

Draft policy brief for Planetary Security working group on the Arctic (WG1). Please do not cite or quote, this policy brief is meant to inform participants of the WG and will be revised and published after the conference.

November 2016

Policy Brief

Drivers of climate change: Seismic testing and human security in Nunavut

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Executive Summary:

When considering the tolls on human security because of climate change, we generally direct our attention to the future as we contemplate the catastrophic effects of our fossil fuel dependence. But (increasingly invasive) non-renewable resource development currently threatens human security at the earliest stages of the climate change process. This takes place before any actual burning of fossil fuels, and even before extraction. This policy brief focuses on the impacts of the drivers of climate change; specifically, it examines impacts of seismic testing on the food security of the Baffin Island Inuit.

What does security mean to Inuit? Security doesn't come from the comfort that some find in icebreakers, sonar detectors and Arctic military capabilities. Security from our societal perspective comes from access to the basic essentials of life – food, shelter and water.¹

The warming Arctic as a major driver of global weather systems

According to the Arctic Council, over the last four decades, global warming is most evident in the Arctic region. The National Snow and Ice Data Centre (NSIDC) reports, "the Arctic is losing its oldest and thickest ice."² Diminishing sea ice reflects less sunlight, and dark waters absorb more solar energy, further increasing temperatures—at twice the rate of the rest of the planet, according to the US National Oceanic and Atmospheric Administration's 2014 annual report. Recorded sea ice extent is the second lowest on record, and with slow regrowth, the Arctic was missing a mass of sea ice the size of the eastern half of the U.S. in October 2016.³ This presents a global challenge, because the Arctic is a major driver of global weather systems.

In 2014, the Intergovernmental Panel on Climate Change (IPCC) reported on the decline of Arctic marine, freshwater, and terrestrial ecosystems, with changes in permafrost, sea ice, and ocean conditions.⁴ Circumpolar peoples face environmental challenges on a growing list that includes disruptive weather changes (making land, ice, and sea travel risky), ocean acidification, declining species' habitats, thawing tundra, dangers associated with thinning, and melting sea ice, flooding,

Verbeek, "A letter to Santa in these troubled times." *South China Morning Post* 24 Dec. 2014. <http://www.scmp.com/comment/insight-opinion/article/1668579/letter-santa-these-troubled-times>

⁴ "Acceptance of the Actions Taken at the Tenth Session of Working Group II" Thirty- eighth session of the IPCC, March 2014. <http://www.ipcc.ch/apps/eventmanager/documents/7/030420140912-Doc.%203.%20Add.1%20-%20Approved%20Summary%20for%20Policy%20makers%20-%20Tables%20and%20figures.pdf>;

erosion, and increased exposures to contaminants, unsafe drinking water and elevated levels of mercury and PCBs in the food chain. The safety and human security of Arctic populations—forty different Indigenous groups numbering approximately four million inhabitants within the Arctic Circle—are threatened by the increasing access to "one of Earth's last frontiers."⁵ In 2007, the once-impassable Northwest Passage (connecting the Atlantic and Pacific oceans via northern Canada) became ice-free; an open seaway during summer for the first time since satellite record keeping began. Our fossil fuel dependence is at the root of climate change, causing carbon dioxide in the atmosphere to pass the 400-ppm threshold in 2016.⁶

While environmentalists express grave concern about catastrophic costs of rapidly declining sea ice, and with it, the opening of the Northwest Passage, others, such as the resource extraction sector, prefer to focus on new opportunities for profit generated by these developments. In the last century especially, the Government of Canada has supported the resource extraction sector's efforts to gain access to the enormous economic potential of "Canada's incredible endowment."⁷ However, opening the Arctic to fossil fuel companies, mining, commercial fisheries, and tourism inadvertently "locks the world into known accelerators of climate change."⁸

⁵ Will Oremus, "The Upside of Global Warming: Luxury "Northwest Passage" Cruises for the Filthy Rich," *Slate*. 17 August 2016. http://www.slate.com/blogs/future_tense/2016/08/17/crystal_serenity_s_northwest_passage_cruise_is_a_festival_of_environmental.html

⁶ Brian Kahn, "Physics Doesn't Care Who Was Elected President: Eight worrisome climate patterns are well underway, regardless of politics" *Scientific American*. 10 November, 2016.

