

University of Northern British Columbia
3333 University Way, Prince George, BC, Canada, V2N 4Z9

August 23, 2017, 2017

Dear Commissioners Morton, Keilty, Cote and Mason,

I am writing to address the questions regarding the proposed Site C before the BC Utilities Commission as a citizen who has been following the destructive effects and costs of the Site C dam and as a scholar who examines the links between development and society. In particular my research has focused upon impacts of development to indigenous peoples in collaborative projects with them:

Booth, A.L. And N.W. Skelton. 2011. 'We are Fighting for Ourselves' - First Nations' Evaluation of British Columbia and Canadian Environmental Assessment Processes. *Journal of Environmental Assessment Policy and Management* 13(3): 367-404.

Booth, A.L. And N.W. Skelton. 2011. 'You spoil everything!' Indigenous Peoples and the Consequences of Industrial Development in British Columbia. *Environment, Development and Sustainability*. 13(4): 685- 702.

The proposed Site C dam is of considerable concern to me for a number of reasons I'll address below, and I would strongly urge its cancellation as, I believe, any costs accrued from cancellation are much less than the serious costs of it continuing.

My reasons for concern are the following:

BC Hydro has been neither honest nor transparent in its reporting on circumstances around Site C. The project is well behind on its timelines, indicating construction costs are likely vastly underestimated, additional costs I and other taxpayers will inherit. Nor do I believe their estimates for cost effective electricity generation, nor their need projections, as others have documented: "B.C.'s auditor general has noted that Hydro uses deferral accounts to push off costs into future years and to give the artificial appearance of annual profitability."
"<http://www.timescolonist.com/business/b-c-hydro-debt-puts-credit-rating-at-risk-1.8588424>

The loss of non-replaceable arable land is nowhere factored into cost calculations. Canada is a net food importer, a shocking state of affairs, and the ongoing loss of arable land across BC should not be allowed to continue. In-country food production increases national food security, the quality of available foods due to better regulation and long term employment opportunities and economic contributions. Compared to the small number of permanent jobs generated by Site C, agricultural production has long term opportunities.

The loss of family farms and livelihoods and the emotional toll on peoples losing their homes can never be adequately addressed by offered buyouts, and as a citizen of a putative democracy I believe the trampling of the lives of a remote "minority" for the theoretical benefit of a voting majority in the Lower Mainland is antithetical in a democracy.

The loss of wildlife habitat is also incalculable. Most species in BC are already under pressure from development in the "sacrifice zone" the Peace has become. Williston Dam devastated wildlife populations for decades; it is unclear that any will survive in sustainable numbers after Site C. As an "owner" of these lands and their wildlife, as Site C will occupy Crown land, I am devastated that such iconic species are not valued over unnecessary and politically driven

developments such as Site C. Nor does it make economic sense as Damien Gillis estimates that “Keeping the Peace Valley’s farmland and ecosystems intact would be worth \$7.9 billion to \$8.6 billion a year” in perpetuity (<http://commonsensecanadian.ca/peace-valleyfarmland-ecosystems-worth-8-billion-year-study/>).

Finally, there are the circumstances of the Indigenous peoples in the Peace. Treaty No. 8 grants Indigenous peoples a clear right to continue their traditional lives unfettered, to continue to hunt, gather, practice their spirituality and to honour their ancestors’ lives and the future of their children. That Treaty is a binding legal document and upholding that document is the basis for the “honour of the Crown.” To abrogate Treaty and Aboriginal rights, as proceeding on Site C (as indeed any current work on Site C has already done) tarnishes irrevocably the honour of the Crown. At a time when government’s provincial and federal call for a new relationship with Indigenous peoples residing in what is now Canada, proceeding with developments like Site C is to put lie to that expressed desire.

For these several reasons, as well as other concerns such as climate change that I’ve no doubt others can address more cogently than I, I urge the Commission to recommend stopping in perpetuity the plan to build Site C dam. I include in this submission a recent case study I wrote demonstrating that Site C represents a clear case of environmental injustice in support of this argument.

Sincerely,



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Northern Environmental Justice: A Case Study of Place, Indigenous Peoples, and Industrial Development in Northeastern British Columbia, Canada

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ABSTRACT This case study introduces the concepts of place-based and Indigenous environmental justice as well as the theory of Indigenous sovereignty, as articulated within a Canadian context and considers their application with respect to the Indigenous peoples with traditional territories within the borders of Canada. The specific legal and industrial contexts affecting Indigenous peoples in Canada are briefly examined to frame two cases of environmental justice issues in the northeastern corner of British Columbia. The two cases are oil and gas development and the proposed development of a new dam which will represent the largest industrial development in Canada in the last several decades. The perspectives of British Columbia Treaty 8 Indigenous Nations on the impacts of these industrial developments are presented.

KEY MESSAGE

Students viewing this case study will:

- Gain a basic understanding of place-based and Indigenous environmental justice, as well as Indigenous sovereignty.
- Gain an understanding of the challenges facing Indigenous peoples in Canada with respect to industrial development, as examples of environmental injustice.
- Be introduced to two examples of environmental justice issues affecting Indigenous peoples in British Columbia, Canada; oil and gas exploitation and a proposed dam.
- Gain an understanding of the concerns of the Indigenous peoples with respect to these two developments.

INTRODUCTION

Indigenous Youth Took Center Stage at People's Climate March (May 5, 2017)

Chile's Indigenous Mapuche Protest Deadly Police Brutality (March 20, 2017)

Ecuador's Indigenous People Take Their Case against Chevron to Canada (December 21, 2016)

The Dakota Access Pipeline and Doctrine of Native Genocide (December 7, 2016)

Quebec Mohawk Chief Vows Civil Unrest If B.C. Pipeline Moves Forward (December 7, 2016)

Guatemala's Indigenous Water Protectors Organize to Challenge Hydroelectric Projects (December 3, 2016) [1]

Industrial development threatening Indigenous peoples' survival occurs across the globe and, in the Americas, goes back centuries to the time of European invaders. This encompasses everything from nuclear bomb tests (the US southwest, the Bikini Islands, and Australia [2]), to murder in the name of resource extraction (Guatemala, Honduras [3]), to pollution poisoning critical lands and Indigenous peoples (Canada [4, 5]). In the face of such threats, Indigenous peoples around the globe and across the centuries resist, as the news headlines above suggest. Ongoing conflicts with industry, and the governments which facilitate industrial development, make the discussion and practice

of environmental justice with respect to Indigenous peoples critical. It is also critical to recognize that for every well-publicized case of environmental injustice, others just as serious occur regularly, but are far less visible.

