

Opinions

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Throwing petrol on a fire: the human and environmental cost of tar sands production

Jennifer Huseman and Damien Short

In this opinion piece, independent researcher Jennifer Huseman and Senior Lecturer in Human Rights in the Institute of Commonwealth Studies, Dr Damien Short, examine Canada's tar sands oil industry and its effect on indigenous communities. They describe how the industry 'externalities' of environmental degradation and pollution are seriously affecting the health of indigenous communities and threatening their physical and cultural survival. Furthermore, due to the enormous carbon footprint associated with the exploitation of the tar sands, the authors argue that they are a danger to us all. They call for a halt to tar sands expansion, the instigation of effective environmental clean-up procedures and measures to address the health issues facing indigenous peoples as a result of tar sands operations. They also call on national and international financial institutions to immediately withdraw funding from the tar sands expansion and operations.

Tar Sands or Oil Sands?

Canada's tar sands are widely considered to be the most destructive industrial project on earth by environmental, human rights, and indigenous activists alike¹. The expression 'tar sands' is a colloquial term used to describe sands that would perhaps be more accurately described as bituminous sands. They constitute a naturally occurring mixture of sand, clay, water, and bitumen – an exceptionally viscous and dense form of petroleum – which has, since the late 19th and early 20th century, been referred to as 'tar' due to its similar viscosity, odour, and colour. However, naturally occurring bitumen is chemically more similar to asphalt than to tar, and the term 'oil sands' is now more commonly used by industry and in the producing areas than 'tar sands', since synthetic oil is what is manufactured from the bitumen. Even so, the term 'oil sands' fails to convey the constituent complexity of the sands, and moreover, serves to sanitise the environmentally destructive industrial processes intrinsic to this particular form of oil production. Indeed, the environmental costs (externalities) of this form of unconventional oil production are enormous.

Tar sands-derived oil must be extracted by strip mining or the oil made to flow into wells by 'in situ' techniques, which reduce the viscosity by injecting steam, solvents, and/or hot air into the sands. These processes use much more water than conventional oil extraction and produce huge 'tailing ponds' – although 'tailing lakes' would be a more accurate description – into which over 480 million gallons of contaminated toxic waste water are dumped daily. Taken together, Canada's toxic waste lakes 'cover more than 50 square kilometres (12,000 acres) and are so extensive that they can be seen from space.'² In addition, producing liquid fuels from such

sands requires huge amounts of energy for steam injection and refining processes which generate two to four times the amount of greenhouse gases per barrel of final product as the production of conventional oil.³ If combustion of the product itself is included, known as the 'Well to Wheels' approach, bituminous sands extraction, upgrade and use has been shown to be the most polluting and carbon intensive oil process known to humankind, generating three to five times the greenhouse gas emissions it takes to produce a barrel of conventional oil.⁴ Thus, if one is not seeking to minimise the impact of these externalities the term 'tar sands' is preferable: it suggests the sand has a more complex constitution and that useable oil must be *extracted* from the sticky, heavy, viscous base material (bitumen) through industrial processes which have huge environmental and human costs.

Environmental destruction

Tar sands production is chronically polluting the lower Athabasca River and adjacent western Lake Athabasca. Much of this pollution emanates 'from licensed discharges; from above-ground and below-ground pipeline leaks and breaks; and from tailing pond leaks that are not captured and returned to the tailing ponds.'⁵ Such leaks and breaks date back to the initial stages of production in 1967. One of the largest early spills occurred in February 1982,⁶ with a minimum of 42 tonnes of oil and contaminants discharged into the Athabasca River from one tailing pond. Unsurprisingly, it is difficult to find adequate governmental, regulatory or corporate information on leaks and spills 'due to the veil that has been drawn down over provincial river monitoring activities'.⁷ However, an indication of the

gravity of the situation can be found in an admission from the tar sands mining company Suncor back in 1997, which stated that their tar island pond 'leaks approximately 1,600 cubic metres of toxic fluid into the Athabasca River every day.'⁸

The rampant poisoning of the watershed and land base is matched only by their depletion, for simply making room for tar sands mining activities involves the draining of rivers, lakes and wetlands to subsidize the huge amounts of water⁹ needed to force the heavy oil from the surrounding earth;¹⁰ the diversion of rivers; and 'stripping all trees and vegetation from the forest'.¹¹ Over the last 40 years of its production, tar sands mining has changed Northern Alberta from an environment rich in cultural and biological diversity to a landscape resembling J. R. Tolkien's nightmarish Mordor with hundreds of 200-foot-deep craters, toxic lakes and thousands of acres of destroyed boreal forests. And now that Canada is the US's largest source of 'foreign' oil, production has correspondingly intensified and environmental destruction is accelerating at a startling rate.

Indigenous peoples living close to and in the midst of tar sand deposits have been expressing concern over the lethal impacts that these industrial events have had on their communities for years, with elders citing caustic changes to river water quality and availability of wild fish and game. Recently, the voicing of these concerns has risen to an alarm call, as health professionals and community members witness more and more friends and family falling ill with a variety of serious illnesses, and local fish populations inflicted with ever more severe deformities.

In 2006, local doctor John O'Connor was the first medical professional to publicly call attention to these issues. In his own downstream community of Fort Chipewyan, he cited disturbingly disproportionate levels of deadly diseases such as leukaemia, lymphoma, lupus, colon cancer, and Graves' disease. He also noted five cases of an extremely rare cancer of the bile duct, cholangiocarcinoma occurring in the past five years within Fort Chip's population of 1,200; normally, only one in 100,000 people contract it.¹² He concluded that these abnormally elevated levels of disease were the direct consequence of steadily rising carcinogens in the sediments and waterways emanating from industrial activities associated with tar sands mining.