⁷ "Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad," *Global Affairs Canada*. http://www.international.gc.ca/arctic-arctique/arctic_policy-canada-politique_arctique.aspx?lang=eng

⁸ Sarah Cornell, PSI 2015 Report - Arctic Security & Conflicting Interests. https://www.planetarysecurityinitiative.org/sites/default/files/2016-11/PSI2015_WG8_Arctic_Security_P26_Conflicting_Interest.pdf. pagespeed.ce.daWmlpPJw.pdf

Arctic human security at risk: The Clyde River Supreme Court case

Given this data, it is concerning that Canada's National Energy Board issued a five year permit in June 2014 to a trans-national consortium of fossil fuel corporations to map as much as ninety billion barrels of technically recoverable sub-sea hydrocarbons off the east coast of Baffin Island over the next five years. Seismic testing causes hearing loss in sea mammals, disrupting their migration patterns, with direct effects on food security. During test periods, seismic oil and gas surveys involve repetitive, underwater dynamite-like blasts every ten seconds, twenty-four hours a day, seven days a week. Marine biologists have observed disruptions to vital marine mammal behaviour caused by the deafening of sea mammals reliant upon echolocation to navigate, find food, nurture their young, and communicate with each other. This is thought to be the reason why almost 1000 narwhals started their migration too late in 2008, and perished after becoming trapped in sea ice along Baffin Island. Clyde River elders recalled seeing pus oozing from the ears of seals they had caught.⁹ A driver of climate change, seismic blasting contributes to a precarious future by supplying our growing appetite for fossil fuels, but also presenting an immediate threat to their food security, as fish and sea mammals normally make up an important part of their diet.

The Arctic has become crucially important to global security, and strategically important in world affairs. With investments in this decade potentially surpassing \$100 billion,

⁹ Chen, David (2015) Food Security in the Canadian Arctic. Presentation at the Global Food Security Conference, McGill Institute For Global Food Security; Cucknell, A-C., Boisseau, O., Moscrop, A. (2015) *A Review of the Impact of Seismic Survey Noise on Narwhal & other Arctic Cetaceans*. Report prepared for Greenpeace Nordic by Marine Conservation Research Ltd.; Heide-Jørgensen, M., Guldborg Hansen, R., Westdal, K., Reeves, R., Mosbech, A. (2013) Narwhals and seismic exploration: Is seismic noise increasing the risk of ice entrapments? *Biological Conservation* Volume 158 (February), 50-54; Elyse Skura, "Clyde River hunters laud 'surprising' Greenpeace partnership" CBC News, Nov 16, 2015. <http://www.cbc.ca/news/canada/north/greenpeace-clyde-river-nunavut-seismic-testing-battle-1.3318691>

nonrenewable resource extraction in the melting Arctic compounds the global threat already posed by disappearing Arctic ice sheets. A fundamental problem is how to ensure environmental and human security in the face of market.

Canada is one of the world's wealthiest nations, yet its Inuit communities (numbering 103,000 in 2011) suffer from chronically urgent food insecurity, compounded by high unemployment and high cost of living, aggravated by reliance on groceries imported by air.¹⁰ Seventy percent of Nunavut Inuit homes are food insecure, exceeding the Canadian average eight times over.¹¹ The Clyde River Inuit rely on subsistence hunting of marine mammals for fifty-five percent of their diet. While crucial for human security, "country food" is also culturally significant as a medium through which social relations are expressed. The economy of hunting ensures community survival through a structural obligation to share that does not extend to expensive, imported groceries. Land development has led to declining food sources in various parts of the world, but the Clyde River case may be unique in its locally specific connections between food source and cultural identity.¹²

¹⁰ Statistics Canada: "Aboriginal Peoples in Canada: First Nations People, Métis and Inuit" <https://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/99-011-x2011001-eng.cfm#a5>