This case study examines environmental justice (EJ) and Indigenous peoples in Canada focusing upon the challenges faced by Indigenous peoples in northeastern British Columbia. While not as well-known as some current Indigenous protests, this corner of Canada illustrates the threats to the survival of Indigenous cultures through threats to ecosystems underpinning those cultures. Northeastern BC is an environmental and social “sacrifice” zone, as industrial development in this remote location benefits the more populous areas in southern BC, and Canada, while the costs and impacts to local communities are poorly recognized and overshadowed by proposed industrial developments in more populated areas.

CASE STUDY CONTEXT AND THEORETICAL LENS

Twenty-first century Canada economically remains a significant primary resource producer. As of 2015, 1.77 million jobs are directly or indirectly linked to natural resources extraction, accounting for 17% of Canada’s Gross Domestic Production. Over the next decade, over 400 major resource-based projects are in process, representing an estimated \$691 billion Canadian dollars of investment. The natural resources sector contributes \$27 billion to government coffers annually through \$231 billion worth of exports [6]. This creates immense incentive to exploit these natural resources, which creates serious challenges for ecosystem and human wellbeing. Exacerbating these circumstances is a geographic stratification of population and natural resources in every Canadian province and territory such that the majority of the population (holding the majority of political decision-making ability) lives far away from the underpopulated hinterlands where the majority of natural resources are extracted. That majority population, which benefits economically from resource extraction and elects the governments promoting resource extraction, are usually insulated from the immediate consequences of extraction activities and are able to ignore the consequences for the smaller remote populations living adjacent to extraction sites. This is the jumping-off point for bringing an environmental justice lens to bear.

Environmental justice as a concept developed in the United States around the understanding that visible

minorities and economically disadvantaged people are disproportionately targeted for and affected by industrial development [7], (Figure 1). A foundational EJ event was a 1982 Warren County, North Carolina (USA) blockade, where a largely African-American community protested its selection as a hazardous waste disposal site without being consulted in the decision-making process [8], (Figure 2). Subsequent EJ work linked race/income with locally unwanted land uses. In the 1980s, approximately three out of five African Americans lived near at least one uncontrolled hazardous site as did half of Native Americans [7]. Presently, visible minorities remain more likely to be exposed to contamination impacting ecosystems and cultural subsistence [7], (Figures 3–6).



FIGURE 1. Art by Ricardo Levins Morales (Source: <http://www.rlmartstudio.com>).



FIGURE 2. Jenny Labalme, Photograph of Warren County Protests (Source: https://sites.duke.edu/docst1105_01_s2011_sb211/what-is-environmental-justice/history/).

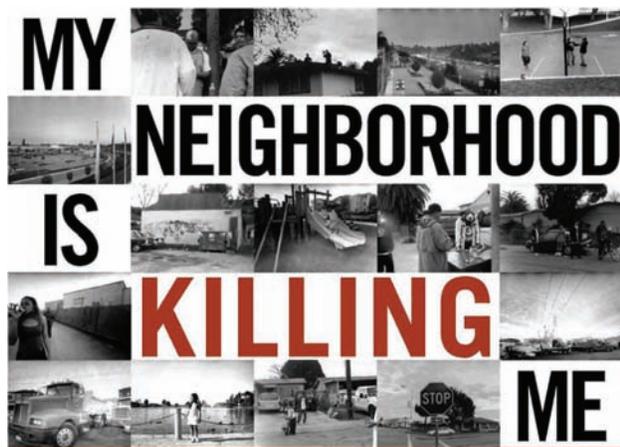


FIGURE 3. Image by Wake Forest, *My Neighborhood is Killing Me* (Source: <http://beautifultrouble.org/theory/environmental-justice/>).



FIGURE 6. Photograph, House and Nuclear Plant (Source: <http://serc.carleton.edu/integrate/workshops/envirojustice2013/index.html>).



FIGURE 4. Photograph, Child and Power Plant (Source: <https://www.michigandaily.com/article/toxic-tour-lead>).



FIGURE 5. Photograph, Houston High School and Power Plant (Source: <http://blogs.edf.org/texascleanairmatters/2014/05/13/houstons-environmental-justice-encuentro-to-chart-path-forward-for-communities/>).

In the United States, most EJ theory is race based. In Canada, where EJ theory started with a focus upon race [9, 10, 11, 12], additional key foci include place, geography and class, or “place-based EJ” [13]. Place-based EJ is less developed than race-based theory, but may have greater application to resource extraction in remote places. Place-based EJ theory derives from a range of variables, including community size in relation to population centers, economic contexts and social/cultural elements, rather than solely race [13].

In Canada, much EJ theory and practice also centers around Indigenous peoples [9, 10, 12, 14, 15, 16]. The theory of “Indigenous EJ” links race-based EJ and place-based EJ as Indigenous peoples are inextricably linked culturally and physically to the matrix of ecosystems within which their culture exists. However, environmental justice generally needs better development with regard to Indigenous peoples [17, 18, 19, 20], and relatively little research examines EJ and Indigenous peoples in Canada [11, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27]. Table 1 summarizes key elements aspects of these three EJ theories.