After Dr O'Connor made his findings public, instead of acting on the information, the governments of Canada dismissed his report and attacked his credibility – even going as far as to have a formal complaint brought against him in tandem with the 'Alberta College of Physicians and Surgeons' (ACPS) for 'causing undue alarm'.¹³ However, these charges were dismissed in 2009, no doubt partly due to the fact that since Dr O'Connor's findings, a number of other reports (e.g. *Proceedings of the National Academy of Sciences* in 2009) corroborated his original medical conclusions and his conviction that the governments of Alberta and Canada have been wilfully ignoring evidence of toxic contamination and its effects on downstream indigenous communities for years.¹⁴ These findings can be a key instrument in the struggle to bring about a moratorium on tar sands expansion, a clean up of existing pollution and compensation for victims.

Indigenous peoples

Bearing all the evidence in mind, one can confidently argue that a kind of 'biological warfare' is being perpetrated against the indigenous peoples of Alberta. Although strategy has varied over the centuries, adapting 'to the times and regions in which it played out', the 'logic of elimination'¹⁵ that underpinned the colonisation of North America – i.e. the elimination of 'all indigenous populations that would not leave their lands and resources', as well as their 'cultures and languages'¹⁶ – has never wavered. As Andrea Smith¹⁷ noted, indigenous peoples 'will continue to be seen as expendable and inherently violable as long as they continue to stand in the way of the theft of Native lands.' The situation is only set to worsen, as the US soon hopes to 'extract up to 25 per cent of their daily oil needs from tar sands-based operations in the region',¹⁸ a plan that will involve the decimation of 'an area the size of Florida'¹⁹ in north eastern Alberta, and the construction and expansion of colossal pipelines that will extend across unceded indigenous territory in B.C. and the North West Territories, before heading south and through Indian Country in the US,²⁰ consequently impacting upon indigenous communities not only in Canada, but across the continent.

The perilous position of tar sands-affected indigenous communities has been greatly facilitated by the governments of the US and Canada failing to comply

with many of their own laws and through the de facto extinguishment of treaty rights, prioritizing mining over local concerns.²¹ The text of Treaty 8 suggests that the lands of First Nations would not be compromised by uncontrolled development which threatened First Nations culture and traditional ways of life, and yet the remote community of Fort Chipewyan relied on an 80 per cent subsistence diet until tar sands pollution, boreal forest and ecosystem destruction, and loss of habitat made it impossible to sustain. Thus, the tar sands now directly threatens the cultural survival of Fort Chipewyan and other First Nation peoples living within the so-called tar sands 'sacrifice zone'. Many people are simply too afraid to drink the water or harvest plants and animals, while others value their traditional knowledge so much that they are prepared to take the risks. While some First Nations have legally forced the government of Canada to consult with indigenous communities about development projects they have no ability to veto such development of their land. Consultation is just that, telling a community a project is being proposed that may or may not have impacts to a First Nation and the recognition of its Treaty rights. As yet, there is no legal framework within the Constitution of Canada that recognizes the international principle of Free, Prior and Informed Consent (FPIC) for the right of First Nations to say 'No' to a proposed development, a central tenet of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

Just as earlier genocidal²² policies of assimilation disguised themselves as philanthropic instruments of 'progress' and 'material advancement' for Native North Americans, resource extraction initiatives have professed an interest in 'helping' Native communities by way of offering them 'steady employment' and 'economic development'. This is exactly how the Alberta government first 'enticed First Nations council leadership to lease their treaty reserve lands to the tar sands industry' in the 1960s, allowing 'the first tier of tar sands operations... to come into a region mostly inhabited by Dene, Cree and Métis'.²³ In reality, this mega-project has paid such a meagre fraction of prevailing market royalty rates that no such advancement has been discernable, rather it has only brought more death and ruin. Moreover, the loss of land and the ensuing physical and cultural erosion has led to a loss of hope and growing apathy, with many not speaking out 'because of the perceived inevitability of tar sands mining'.²⁴ And so,

'the battle over the ongoing mining comes down to the *fundamental right to exist*'.²⁵ As George Poitras of the Mikisew Cree First Nation asserted:

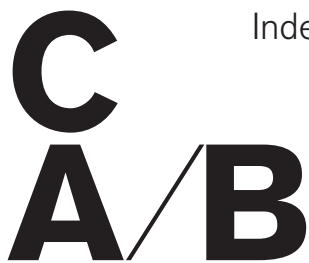
If we don't have land and we don't have anywhere to carry out our traditional lifestyles, we lose who we are as a people. So, if there's no land, then it is equivalent in our estimation to genocide of a people.²⁶

For these reasons alone the Alberta government should halt tar sands expansion, address environmental damages and ameliorate the effects of and address the health issues facing indigenous peoples as a result of tar sands operations. National and international financial and banking institutions should immediately withdraw funding from the tar sands expansion and operations. Indeed, if we take the latest climate science, or even the warnings of the notoriously conservative International Energy Agency²⁷ seriously, then indigenous peoples and the rest of us are fast approaching the 'tipping point' of runaway climate change, making further investment in tar sands production tantamount to throwing bucketfuls of petrol on a fire.²⁸

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6. *Ibid*, p.52.
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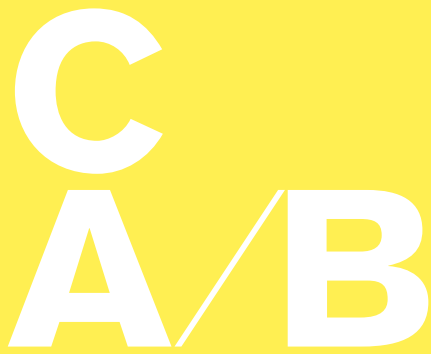
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