¹¹ M. Harder and G. Wenzel, "Inuit Subsistence, Social Economy and Food Security in Clyde River, Nunavut," *Arctic*, Vol. 65 (3) 2012. 305 - 318; G. Egeland, A. Pacey, Z. Cao, and I. Sobol, "Food insecurity among Nunavut preschoolers: Nunavut Inuit Child Health Survey 2007-2008," *Canadian Medical Association Journal*, 182(3): 2010. 243-248; A. Cucknell, O. Boisseau, A. Moscrop, "A Review of the Impact of Seismic Survey Noise on Narwhal & other Arctic Cetaceans," Report prepared for *Greenpeace Nordic* by Marine Conservation Research Ltd. 2015; M. Heide-Jørgensen, R. Guldborg Hansen, K. Westdal, R. Reeves, A. Mosbech, "Narwhals and seismic exploration: Is seismic noise increasing the risk of ice entrapments?" *Biological Conservation* Volume 158 (February 2013), 50-54; L. Cecco, "The food desert of the North: In northern Canada, Inuit rely on an annual narwhal hunt to relieve hunger." *Al Jazeera America*. 27 December 2015; Nunavut Food Security Coalition Annual Report 2014-15; 2010 - 2011 Annual Report on the State of Inuit Culture and Society).

¹² George Wenzel, *Animal Rights, Human Rights: Ecology, Economy, and Ideology in the Canadian Arctic* (Toronto: University of Toronto Press,

Lacking sufficient economic power and political autonomy, Inuit groups are often circumscribed in their efforts to protect their food sources. Former Inuit Tapiriit Kanatami President Mary Simon has suggested that protecting the environment and sustaining the Inuit economy in Inuit Nunangat are vital to preventing "inappropriate levels" of nonrenewable resource extraction. Prevailing economic structures prioritize government policies designed to facilitate the marketplace. Canada's *Northern Strategy* (2009), a set of guidelines developed in response to increasing global interest in the Canadian Arctic, focuses on economic development (through the Nunavut Land Claims Agreement, the Mackenzie Gas Project and Geo-Mapping for Energy and Minerals) and military security. By emphasising competition, consumption, and prioritization of the market, deregulation, and privatization, the Strategy positions Inuit on the periphery, limiting the ways in which they may participate in "Arctic dialogues". Similarly, the Arctic Council restricts Indigenous decision-making power. A high-level intergovernmental forum, the Arctic Council is comprised of member states with territory in the Arctic. While it addresses issues pertinent to Arctic governments and Arctic Indigenous peoples, the latter may gain access only as Permanent Participants, with no vote, and therefore, no direct agency. Decision-making power in the Arctic Council remains out of Inuit hands.

The Makivik Corporation, the legal representative of Quebec's Inuit, has argued, "The oil and gas regime in Arctic waters takes development for granted and adds Inuit consultation as an afterthought." The Canadian government has made unilateral decisions with regard to natural resources, "fed by an attitude of paternalism and the policies of assimilation."¹³

1991); Claude Lévi-Strauss, *The Savage Mind* (Chicago: University of Chicago Press, 1962); M. Freeman, "Why Matataak and other kalaalimerngit (local foods) matter," 45-53 in B. Jacobsen, ed., *Cultural and Social Research in Greenland 96/96. Essays in Honour of Robert Petersen*. NUUK: Ilisimatusarfik/Atuakkiorkfik, 1996. Also see George Wenzel "Ningiqtuq: Resource Sharing and Generalized Reciprocity in Clyde River, Nunavut," *Arctic Anthropology* 32(2): 1995. 43-60.

¹³ Elyse Skura, "Nunavut seismic testing appeal could help define Canada's duty to consult

What is being done?

For the past two years, former mayor Jerry Natanine, and the Nammautaq Hunters and Trappers Organization of Clyde River have been legally challenging a National Energy Board decision to permit seismic testing in Baffin Bay and Davis Strait as a direct threat to their right to food and survival in the case: *Hamlet of Clyde River, Nammautaq Hunters & Trappers Organization - Clyde River, and J. Natanine v. TGS-NOPEC Geophysical Company ASA (TGS), Petroleum Geo-Services Inc. (PGS), Multi Klient Invest as (MKI), and Canada (A-G)*. In October 2015, Clyde River filed an application for leave to appeal its seismic testing challenge to the Supreme Court of Canada, and the case is being heard 30 November 2016. This, the first Supreme Court case from Nunavut, has implications of national and international importance, because the court may define more clearly the extent of the Crown's constitutional duty to consult Indigenous groups according to the tenet of "free, prior and informed consent" outlined in the United Nations Declaration on the Rights of Indigenous Peoples.¹⁴ This may have far reaching effects.