One last theory is relevant to this case study, Indigenous sovereignty, given the unique legal circumstances of Indigenous peoples within Canada. Indigenous peoples are “faced with systemic environmental injustice” due to “the failure by the Canadian state to recognize underlying and inalienable Aboriginal title and rights” to traditionally used public lands (“Crown” land in Canada) and natural resources [14, p.12]. This reality gives rise to demands for the recognition of Indigenous sovereignty. Indigenous sovereignty is, according to Indigenous theorist Coulthard, the “call for

TABLE 1. Key features of three environmental justice theories

Race-based EJ	Place-based EJ	Indigenous EJ
<ul style="list-style-type: none"> • Racial discrimination in environmental policy-making and enforcement of regulations and laws. • The deliberate targeting of communities of color for toxic waste facilities. • The official sanctioning of the presence of life-threatening poisons and pollutants for communities of color. • Excluding people of color from leadership of the environmental movements. • Drawn from [28] <ul style="list-style-type: none"> ◦ “The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.... Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.” • United States Environmental Protection Agency 1982 (https://www.epa.gov/environmentaljustice). 	<ul style="list-style-type: none"> • Environmental inequities have more to do with geographical contextuality and socioeconomic characteristics than ethnic identity. • Key variables include: <ul style="list-style-type: none"> ◦ Community size in relation to major population centers ◦ Economic/political standing derived from proximity or significance to political/economic centers ◦ Economic contexts (is the community a resource-extractive economy versus a knowledge-based or other type of economy) ◦ Social/cultural elements. • Place-based EJ is defined by Mitchell as: <ul style="list-style-type: none"> ◦ “The right to a safe, healthy, productive and sustainable environment for all, in which environment is viewed in its totality and includes ecological (biological), physical (natural and built), social, political, aesthetic and economic components” [13, p.557)]. 	<ul style="list-style-type: none"> • Focuses upon the key challenges facing Indigenous people across the globe. • While based upon a racial characteristic (indigeneity) this is also based within geographic contextuality (place-based EJ). • Unlike broader place-based EJ, Indigenous EJ recognizes geographical presences and cultures fixed within certain places that can trace roots back thousands of years. • Place and culture/spirituality are inextricably intertwined and are included within assessments of harm and response, in addition to physical, health, or economic harms. • Schlosberg and Carruthers [17, p.13] state that Indigenous environmental injustices are “direct assaults not only against the people, but also against cultural practices and beliefs, and the ability of their community to reproduce those traditions. Indigenous leaders thus articulate environmental injustices as a set of conditions that remove or restrict the ability of individuals and communities to function—conditions that undermine their health, destroy economies and cultural livelihoods, or present general environmental threats.”

the delegation of land, capital, and political power from the state to Indigenous communities through a combination of land claim settlements, economic development initiatives, and self-government agreements” [29, p.3]. Indigenous theorist Simpson further describes the requirements for developing Indigenous sovereignty:

Building diverse, nation-culture-based resurgences mean significantly reinvesting in our own ways of

being: regenerating our political and intellectual traditions; articulating an living our legal traditions, language leaning; creating and using our artistic and performance based traditions. [Decolonization] requires us to reclaim the very best practices of our traditional cultures, knowledge systems and lifeways in the dynamic, fluid, compassionate, respectful context in which they were originally generated [30, pp.17–18].

TABLE 2. Selections from Section 35 Constitution Acts 1867–1982 (Canada’s Constitution Act 1982[†])

**PART II
RIGHTS OF THE ABORIGINAL PEOPLES OF CANADA**

Marginal note: Recognition of existing aboriginal and treaty rights

- 35. (1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.
- Definition of “*aboriginal peoples of Canada*”

(2) In this Act, “*aboriginal peoples of Canada*” includes the Indian, Inuit and Métis peoples of Canada.

- **Marginal note: Land claims agreements**

(3) For greater certainty, in subsection (1) “*treaty rights*” includes rights that now exist by way of land claims agreements or may be so acquired.

- **Marginal note: Aboriginal and treaty rights are guaranteed equally to both sexes**

(4) Notwithstanding any other provision of this Act, the aboriginal and treaty rights referred to in subsection (1) are guaranteed equally to male and female persons.

Source: [†]<http://laws-lois.justice.gc.ca/eng/const/page-16.html>

The legal context in Canada provides significant support for Indigenous sovereignty, as Indigenous peoples in Canada have significant legally based rights. While the legal circumstances of Indigenous peoples are exceedingly complex, beyond this case study to explain,¹ and subject to change through court cases, key protections/considerations include:

- Section 35 of the 1982 Canadian Constitution recognizes (rather than grants) Aboriginal rights to hunt, fish, and gather for subsistence, ceremonial, and cultural survival purposes (Table 2 offers key excerpts).
- A series of federal laws and court decisions over Aboriginal rights around, and possible legal title to, lands and resource access.
- Historical (“numbered”) and modern treaties.

Aboriginal rights have been upheld by a series of court cases (*R. v. Delgamuukw* 1997; *R. v. Sparrow* 1990; *Tsilhqot’in Nation v. British Columbia* 2008; *Tsilhqot’in Nation v. British Columbia* 2014) [31]. After conservation requirements are met, Indigenous peoples have priority rights to access land and natural resources, only then followed by the contingent rights held by companies and mainstream society (*R. v. Sparrow* 1990). *Sparrow* determined that any infringement upon established Aboriginal rights must be

¹ Muir and Booth [31] provide an overview of the legal framework affecting indigenous peoples in Canada with respect to land and natural resources, as of 2017.

avoided unless there are “compelling and substantial” reasons (usually determined by government, subject to court challenge), in which case, government can infringe upon Aboriginal rights, including limited access to, or use of, natural resources. In addition to Aboriginal rights, most, but not all, Indigenous peoples possess rights conferred by historical (numbered) or modern treaties agreed to by their governments and the federal government of the time.

However, treaty and Aboriginal rights are frequently ignored or abrogated by government. In these cases, Indigenous Nations have resort only to lengthy and expensive court challenges to force a government to honor legal obligations [31, 32]. Governments are also obligated to consult meaningfully with Indigenous peoples when anticipating impacts upon their rights from proposed developments, and are often expected to mitigate such impacts. However, neither rights nor legal obligations have stopped industrial encroachment or impacts upon ecosystems critical to the survival of Indigenous cultures. If government chooses to simply ignore Indigenous Nations’ concerns, there are few means outside of (often unsuccessful) court challenges or creating public outcry to force government to do otherwise.

A final lens by which to examine these issues is the lens of Indigenous worldviews, especially in relation to Indigenous embeddedness within specific ecosystems. Worldviews are how a group defines their world, and there is a significant mismatch between Indigenous worldviews and those of non-Indigenous Canada. For Indigenous cultures,

the land, animals, and plants that make up an ecosystem within which they exist are far more than a collection of exploitable resources [33, 34]. Indigenous peoples are rooted in specific ecosystems through complex interconnections derived from their history, their cultures, their spirituality, and their community networks linked throughout the ecological attributes of their traditional territories. This circumstance, from an Indigenous EJ lens, requires recognition of the distinct impacts of industrial exploitation of resources in territories of Indigenous peoples. This includes, for example, an erosion of traditional knowledge, the loss of traditional foods and traditional material goods created from specific (and non-substitutable) plants and animals, the loss of natural resources required for cultural subsistence, destruction of the graves belonging to their ancestors, and intrusions not just into traditional use areas, but into sacred lands as well [18, 34].

