industry’s expanding footprint and growing international pressure from environmentalists have spurred Alberta to establish a process to make decisions on further resource development. The province has promised any eventual plan will protect “aboriginal traditional use activities.” Its government publicizes a desire to include traditional knowledge in other resource decisions as well, ranging from the allocation of water in its arid south to signing off on industry’s effort to restore mined landscapes to a near-natural state. The province has subsidized 42 First Nations to collect and record their “traditional use” observations.

The Cumulative Environmental Management Association — an agency jointly funded by government and the oil industry to research environmentally acceptable limits to oil sand development — has also sought out traditional knowledge. But as Alberta’s assistant deputy

environment minister, Bev Yee, notes, the province faces a central question: “How do we bridge Western science to traditional knowledge?” It’s a hard question to answer. Although advocates of traditional knowledge like to posit an alternative “way of knowing” that stands as a peer to Western science, specifics often prove elusive.



The Athabasca River near Fort McMurray, Alberta. (The Pembina Institute / David Dodge)

“The problem from a scientific perspective is that [TEK] allows answers that are not necessarily based on data, at least insofar as you can see data,” says Alan Emery, a wildlife biologist who has worked with native elders. “To compound it, science in general feels that it is a superior way of finding out about the universe, so it tests all other knowledge bases against itself. “And if the other knowledge base doesn’t agree with the science, then it has to be wrong.”

In substance, what’s meant by traditional knowledge or its derivatives typically comes as a combination of stories — oral accounts passed down through generations — and judgments rendered by a tribal community’s eldest members on the basis of lifelong observation, augmented by younger members of the community who are still active “out on the land.” Contrary to connotations of the term, traditional knowledge isn’t stagnant, asserts Joanne Barnaby, a Cree consultant who was Emery’s research partner in efforts to interpret between TEK and science. “To be a responsible Dene,” she says, citing one example of a tribe, “you must share your observations with the community as a whole, and give elders in particular an opportunity to analyze your observation and determine whether it’s important to retain.”

Though government and industry give every sign of bending over backward in pursuit of traditional ecological knowledge, there are critics of TEK, some quite harsh. The most outspoken may be two political theorists and avowed Marxists who have denounced traditional knowledge in academic essays and presentations as “junk science.” In one paper for the Canadian Political Science Association pointedly titled, “Aboriginal ‘Traditional Knowledge’ and Canadian Public Policy: Ten Years of Listening to the Silence,” Frances Widdowson, a professor at Calgary’s Mount Royal College, and co-author Albert Howard accused TEK of being a collection of “simplistic hypotheses, vague and unsubstantiated opinions and unsystematic data, [as well as] other unacceptable, unscientific premises ... based on unverifiable beliefs in the supernatural.”

Giving it weight in resource management, the pair charged, posed “a threat to environmental assessment wherever it was applied.”

Their critique provoked scholarly outrage from advocates for indigenous knowledge. “A dog’s breakfast of outmoded communist ideology and rotten anthropological theories washed down with strong racial prejudices inherited from their own unexamined colonial upbringings,” thundered Taiaiake Alfred, a professor of aboriginal governance at the University of Victoria, British Columbia.

But other Canadian academics say that fear of being labeled racist deters many from agreeing with at least some of Widdowson’s criticism of the use of traditional ecological knowledge alongside science. “I think she is largely right,” says Rod Clifton, an education professor at the University of Manitoba who has had experience in First Nations communities and is married to a Blackfoot woman. “What’s myth and what’s true [in traditional knowledge] is hard to sort out. There are many in the white community and in the aboriginal community that, below the surface, think this way, and they’re afraid to say so.” The University of Calgary’s Flanagan criticizes native leaders who invoke TEK as a hard-to-challenge cudgel in legal and policy debates. “It’s a wonderful weapon for aboriginal spokesmen,” he says, “if they claim to be in possession of special knowledge that by definition you’re not able to share.”

I relayed the criticism that some, and possibly a great deal, of what is presented as TEK might be hokum to Barnaby, the Cree consultant. She sighed before conceding, “That’s probably true.” Canada’s governments, Barnaby complains, have failed to match rhetorical enthusiasm for the use of traditional native knowledge with support for rigorous tests of its factuality. As a result, she says “there’s no way to address quality. There should be verification standards in place and standards to determine that the traditional-knowledge holder is in full support of the analysis, based on his knowledge.”

Other factors add to TEK’s credibility problem. Much of what is often considered the purest traditional knowledge — insights based on years of integrating personal observation with oral history — resides in the memory of elders in remote communities. Many are reluctant to share their knowledge with outsiders. Those who are willing to speak face the disadvantage of deep linguistic differences between native tongues and English. “Indigenous language tends not to be object-based, like ours,” Emery observes. “It tends to be relationship-based. If you ask for a direct translation of ‘a rock’ in some Athabaskan languages, they’ll say, ‘Well, in our language, we say “pressing down.”’

More dispiriting still to those who believe in the underlying value of traditional knowledge, many of the languages in which it is encoded are disappearing. More than 100 native North American languages have been lost over the last five centuries. Many that remain are becoming hybridized with English or face extinction as speakers dwindle in number. With the passing of elders and erosion of indigenous languages, says Don Harron, a Manitoba biologist who has worked with industry and First Nations to assess development impacts, “the knowledge itself is disappearing; it’s degrading.”

Syncrude, the oldest and largest oil sand producer in Canada, meets with one or another of the dozen First Nation communities in its operating area almost daily, spokeswoman Cheryl Robb says. The company sent its environmental affairs manager camping with elders and sought their advice on how to restore mined landscapes. In one lesson learned from traditional ecological knowledge, Robb says, Syncrude changed its practice of indiscriminately clearing away everything above the target layer of bitumen. On the advice of local elders, equipment operators

now separate the top layer of forest “duff,” which is full of seeds, roots and organic matter, and use it to top-coat the bare sand and clay of areas being reclaimed.



A Syncrude oil sands extraction plant in Alberta. (The Pembina Institute / David Dodge)

Oklahoma-based Devon Energy uses a less intrusive in-situ process to extract Alberta oil, forcing high-pressure steam into deep deposits of bitumen to liquefy its hydrocarbons, then pumping the liquid oil up to an adjoining well. Devon has hired archaeological and other consultants to acquire local traditional knowledge before deciding where to locate well pad sites. “We’ll try to avoid certain areas depending on what they’re telling us,” says Pete Millman, an environmental adviser in Devon’s Calgary office. “If there’s an area that’s identified as a blueberry-picking area, we’ll put a pad off to the side.” On larger questions — like when to call “when” on the large-scale transformation of the boreal wilderness into a maze of well pads, pipelines and unearthly strip mines — the influence of traditional ecological knowledge is more doubtful. One measure of the uncertainty: Observers on both sides of the debate question how deep their governments’ embrace of traditional knowledge goes.

In many cases, TEK consultant Harron alleges, indigenous knowledge is included as lip service in development plans, but functionally ignored. Putting it only a little differently, Flanagan says governments find it expedient to accommodate TEK in advisory arenas, “where it won’t gum up the works.” Those descriptions seem about right to Jumbo Fraser. A neighbor of Ray Ladouceur’s in Fort Chipewyan, Fraser has participated in traditional-knowledge studies conducted by Alberta’s Cumulative Effects Management Association, and, he says, he’s brought dramatic changes in wildlife populations on the Athabasca delta to the agency’s attention. “Government does what it was going to do anyway,” he says. “I guess they figure if they’re talking about [traditional knowledge], they’re using it. They’re not.”