Despite longstanding Inuit resentment of Greenpeace for its campaigns against seal hunting beginning in the 1970s, Clyde River residents have formed an alliance with this global campaigning organization. Along with an apology and stated support for subsistence hunting, Greenpeace is financially assisting Clyde River's legal opposition to the fossil fuel industry. Greenpeace has also recently installed solar panels in Clyde River to reduce the hamlet's dependence upon fossil fuels.

Indigenous groups," *CBC News*, 21 November 2016.

¹⁴ *United Nations Declaration on the Rights of Indigenous Peoples*, United Nations A/RES/61/295 Resolution adopted by the General Assembly on 13 September 2007 [without reference to a Main Committee (A/61/L.67 and Add.1)] 61/295, at <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N06/512/07/PDF/N0651207.pdf?OpenElement>; Elyse Skura, "Nunavut seismic testing appeal could help define Canada's duty to consult Indigenous groups," *CBC News*, 21 November 2016.

Understanding obstacles to further progress: The problematic insertion approach

Government planning of human security in the Canadian Arctic pays lip service to, but does not properly take on board considerations of the people who actually live there. Inclusive gestures that acknowledge the “complementary” nature of Indigenous knowledge overlook Inuit participation beyond inserting them into already defined frameworks. Inuit perspectives on “better security tactics” are not permitted to drive the projects.¹⁵

There is a danger in overstating the colonial era and its aftermath as radically different from today, but it has been recuperated under globalisation, such that Indigenous peoples are often regarded not as defeated figures, but as pacified peoples, “enthusiastically rushing forward under the leadership of their benefactors to follow the path traced out for them towards progress.”¹⁶

Assessing potential private-sector employment opportunities arising out of the opening up of the Northern Passage

Might it be possible that private-sector employment opportunities arising out of the opening up of the Northern Passage seaway compensate Baffin Island Inuit for the collapse of subsistence hunting caused by seismic testing? In her study of northern Alberta’s Mikisew Cree First Nation, political scientist Gabrielle Slowey examines community prosperity and economic autonomy developed through Indigenous partnerships with the resource extraction sector. Communities such as the Mikisew Cree First Nation reorganized their economic relationship to the global market, and the money they earned afforded them more independence and control over their affairs, but “through a dependency on a predatory economy at odds with the deep reciprocity that forms the cultural core of many Indigenous people’s relationships with land.”

¹⁷ Their engagement with extractive industries eroded egalitarian traditions, resulting in increased economic disparity, and attendant tensions and divisiveness amongst band members.¹⁸ Andrew Hodgkins notes that “resource development” in the North has historically produced precarious cycles of rapid economic growth followed by sudden economic decline. Such “boom and bust cycles” have historically disrupted slower, but more stable developments of traditional economies, especially when volatile markets compel extractive industries to pull out of the region, making regional underdevelopment worse.¹⁹

Economic interests in the Arctic as a result of globalization are often socially and politically in conflict with various, stated Indigenous objectives. The short-term profit imperatives driving fossil fuel prospecting off the east coast of Baffin Island immediately threaten the food security of nearby Inuit communities, and have long term consequences for human security on a global scale, given that the warming Arctic is a major driver of global weather systems. The food security threat at hand, along with long-term, global costs, is not prioritized in national economic planning.

Discussion points

How can governments more effectively protect populations from food insecurity in the face of encroaching resource extraction sector interests?

How can the food security problem be solved through alternatives to dependence upon extractive industries as the driver of the Arctic economy?

Further reading

Anaya, S. James, *Indigenous Peoples in International Law*. Oxford: Oxford University

¹⁷ Coulthard, Glen, *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition*. Minneapolis: University of Minnesota Press, 2014. 171.