Indigenous demands for environmental justice go beyond distributional equity to emphasize...their ability to continue and reproduce their traditions, practices, cosmologies, and the relationship with nature that tie native peoples to their ancestral lands [17, p.10].

The consequences for Indigenous peoples of industrial development upon lands they utilize to maintain their culture, are profound. The loss of culture threatens their history, the wellbeing of the current generation and their children's future. Indigenous peoples living in Canada rank below other Canadians in terms of socioeconomic indicators [35]. Indigenous peoples attribute this, in part, to be the consequence of the loss of the profound inter-linkage between cultural health, land health, and social wellbeing within Indigenous cultures coupled with long-term and subtle social impacts of the loss of land, and the culture that has developed within that land [34, 36, 37].

THE CASE STUDY: THE PEACE REGION AND TREATY 8 INDIGENOUS NATIONS

The northeastern portion of British Columbia (BC), the Peace region (Figure 7), presents a useful exploration of place-based and Indigenous EJ. The Peace (officially the Peace Regional District) has a population of about 56,500. Most live along the Peace River. The area is comprised of the Boreal White and Black Spruce Biogeoclimatic Zone. It is an ecologically diverse area and as a result is also a productive and critical collection of ecosystems. Approximately 61% of BC's bird species and 46% of all breeding species



FIGURE 7. Map of Peace region, British Columbia, Canada (Source: [39])

reside here. Multiple wetlands, ponds, and streams create a major migratory corridor for water- and shorebirds. Moose, mule, white-tailed deer, caribou, and elk are common ungulates and the area also supports Dall sheep, black bear, grizzly bear, and gray wolf. Freshwater fish species include the Arctic grayling, northern pike, and slimy sculpin [38]. Major tree species include white spruce, black spruce, trembling aspen, lodgepole pine, balsam poplar, tamarack, subalpine fir, and paper birch.

Human residents largely make their living through agriculture, natural resources exploitation (forestry, mining, and oil and gas development) or through provision of support services (Tables 3–5). The Peace is also a millennium long home to the Dunne'za peoples, who are Beaver and Cree cultures comprised of five Indigenous Nations: West Moberly First Nations, Halfway River First Nation, Doig River First Nation, Saulteau First Nations, and Prophet River First Nation. All are signatories to the BC portion of Treaty No. 8 (Appendix 1) and participate in the Treaty 8 Tribal Association (<http://treaty8.bc.ca/>). While these Nations (Tables 6–8) participate in mixed economies, including working with resource industries (Table 9), they also rely heavily on subsistence activities both to feed community members and to maintain their cultures [32, 34, 40].

Since the 1940s, the Peace has also been a substantial source of natural resources and energy generation, and further, is undergoing significant industrial development presently and will likely continue to do so into the future. It is

TABLE 3. Comparative population numbers between northeastern British Columbia and other regions of the Province[†]

Regional District in bold; selected subset italic	2016 population
<i>Vancouver Island/Coast</i>	800,716
<i>Capital (Victoria, BC)</i>	382,645
<i>Mainland/Southwest</i>	2,930,041
<i>Greater Vancouver</i>	2,558,029
<i>Thompson/Okanagan</i>	549,956
<i>Kootenay</i>	149,661
<i>Cariboo</i>	154,026
<i>North Coast</i>	53,659
<i>Nechako</i>	41,057
<i>Northeast</i>	72,496
<i>Northern Rockies</i>	5,992
<i>Peace River</i>	66,504
<i>British Columbia (Total)</i>	4,751,612

Source: [†]<http://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates>

TABLE 4. Northeastern BC regional labor profile 2017[†]

Total population (Age 15+)	56,500
Total employment	40,600
Unemployment rate	6.5%

Source: [†]<https://www.workbc.ca/Labour-Market-Information/Regional-Profiles/6>

TABLE 5. Regional employment by industry sector April 2017 in the Peace region (X = suppressed to meet the confidentiality requirements of the Statistics Act)[†]

Total employed, all industries	39,600
Forestry, fishing, mining, quarrying, oil and gas	3,500
Utilities	X
Construction	6,400
Manufacturing	2,000
Services-producing	26,800
Wholesale and retail trade	6,000
Transportation and warehousing	2,100
Finance, insurance, real estate, rental and leasing	2,000
Professional, scientific, and technical services	1,900
Business, building, and other support services	X
Health care and social assistance	4,300
Information, culture, and recreation	X
Accommodation and food services	2,200
Other services (except public administration)	2,400
Public administration	X
Educational services	2,400

Source: [†]<http://www.statcan.gc.ca>

TABLE 6. Aboriginal peoples in the Peace region (2011 census)[†]

	Total Population	Male	Female
North American Aboriginal origins	8,920	4,520	4,400
First Nations (North American Indian)	6,520	3,310	3,210
Inuit	35	10	25
Métis	2,920	1,490	1,430

Source: [†]<http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/details/page.cfm?Lang=E&Geo1=CD&Code1=5955&Data=Count&SearchText=Peace%20River&SearchType=Begins&SearchPR=01&A1=All&B1=All&GeoLevel=PR&GeoCode=5955&TABID=1>

TABLE 7. Total First Nations population in private households by Registered or Treaty Indian status in the Peace region (2011 census)[†]

Registered or Treaty Indian	2,980
Not a Registered or Treaty Indian	1,460

Source: [†]<http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/details/page.cfm?Lang=E&Geo1=CD&Code1=5955&Data=Count&SearchText=Peace%20River&SearchType=Begins&SearchPR=01&A1=All&B1=All&GeoLevel=PR&GeoCode=5955&TABID=1>

TABLE 8. Total Aboriginal identity population aged 15 years and over in private households by labor force status and income in the Peace region (2011 census)[†]

In the labor force	4,110
Employed	3,645
Unemployed	465
Not in the labor force	1,805
Participation rate	69.5%
Employment rate	61.6 %
Unemployment rate	11.3%
Median income (\$) 26,685	
Average income (\$) 37,434	

