

Rachel Carson Center Perspectives

How to cite:

Sandlos, John, and Arn Keeling. "Pollution, Local Activism, and the Politics of Development in the Canadian North." In: "Environmental Knowledge, Environmental Politics," edited by Jonathan Clapperton and Liza Piper, *RCC Perspectives: Transformations in Environment and Society* 2016, no. 4, 25–32. <https://doi.org/10.5282/rcc/7696>.

RCC Perspectives: Transformations in Environment and Society is an open-access publication. It is available online at www.environmentandsociety.org/perspectives. Articles may be downloaded, copied, and redistributed free of charge and the text may be reprinted, provided that the author and source are attributed. Please include this cover sheet when redistributing the article.

To learn more about the Rachel Carson Center for Environment and Society, please visit www.rachelcarsoncenter.org.

Rachel Carson Center for Environment and Society
Leopoldstrasse 11a, 80802 Munich, GERMANY

ISSN (print) 2190-5088
ISSN (online) 2190-8087

© Copyright of the text is held by the Rachel Carson Center.

Image copyright is retained by the individual artists; their permission may be required in case of reproduction.

SPONSORED BY THE



Federal Ministry
of Education
and Research

Deutsches Museum



John Sandlos and Arn Keeling

Pollution, Local Activism, and the Politics of Development in the Canadian North

Once considered pristine and untouched wilderness lands, northern Canada is now more commonly regarded as an area threatened by environmental changes ranging from climate change to acid rain to nuclear fallout. The discovery of toxic contaminants in the northern environment and in the bodies of Indigenous northerners in the 1980s illustrated what is known as the “Arctic Paradox”: the region is remote from most modern industry, yet distant sources of persistent organic pollutants (POPs) and other chemical and radiological hazards represent a persistent health and environmental threat.¹ Such widespread pollution in the Arctic environment (and by extension in Inuit food sources) through the long-range transport of POPs captured the attention of policy makers and the media, and galvanized Inuit activists to lobby for the 2001 Stockholm Convention that banned the 19 worst of these pollutants.² Indigenous advocates displayed a remarkable ability not only to mobilize concern and influence at the local community level, but also to work at the national and international level through organizations such as the Inuit Circumpolar Council (ICC).³

Less well-known, however, is the longer history of community activism against local sources of pollution and industrial development undertaken by Indigenous and community activists in northern Canada, dating back to at least the 1960s. Pollution was the key environmental issue for the wave of environmental consciousness that swept North America in the 1960s and 1970s.⁴ Whether pesticides, smokestack emissions, smog, or water pollution, toxic contaminants and their effects on local populations inspired environmental activism and eventually spawned a broad social movement for environmental justice.⁵ While often associated with urban and industrial environ-

1 Marla Cone, *Silent Snow: The Slow Poisoning of the Arctic* (New York: Grove Press, 2005).

2 Terry Fenge and David Leonard Downie, eds., *Northern Lights Against POPs: Combatting Toxic Threats in the Arctic* (McGill-Queen's University Press, 2003).

3 Sheila Watt-Cloutier, *The Right to Be Cold: One Woman's Story of Protecting Her Culture, the Arctic, and the Whole Planet* (Toronto: Allen Lane, 2015).

4 Adam Rome, "'Give Earth a Chance': The Environmental Movement and the Sixties," *Journal of American History* 90, no. 2 (2003): 525–54; and Laurel Sefton-McDowell, "The Environmental Movement and Public Policy," in *An Environmental History of Canada* (Vancouver: University of British Columbia Press, 2012), 243–67.

5 Luke Cole, *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* (New York: New York University Press, 2000); and Michael Egan, "Subaltern Environmentalism in the United States: A Historiographic Review," *Environment and History* 8 (2002): 21–41.

mental issues, pollution fears also contributed to controversies over industrial developments in the north, such as the Mackenzie Valley Pipeline Inquiry and the Cyprus Anvil Mine.⁶