¹⁸ Gabrielle Slowey, *Navigating Neoliberalism: Self-Determination and the Mikisew Cree First Nation* (Vancouver: UBC Press, 2008).

¹⁹ Andrew P. Hodgkins, “Re-appraising Canada’s Northern ‘Internal Colonies,’” *The Northern Review* 30 (Spring 2009): 179–205. 84.

Press, 2004.

Crawford, James, *Brownlie's Principles of Public International Law*, 8th ed. Oxford: Oxford University Press, 2012.

Joffe, Paul. United Nations Declaration on the Rights of Indigenous Peoples Provisions Relevant to "Consent," 14 June 2013, at <http://quakerservice.ca/wp-content/uploads/2013/07/UN-Decl-Provisions-Relevant-to-Consent.pdf>

Littlechild W. and E. Stamatopoulou, eds, *Indigenous Peoples' Access to Justice, Including Truth and Reconciliation Processes*. New York: Columbia University Press, 2014.
<http://academiccommons.columbia.edu/catalog/ac:184687>

Moore, S.E., Reeves, R.R., Southall, B.L., Ragen, T.J., Suydam, R.S., and Clark, C.W. 2012. "A new framework for assessing the effects of anthropogenic sound on marine mammals in a rapidly changing Arctic." *BioScience* 62 (3): 289-295.

Stavenhagen Rodolfo, "Report of the Special Rapporteur on the situation of human rights and fundamental freedoms of Indigenous people," submitted in accordance with Commission resolution 2001/65 (Fifty ninth session)", UN Doc. E/CN.4/2003/90 of 21 January 2003

Weilgart, L. S. 2007a. The need for precaution in the regulation and management of undersea noise. *J. Int. Wildlife Law & Policy*, 10(3): 247 - 253. DOI: 10.1080/13880290701769312

Weilgart, L.S. 2007b. The impacts of anthropogenic ocean noise on cetaceans and implications for management. *Can. J. Zool.* 85:1091-1116.

Weilgart, L. 2013. A review of the impacts of seismic airgun surveys on marine life. Submitted to the UN Convention on Biodiversity (CBD) Expert Workshop on Underwater Noise and its Impacts on Marine and Coastal Biodiversity, 25-27 February 2014, London, UK. Available at: <http://www.cbd.int/doc/?meeting=MCBEM-2014-01> (Document: Seismic Airgun Impacts)

International Law Association, "Rights of

Indigenous Peoples", Interim Report, The Hague Conference (2010), <http://www.ila-hq.org/en/committees/index.cfm/cid/1024> International Law Association, "Rights of Indigenous Peoples", Final report, Sofia Conference (2012), (Conclusions and Recommendations), file:///C:/Users/dsdorough/Downloads/Final_Report_Sofia_2012_1354632615751_1.pdf

United Nations Declaration on the Rights of Indigenous Peoples, United Nations A/RES/61/295 Resolution adopted by the General Assembly on 13 September 2007 [without reference to a Main Committee (A/61/L.67 and Add.1)] 61/295, at <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N06/512/07/PDF/N0651207.pdf?OpenElement>

C169 - Indigenous and Tribal Peoples Convention, 1989 (No. 169) Convention concerning Indigenous and Tribal Peoples in Independent Countries (Entry into force: 05 Sep 1991), at http://www.ilo.org/dyn/normlex/en/f?p=NO_RMLEXPUB:12100:0::NO::p12100_instrument_id:312314

A/HRC/EMRIP/2011/2, Study on Indigenous peoples and the right to participate in decision-making Final study on Indigenous peoples and the right to participate in decision-making Report of the Expert Mechanism on the Rights of Indigenous Peoples, 26 May 2011 Human Rights Council Expert Mechanism on the Rights of Indigenous Peoples, at <http://www.ohchr.org/Documents/Issues/IPeoples/EMRIP/AEVfinalreportStudyIPRightParticipate.pdf>

Northern Public Affairs, Vol. 4, Issue 2, The Right to Free, Prior and Informed Consent, at <http://www.northernpublicaffairs.ca/index/magazine/volume-4-issue-2/>