Source: [†]<http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/details/page.cfm?Lang=E&Geo1=CD&Code1=5955&Data=Count&SearchText=Peace%20River&SearchType=Begins&SearchPR=01&A1=All&B1=All&GeoLevel=PR&GeoCode=5955&TABID=1>

TABLE 9. Aboriginal employment by industry sector in the Peace region (2011 census)[†]

Total labor force population aged 15 years and over having an Aboriginal identity in private households by industry—North American Industry Classification System (NAICS) 2007	4,110
All industries	4,040
Agriculture, forestry, fishing, and hunting	205

(continued)

TABLE 9. Aboriginal employment by industry sector in the Peace region (2011 census)[†] (continued)

Mining, quarrying, and oil and gas extraction	535
Utilities	30
Construction	590
Manufacturing	140
Wholesale trade	75
Retail trade	520
Transportation and warehousing	145
Information and cultural industries	45
Finance and insurance	40
Real estate and rental and leasing	40
Professional, scientific, and technical services	105
Management of companies and enterprises	0
Administrative and support, waste management, and remediation services	130
Educational services	220
Health care and social assistance	330
Arts, entertainment, and recreation	35
Accommodation and food services	275
Other services (except public administration)	215
Public administration	340

Source: [†]<http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/aprof/details/page.cfm?Lang=E&Geo1=CD&Code1=5955&Data=Count&SearchText=Peace%20River&SearchType=Begins&SearchPR=01&A1=All&B1=All&GeoLevel=PR&GeoCode=5955&TABID=1>

TABLE 10. Approved and proposed development projects in the Peace region 2016

Large-scale hydroelectric dams (including the Site C dam)	2
Run of the river electricity generation developments	In the hundreds
Mines	5
Windfarms	6
Oil and gas wells	18,793
Industrial facilities	10,815
Oil and gas pipelines	100,000 km
Electrical power lines	In the thousands
Roads	60,000 km
Fee simple and agricultural lands	Thousands of hectares
Forestry cut blocks	6,000
Large-scale industrial projects proposed as of 2016 [41]	28

an already (over) crowded resource development and extraction landscape (Table 10). When assessed altogether, known as cumulative impact assessment, currently there is no unimpacted land in the Peace (Figure 8). For this case study, two specific industrial developments will be examined for their impacts on the region's Indigenous peoples: oil and

gas (O&G) development in northeastern BC and the Site C dam.

The development of O&G in the Peace has been occurring since the 1950s [42]. Since 2000, however, rates of resource development have soared due to the introduction of the controversial process of hydraulic fracturing (fracking) for natural gas. In the Peace the largest employment sector is in O&G, which provides 10.5% of all jobs (Table 5), (Figure 9). Indirect employment through providing services to the industries or to the workers is also substantive. After a two-year slump, 2017 witnessed a significant development boom. A January auction for petroleum and gas rights generated \$40 million in total sales. Estimates for the 2017 BC drilling season include 367 new wells [43].

Most BC O&G development occurs in the Peace, which is a remote and under-populated region when compared with the "Lower Mainland," including the city of Vancouver, and Vancouver Island, where the provincial capital of Victoria is located. While remote communities do experience positive impacts from industrial development, largely through employment, the residents bear all of the negative impacts, including air, land, and water contamination and related health impacts, the risk of catastrophic events (sour gas venting or oil spills), the loss in quantity and quality of fresh water, the loss of use of private lands adjacent to extraction sites, and the loss of employment from other resources [44, 45, 46], (Figure 10).

In contrast, the residents of BC's south, including Vancouver and Victoria, suffer few, if any, direct negative impacts, and face few direct risks² but experience considerable positive social benefits such as subsidized health care and education which are underwritten by O&G royalties (\$1.5 billion between 2014 and 2015 [47]). Thus there is a differential sharing in the quantity and quality of impacts (positive and negative) between the large urban centers distant from most resource extraction sites and the communities living with extraction activities.

The second EJ issue under consideration is the proposed Site C dam [48]. A companion to the 1950s WAC Bennett (Figure 11) and the Peace Canyon Dams, the Site C dam would flood a 51 mile stretch of the Peace River, and

2 This is changing in 2017, as the proposed Kinder Morgan Trans Mountain Pipeline will bring increased amounts of Alberta oil through a pipeline within Greater Vancouver, and public awareness of the risks has been greatly increased, but only around their local pipeline (<http://globalnews.ca/tag/trans-mountain-pipeline/>).