The issue of arsenic pollution at Giant Mine near Yellowknife, Northwest Territories (NWT), constitutes one of the earliest and most dramatic cases of communities mobilizing knowledge in response to environmental contamination in northern Canada. Opened in 1948, Giant Mine began a year later to emit large amounts of highly toxic arsenic trioxide dust into the atmosphere and water surrounding Yellowknife (figure 1). The small Dene (Indigenous) communities adjacent to the mine were particularly vulnerable to this pollution, as they relied on snowmelt—wherein arsenic readily accumulated over the long northern winter—for drinking water. In the spring of 1951 a small child died of acute gastroenteritis due to arsenic poisoning and the Indian Agent reported illness as widespread, with several people being hospitalized with unspecified medical conditions. Yellowknives Dene elders claim that several other children and elders died due to arsenic poisoning. Some action was taken at this time: pollution control equipment installed at the mine reduced the arsenic load in the atmosphere, the federal government conducted health studies, and municipal authorities began to truck water to the Dene community on Latham Island—for a fee—much to the exasperation of local residents, who resented the loss of local water sources and could ill afford the cost.⁷

In spite of these actions, arsenic continued to be released into the atmosphere from the mine's stack, and intermittent study of the arsenic issue proceeded in the 1950s and 1960s. Non-Indigenous Yellowknife residents and Indigenous people alike were keenly interested in the results of the most intensive research study to date, conducted by

6 Thomas Berger, *Northern Frontier, Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry*, vol. 1 (Ottawa: Supply and Services Canada, 1977); Robert Page, *Northern Development: The Canadian Dilemma*. (Toronto: McClelland and Stewart, 1986); Paul Sabin, "Voices From the Hydrocarbon Frontier: Canada's Mackenzie Valley Pipeline Inquiry (1974–1977)," *Environmental History Review* 19, no. 1 (1995): 17–48; and Janet E. McPherson, "The Cyprus Anvil Mine," in *Northern Resource and Land Use Study*, vol. 1 of *Northern Transitions*, ed. Everett B. Peterson and Janet B. Wright (Ottawa: Canadian Arctic Resources Committee, 1978), 111–50.

7 See Minutes of Meeting Held to Discuss the Death of Indian Boy, Latham Island, 1 June 1951. RG 29, vol. 2977, file 851-5-2, pt. 1, LAC. Elders' memories of the deaths in the community are recorded in Yellowknives Dene First Nation, *Weledeh Yellowknives Dene: A History*, accessed 25 October 2015, <http://www.akaitcho.info/linked/weledeh%20yellowknife%20dene%20history.pdf>. For an overview, see John Sandlos and Arn Keeling, "Giant Mine: Historical Summary, Report Submitted to the Mackenzie Valley Environmental Impact Review Board," 12 August 2012, accessed 11 February 2013, http://www.reviewboard.ca/upload/project_document/EA0809-001_Giant_Mine__History_Summary.PDF.

A. J. DeVilliers of the Department of Health and Welfare from 1966 to 1969. Increasingly angry requests for copies of the reports from municipal officials and Dene leaders waited without response for several years. In 1975, the Canadian Broadcasting Company (CBC) radio news show *As it Happens* produced an in-depth documentary on the issue, providing a national forum for local fears about arsenic and ultimately accusing the government (using distinctly Watergate-era language) of covering up links between arsenic and high cancer rates in Yellowknife. The federal Department of Health and Welfare responded to the accusations with a new health study, which concluded that the ill effects of arsenic were confined to the workplace at Giant Mine. As far as the government and the local press were concerned, the new studies proved that the arsenic concerns raised by the CBC were a “scare”—nothing more.⁸

The Yellowknives Dene responded to this dismissal of their concerns with public activism and research of their own. Their voices were prominent in the inaugural NWT Water Board hearings in 1974 and 1975, where Giant Mine’s water licence application was under review. Yellowknives Chief Joe Charlo summed up the community’s concerns when he decried the previous deaths in the community, the “spoiling” of fish in Yellowknife Bay, and the fact the households who could not afford water delivery were simply bypassed although the mine was responsible for polluting the water.⁹ After the release of the federal government’s 1975 health survey, local activists working with the