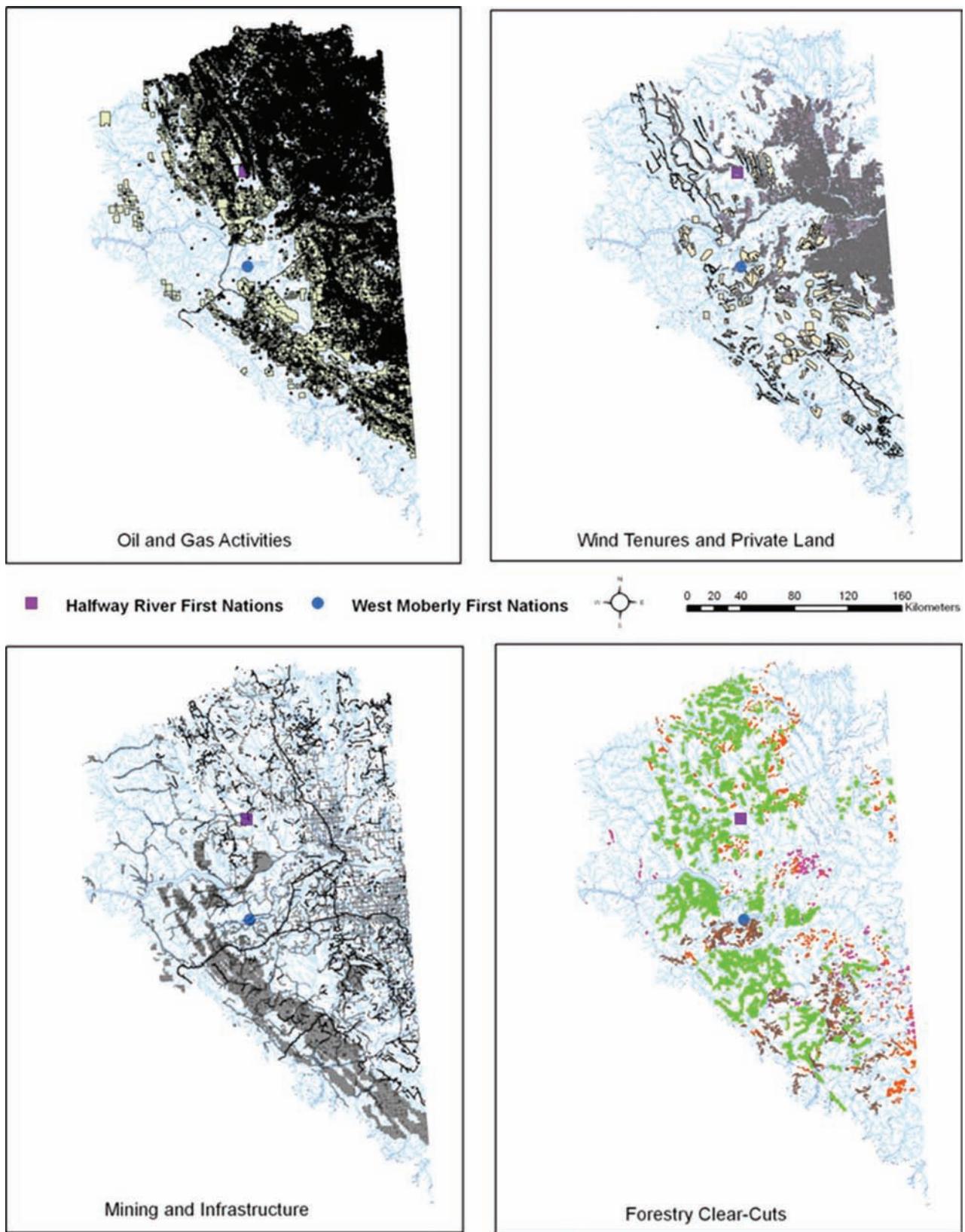


FIGURE 8. Map of cumulative impacts from industrial development in the Peace region. Map was compiled by West Moberly First Nations Lands Office using all BC government sources available as of 2011 (Source: [41])

about 13,000 acres of land. Flooding will destroy critical ecosystems (Figure 12), threatening culturally important species including woodland caribou, bison, muskox, and eagles, destroy some of the best agricultural land (Figure 13) outside of the Lower Mainland, as well as stands of valuable timber and the homes of ranchers, farmers and Indigenous peoples [49, 50]. In so doing, the development will



FIGURE 9. Photo of union support for liquid natural gas development (Source: <http://www.alaskahighwaynews.ca/fort-st-john/let-us-help-premier-christy-clark-stirs-lng-supporters-at-forest-john-rally-1.2235717>)

compound existing damage to ecosystems caused by the first dams, which drowned thousands of caribou, contaminated fish and compromised the cultures of Indigenous peoples theoretically protected by the Treaty they had signed. In 2016, BC Hydro (the government entity overseeing hydroelectricity development) acknowledged that damage and issued an apology to the Indigenous peoples affected, including that history in its Interpretation Centre at the Bennett Dam [51]. Despite this admission, the BC government is proceeding with Site C.

The political enthusiasm for the dam is based upon increased electrical production which will offset projected future demand, but will also allow the development of natural gas production in northwest BC. Further, BC has plans to sell the electricity generated at the dam elsewhere, at considerable profit. Finally, there is support for the project by labor unions, local governments, and many local communities because of the potential for long-term employment (estimated at 10,000 person years by BC Hydro) and anticipated economic growth (Figure 14). BC Hydro stated that, as of September 2016, it had spent \$1.3 billion and had more than 1,860 workers working on the dam (85% from BC) [52].



FIGURE 10. Photo of a massive largest frack site, near Chetwynd, BC (Source: <http://www.davidsuzuki.org/blogs/climate-blog/2013/12/no-peace-in-bcs-peace-region-study-shows/>)



FIGURE 11. Photo of the WAC Bennett Dam in northeastern British Columbia (Source: <https://www.flickr.com/photos/canadagood/3390099061>)

Treaty No. 8 Nations will be affected in multiple ways, including through the loss of ecosystems they not only depend upon for subsistence, but which form the basis of their cultures [32, 34]. In response to provincial and federal government support for the dam, despite serious questions about the benefits of the dam versus the costs [49, 50], the governments of West Moberly and Prophet River Nations have filed numerous court challenges [48, 49, 50].³ Table 11 presents Treaty 8 Tribal Association’s official statement of concern on the Site C dam. Organized protests have occurred in 2015 and 2016 (Figures 15–17) including a 2016 awareness raising bus caravan across Canada (Figures 18 and 19). Final court decisions, however, may come too late to stop the dam and have not stopped ongoing destructive preparatory work. Two videos, the first showing the Peace River Valley prior to the dam, and the second discussing the impacts of the dam,⁴ are good introductions to the Site C controversy.

The Indigenous peoples are not alone in their fight against Site C. A number of local ranchers and landowners are participating in the fight against Site C. Most stand to

³ To hear Chief Roland Willson (West Moberly First Nations) speak on Site C, see the video here <https://www.facebook.com/PeaceValleyEnvironmentAssociation/videos/754473578041683/>

⁴ Eoghan Moriarty, “This is What the Peace River Valley Looks Like Before Site C dam”: https://www.youtube.com/watch?v=OO7_gltwTdA; Desmog Canada, “What is the Site C Dam”: <https://www.facebook.com/DesmogCanada/videos/946582382113989>. Many additional photos and videos can be found on the Peace Valley Environmental Association’s Facebook page <https://www.facebook.com/PeaceValleyEnvironmentAssociation/>.

lose farms and ranches held by their families for generations, with little or no compensation. Two videos offer the perspectives of these landowners.⁵ Finally, support has been received from outside agencies. In 2016 Amnesty International released a report opposing the dam for its violation of human rights [53].

APPLYING THE THEORETICAL LENS

Four theoretical lens related to environmental justice were introduced earlier. Their application to the Peace region is now examined. Race based EJ does offer a basic lens. When examining the impact of industrial development on the Peace, there are significant impacts upon Indigenous peoples. However, the other theories presented have greater utility in analyzing this case study.

There are components from the Peace case study that are best understood through the lens of place based EJ. The first is that the remoteness of northeastern BC from provincial and federal power centers is a significant factor in how little known is either the level of industrial development or its regional impacts, even within BC. While past, current, and proposed developments affect a greater land base than better known developments (Kinder Morgan’s Trans Mountain Pipeline, for example), and arguably cause far greater environmental impacts, the remoteness of the region from Vancouver and Victoria, and public consciousness, means little public opposition to such development outside of the Peace. Few BC residents are aware of the amount of O&G development in the northeast corner of their own province. The second component is the explicitly open trade-off of a booming economy versus environment and traditional cultures and lives (including third-generation farmers and ranchers as well as Indigenous cultures) by the provincial and federal government in supporting both oil and gas as well as the Site C dam [39, 44, 45, 46, 49, 50].

This circumstance reflects the significant difference in populations between the Peace and the south and, as a consequence, the relative difference in decision-making power or political influence as well. The Peace has a

⁵ See “Peace River Cowboys and Indians Against the Dam”; <https://sub.media/video/peacriver-cowboys-and-indians-against-the-dam/>; “Rancher Arlene Boon on Site C Dam”; <https://www.facebook.com/LittleRiverProductions/videos/431062887260768/>; and a music video protesting Site C <https://www.facebook.com/PeaceValleyEnvironmentAssociation/videos/875869749235398/>



FIGURE 12. Photo of the area of the Peace River to be dammed (Source: <https://www.desmog.ca/2015/12/18/photos-destruction-peace-river-valley-site-c-dam>)



FIGURE 13. Graphic on preserving agricultural lands in the Peace (Source: http://www.stopsitec.org/take_action_6)



FIGURE 14. Government photo promoting Site C employment (Source: http://www.miningandenergy.ca/energyinsider/article/site_c_reaches_employment_milestone_surpassing_1000_b.c._workers/)

population of roughly 60,000; the most populated portion of BC, the Lower Mainland (including Vancouver) and Vancouver Island (where the provincial capital of Victoria is located) has a population of roughly 2.6 million

TABLE 11. Statement of Treaty 8 on Site C Dam 2015[†]

1. Site C is an infringement on our Treaty Rights, yet BC Hydro proceeds with construction.
2. There are alternatives to Site C that do not infringe upon our Treaty Rights.
3. There are alternatives to Site C that do not destroy the Peace River Valley.
4. The remaining stretch of the Peace River Valley is vital to Treaty 8 First Nations practicing our Treaty Rights.
5. The outcomes of the Site C legal proceedings have the potential to impact the treatment of First Nations by government an adhered to numbered Treaties across Canada by government and industry.

Source: [†]<http://raventrust.com/2015/11/02/statement-from-treaty-8-regarding-the-site-c-dam/>

(Table 3, Figure 20). The majority of provincial political power rests with the elected Members of the Legislative Assembly which represent regions well away from resource extraction, as West Moberly First Nations Chief Roland Willson is well aware: “If they propose a coal mine in downtown Vancouver, it would be a different story. If they wanted to flood the Fraser River, you know” [34, p.697]. Tellingly, little research has actually been done on the social and environmental impacts of resource extraction or dams in the Peace [32, 34, 41, 54].

The Indigenous EJ lens provides an even greater focus on the consequences for Treaty 8 Nations in the Peace. Indigenous EJ notes the ancient and inextricably linked nature of



FIGURE 15. Photo, Site C protest (Source: <http://commonsensecanadian.ca/VIDEO-detail/bc-hydro-rushes-to-cut-down-eagles-nests-for-site-c-dam-first-nations-see-injunction/>)



FIGURE 16. Photo, Site C protest (Source: <http://peoplesvoice.ca/2016/09/14/solidarity-with-treaty-8-caravan-to-stop-the-site-c-dam/>)



FIGURE 17. Protest graphic on Site C dam (Source: <http://raventrust.com/join-the-circle-no-site-c/>)

Indigenous cultures and the ecosystems within which the culture is set. For the Indigenous peoples of the Peace,

their cultural integrity, their ability to persist as a Dunne-za people, is utterly dependent upon the ability to continue their traditional seasonal round of subsistence, cultural and spiritual activities. The continuance of the seasonal round relies on the continued existence of key species (which the Dunne-za would not consider as simply resources) and their continued ability to interact meaningfully with those species and the ecosystems which support all species. . .The rate and scale of industrial development is, however, placing that continuance in serious jeopardy [55, p.425].

Industrial development in Indigenous peoples' traditional lands results in sickness, expatriation from ancestral lands, and poverty, all manifestations of the collision of worlds and cultures [36, 37]. Indigenous peoples are well aware of the consequences, surrounded as they are by industrial impacts within their territories, as research carried out in 2007 [34, 41] documented.

To be a proud First Nations person, you have to be connected to your culture. You have to know where you came from, and where and what are the important parts. . .why is my culture important today, and why is making dry meat, and picking these berries, critical to our way of life. The whole tone of government is economics and jobs, and training and



FIGURE 18. Photograph of the Caravan for the Peace and Chief Roland Willson, West Moberly First Nations (Source: <http://www.nationalobserver.com/2016/04/05/news/treaty-8-chiefs-condemn-site-c-dam-project>)



FIGURE 19. Photograph of caravan for the Peace (Source: <https://eastendnotar.org/2016/11/21/ottawa-on-collision-course-with-indigenous-peoples/>)

forcing people into this economy, and there is not an appropriate amount of attention placed on maintaining [our culture]. We're the ones fighting. We can see our land base eroding [34, p.693].

It just becomes like an industrial zone, the area that they operate. . .none of our people will eat the meat from those areas once the oil and gas companies move in, in a big way, and everybody knows about the H₂S [sour natural gas]. Everybody just worries that it is contaminated [34, p.694].

They spoil it. They spoil the berries, and they spoil our water there. They spoil our fishing. You spoil everything! You really kill the moose, I said, "You get the hell out of here, because I don't want you here" [34, p.692].