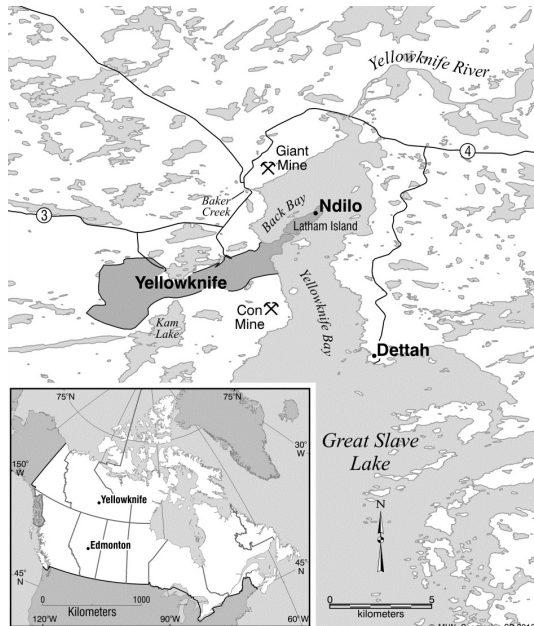


Figure 1:
Location of Giant Mine, the city of Yellowknife, and the adjacent Dene communities of Ndilo and Dettah. Map by Charlie Conway.

8 Occupational Health Division, Environmental Health Directorate, Department of Health and Welfare, *An Investigation of the Health Status of Inhabitants of Yellowknife, Northwest Territories*, by A. J. de Villiers and P. M. Baker (Ottawa, 1970). A transcript of the CBC show was printed in the *Yellowknifer* newspaper, 11 January 1975. See also, “CBC Causes Arsenic Scare,” *News of the North*, 31 December 1975.

9 Chief Charlo’s comments are contained in the transcript of the 1974 NWT Water Board Hearings on Giant Mine, NWT Water Board paper registry, Mackenzie Valley Land and Water Board Office, Yellowknife, NWT.

National Indian Brotherhood (NIB, an activist group that arose out of the broader Indigenous rights movement in Canada during this period) recorded high arsenic levels in hair samples from 18 Dene children. After government officials rejected the results due to the small sample size, the NIB organized a remarkable community-based study involving an unprecedented partnership with the United Steelworkers Local at Giant Mine and academics from the University of Toronto. Critical of the government study for relying on volunteers—a non-random sample—and for focusing on the non-Indigenous population, the NIB concentrated on the Dene communities of Dettah and Latham Island (present day Ndilo) because of the water issue and because these villages were directly downwind of the Giant Mine smokestack. Hair sample results showed high levels of arsenic exposure among the Indigenous population.¹⁰ The federal government rejected these results after the non-profit Canadian Public Health Association conducted an independent (but still controversial) study that once again concluded that the arsenic exposure problem was confined to processing facilities at Giant Mine.¹¹

In spite of these conclusions, the convergence of community knowledge, scientific research, public health advocacy, and Indigenous activism in Yellowknife represented a significant moment in the history of local resistance to industrial pollution in northern Canada. In 1978, the NIB summarized the arsenic saga in a damning report, “Arsenic and Red Tape,” documenting what it regarded as the history of bureaucratic delays and inconclusive studies that resulted in what respected toxicologist Dr. Kingsley Kay called “a human experiment” of carcinogen exposure at Yellowknife.¹² Coming as it did during the same period as Dene land claims activism and widespread opposition to the Mackenzie Valley pipeline proposal (a projected mega-development that many felt threatened the Dene hunting and trapping economy) the arsenic controversy exemplified the deep mistrust of government agencies and industry among northern Indigenous people. As one Dene woman wrote in a brief to the Canadian Public Health Association, “The continuing pollution and destruction by corporate interests of our air, water and soil and the government’s failure to stop this contamination, is a prime example of why we insist we can no longer allow our land and our lives to be con-

10 Lloyd Tataryn, *Dying for a Living* (Ottawa: Deneau and Greenberg, 1979).

11 Canadian Public Health Association, *Task Force on Arsenic: Final Report, Yellowknife Northwest Territories* (Ottawa: CPHA, 1977).

12 Lloyd Tataryn, “Arsenic and Red Tape,” National Indian Brotherhood Report, 1978, 5. Kay’s comments were made to the CBC and also reported in “How the Uproar Got Started,” *News of the North*, 15 January 1975.



Figure 2:
Giant Mine Shaft no. 2 headframe partially deconstructed, July 2012. The mine site is currently undergoing extensive subsurface and surface remediation. Photo by Kevin O'Reilly.

trolled by others.”¹³ Episodes in the 1970s such as the arsenic contamination at Giant Mine and mercury poisoning at the Anishinaabe community of Grassy Narrows in the province of Ontario epitomized what many regarded as a pattern of environmental racism against Indigenous communities across Canada.

Local concern over arsenic in Yellowknife dissipated somewhat in the 1980s as technological improvements led to further reductions in air pollution. Nonetheless, local non-Indigenous activists Kevin O'Reilly and Chris O'Brien pushed for zero emissions in the 1980s and 1990s as evidence mounted that arsenic trioxide is a non-threshold carcinogen: there is no safe exposure level. Among the Yellowknives Dene, advocacy surrounding the historical and contemporary arsenic loading continued unabated, as evidenced by comments at intermittent public hearings on the issue. Even after Giant Mine finally closed in 2004, the Dene continued to press government officials on the possible long-term health impacts of arsenic exposure, including the incidence of cancer. The abandoned mine site, where 237,000 tonnes of arsenic trioxide are stored in underground chambers, remains extensively contaminated with arsenic and is now a public environmental liability. As recently as the 2012 public hearings on the remediation plan for Giant Mine, Yellowknives elders and community leaders continued

13 Cited in Tataryn, "Arsenic and Red Tape," 64.

to press the government to focus on permanent removal of the arsenic from the site (rather than containment strategies for the surface and underground) and for a study of long-term health impacts.¹⁴

Since the original Giant Mine arsenic controversy, a series of other local pollution issues have spurred similar grassroots concern and mobilization. Northern advocates have highlighted the long-term legacies of military activity in the north, for instance, including abandoned infrastructure and toxic sites ranging from the CANOL pipeline (originally built to ship oil from Norman Wells, NWT, to Alaska) to the Cold War-era Distant Early Warning (DEW) Line radar stations originally built to warn of Soviet nuclear attack, but which left behind soils contaminated with PCBs and hydrocarbons.¹⁵ Perhaps the most high-profile recent case is the campaign of the Sahtu Dene for redress due to the high incidence of cancer in the community of Déline, where many people worked as uranium ore carriers at the Port Radium mine on Great Bear Lake during the Second World War and the Cold War. Although the government ultimately dismissed as inconclusive the evidence for a cancer cluster in Déline in 2005 after a collaborative research process called the Canada-Déline Uranium Table (CDUT), the national attention afforded the issue (in the form of two films, newspaper and magazine articles, and lobbying from the community) brought the mine's environmental and public health legacies to a wider audience. Funding through the CDUT process also produced a rich oral history collection that documented the Sahtu Dene's convictions that radium and uranium mining had poisoned individuals and the land and water surrounding the mine.¹⁶

14 Editorial, "Report Fails to Clear the Air," *Yellowknifer*, 9 July 1993; Fred Sangris, Evidence, Parliamentary Hearings on Canadian Environmental Protection Act, 11 May 1995, accessed 13 March 2012, http://www.parl.gc.ca/content/hoc/archives/committee/351/sust/evidence/122_95-05-11/sust122_blk-e.html#0.1.SUST122.000001.AA1040.A; Giant Mine Remediation Environmental Assessment Hearing EA-0809-001, Yellowknife, 12 September 2012, http://www.reviewboard.ca/upload/project_document/EA0809-001_Giant_Mine_hearing_transcript_-_September_12_2012.PDF.

15 K. J. Reimer and Douglas Arthur Bright, *The Environmental Impact of the DEW Line on the Canadian Arctic* (Ottawa: Department of National Defence, 1993); Sandro Contenta, "DEW Line: Canada is Cleaning Up Pollution Caused by Cold War Radar Stations in the Arctic," *Toronto Star*, 4 August 2012, https://www.thestar.com/news/insight/2012/08/04/dew_line_canada_is_cleaning_up_pollution_caused_by_cold_war_radar_stations_in_the_arctic.html

16 *Village of Widows*, directed by Peter Blow (Toronto: Lindum Films Inc., 1999), 52 min.; Canada-Déline Uranium Table, *Canada-Déline Uranium Table Final Report* (Ottawa: Department of Indian Affairs and Northern Development, 2005); Déline Uranium Team, *If Only We Had Known: The History of Port Radium as Told by the Sahtúot'ine* (Déline, NWT: Déline Uranium Team, 2005); David Henningson, *Somba Ke: The Money Place*, directed by David Henningson (Urgent Service Films, 2006), 45 min., <http://www.sombake-themoneyplace.com/>; Andrew Nikiforuk, "Echoes of the Atomic Age: Cancer Kills Fourteen Aboriginal Uranium Workers," *Calgary Herald*, 14 March 1998, A4; Peter Van Wyck, *The Highway of the Atom* (Montreal: McGill-Queen's University Press, 2010).

The case of Giant Mine offers several key lessons about environmental justice and the politics of waste in resource extraction zones. While it is common to frame Indigenous communities as “victims” of environmental injustices, it is important to acknowledge the various ways local people historically mobilized to resist pollution and industrial development—from the decades-long struggles of the Yonggom of Papua New Guinea against the Ok Tedi Mine to Navajo activism around the legacies of uranium mining in the US Southwest.¹⁷ Stories of northern communities responding to pollution have remained somewhat below the radar of historians and other scholars in Canada (who have tended to focus on controversies at the front end of the northern development process), despite the rich array of available sources. Yet as these cases demonstrate, for northern Indigenous communities pollution and environmental justice issues have historically been (and continue to be) bound up with critical issues surrounding land claims, sovereignty, and colonial dispossession.¹⁸ As scholars uncover more of these stories from northern Canada, it becomes clear that environmental justice struggles over pollution are not confined to the large urban areas or extensive industrial sacrifice zones that have been so well documented in the US literature, but permeate the histories of small communities in remote regions where intensive resource extraction occurs.¹⁹ Finally, the prominent place of Indigenous communities in northern pollution debates provides a clear example where “traditional” ecological knowledge is not confined to “long ago” stories or matters of flora and fauna, as is often the case, but provides insight into more recent historical experiences of industrial development and toxic contamination.

As with the issue of POPs, Indigenous activism around mine pollution showed an ability to move beyond the local context, mobilizing regional and national allies and resources to pressure governments and industries into action.²⁰ The historical interface between northern Canadian communities and development is complicated, with

17 Stuart Kirsch, *Reverse Anthropology: Indigenous Analysis of Social and Environmental Relations in New Guinea* (Stanford, CA: Stanford University Press, 2006); Traci Brynne Voyles, *Wastelanding: Legacies of Uranium Mining in Navajo Country* (Minneapolis: University of Minnesota Press, 2015).

18 Arn Keeling and John Sandlos, “Environmental Justice Goes Underground? Historical Notes From Canada’s Northern Mining Frontier,” *Environmental Justice* 2, no. 3 (2009): 117–25.

19 See for example Steve Lerner, *Sacrifice Zones: The Front Lines of Toxic Chemical Exposure in the United States* (Cambridge: MIT Press, 2010). Although Yellowknife today can be classified as a small city (with a population of close to 20,000) that is well-connected to southern centres, in the 1940s and 1950s the population was small (1,000 people in 1940) and transportation links much more tenuous.

20 Similar to the examples discussed in Stuart Kirsch, *Mining Capitalism: The Relationship between Corporations and Their Critics* (Berkeley: University of California Press, 2014).

many instances where Indigenous and settler communities have welcomed intensive resource development with open arms. But cases such as Giant Mine and Port Radium are among the most significant examples in Canada of communities mobilizing their own knowledge to resist and mitigate the health and environmental impacts of large-scale development.

Suggested Further Reading

Keeling, Arn, and John Sandlos. "Environmental Justice Goes Underground? Historical Notes from Canada's Northern Mining Frontier." *Environmental Justice* 2, no. 3 (2009): 117–25.

Lerner, Steve. *Sacrifice Zones: The Front Lines of Toxic Chemical Exposure in the United States*. Cambridge: MIT Press, 2010.

O'Reilly, Kevin. "Reviewing the Review Board: Was the Giant Mine Environmental Assessment a Success?" *Northern Public Affairs* 2, September 2013, 63–66.

Piper, Liza. *The Industrial Transformation of Subarctic Canada*. Vancouver: University of British Columbia Press, 2009.

Sandlos, John, and Arn Keeling. *Giant Mine: Historical Summary*. Report drafted as background to the environmental assessment of the Giant Mine Remediation Project (2012). http://research.library.mun.ca/638/3/GiantMine_HistorySummary.pdf.

Sandlos, John, and Arn Keeling. "Zombie Mines and the (Over)burden of History," *Solutions Journal* 4, no. 3 (2013): <http://thesolutionsjournal.anu.edu.au/node/23361>.