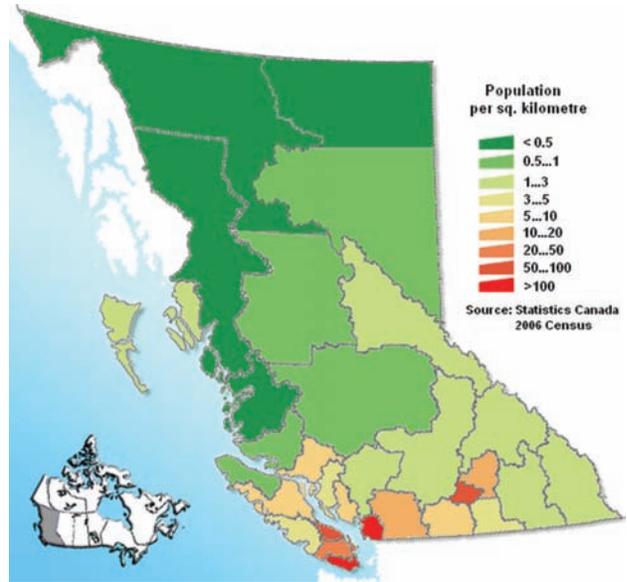


FIGURE 20. Map of British Columbia population density (Source: https://en.wikipedia.org/wiki/Demographics_of_British_Columbia#/media/File:British_Columbia_2006_population_density.PNG)

One aspect that is rarely acknowledged is the impact of multiple developments in a small region. Figure 8 demonstrates the extent of the loss of unaltered lands in the Peace:

The death of a 1,000 cuts, we are experiencing. . . because oil and gas has their mandate, and their planning process, forestry has their mandate and planning process. All of these different planning processes, independently working in their silos. . .separate from each other, with nobody overlooking the whole process, and definitely nobody managing the impacts of those interactions on treaty rights and health of the First Nations people [34, p.696].

A last perspective from Indigenous EJ involves the ability of a culture to persist. For Indigenous peoples, one of the most important considerations is their children:

When I think the level of development. . .our children are seeing it, and they are scared. . .What 11 year old should have to worry about having clean water or clean air [34, p.695]?

Finally, there is the lens of Indigenous sovereignty. Indigenous sovereignty posits that Indigenous peoples should legally be treated as sovereign nations, with rights to manage their own governments, communities, land, and natural resources. This could be the case in the Peace. While the Nations signed Treaty No. 8 agreeing to share their lands,

in the context of their Treaty rights, the Nations' traditions, customs, and traditional seasonal round relating to hunting, trapping, fishing, and gathering throughout their territory [56] were, in a meaningful way, guaranteed forever [40]; that "they would be as free to hunt and fish after the treaty as they would be if they never entered into it," because "the Treaty would not lead to 'forced interference with their mode of life'" [57]. Court cases have determined, for example, it is unacceptable to simply tell a First Nation to "hunt elsewhere" [40]. Examining the Peace from the perspective of Indigenous sovereignty, while it is clear that Indigenous peoples' rights have been ignored and possibly abrogated, they perhaps do have claim to, and immense need for, the legal ability to govern much of their lives themselves.

CONCLUSION

As with any EJ case study, the consequences of the injustice are profound for the people who bear the burden. The question remains, however, as to what decisions a society will permit their government to take, whether from ignorance or indifference, that perpetuates environmental injustice for a vulnerable few in a trade-off for the benefit of the more powerful many.

CASE STUDY QUESTIONS

1. Bentham's philosophy of Utilitarianism, at its most basic, argues for the greatest good for the greatest number. In other words, it could be read to argue for the tyranny of the majority. How does society reconcile the needs of the majority with meeting the needs of smaller groups? This concern might also be considered within the context of power. How does society ensure that those without power (political, economic) be included in decisions that affect them? How can their rights and needs be meaningfully recognized and addressed by those with power (or by those who monitor those with power, i.e., voting citizens)?
2. The world's Indigenous peoples strive to retain their unique cultures, spiritualities, languages, and traditional means of subsistence. For most, this requires access to the functional ecosystems that the cultures are embedded within. However,

protecting these ecosystems and these cultures would mean vastly restricting conventional development of most nonrenewable and renewable resources, as currently practiced. Is it reasonable to expect modern industrial society to give up or limit access to these resources, upon which *their* cultures depend, in exchange for allowing Indigenous peoples to continue their traditional practices? Are there alternatives that could be considered?

3. Do you think the theories of place-based and Indigenous environmental justice add to the theories of race-based environmental justice? How? How do the different theories expand opportunities to address environmental injustices?
4. What are the differences in the perspectives of the Indigenous peoples, as presented in this case study, from your cultural perspectives? Are there points of agreement?

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COMPETING INTERESTS

The author has declared that no competing interests exist.

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APPENDIX 1. SELECTED PASSAGES OF TREATY NO. 8 AND COMMISSIONER INTERPRETATIONS

ARTICLES OF A TREATY made and concluded at the several dates mentioned therein, in the year of Our Lord one thousand eight hundred and ninety-nine, between Her most Gracious Majesty the Queen of Great Britain and Ireland, by Her Commissioners the Honourable David Laird, of Winnipeg, Manitoba, Indian Commissioner for the said Province and the Northwest Territories; James Andrew Joseph McKenna, of Ottawa, Ontario, Esquire, and the Honourable James Hamilton Ross, of Regina, in the Northwest Territories, of the one part; and the Cree, Beaver, Chipewyan and other Indians, inhabitants of the territory within the limits hereinafter defined and described, by their Chiefs and Headmen . . .

AND WHEREAS, the said Indians have been notified and informed by Her Majesty's said Commission that it is Her desire to open for settlement, immigration, trade, travel, mining, lumbering and such other purposes as to Her Majesty may seem meet, a tract of country bounded and described as hereinafter mentioned, and to obtain the consent thereto of Her Indian subjects inhabiting the said tract, and to make a treaty, and arrange with them, so that there may be peace and good will between them and Her Majesty's other subjects, and that Her Indian people may know and be assured of what allowances they are to count upon and receive from Her Majesty's bounty and benevolence.

. . .the said Indians DO HEREBY CEDE, RELEASE, SURRENDER AND YIELD UP to the Government of the Dominion of Canada, for Her Majesty the Queen and Her successors forever, all their rights, titles and privileges whatsoever, to the lands included within the following limits. . .

And Her Majesty the Queen HEREBY AGREES with the said Indians that they shall have right to pursue their usual vocations of hunting, trapping and fishing throughout the tract surrendered as heretofore described, subject to such regulations as may from time to time be made by the Government of the country, acting under the authority of Her Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading or other purposes.

And Her Majesty the Queen hereby agrees and undertakes to lay aside reserves for such bands as desire reserves, the same not to exceed in all one square mile for each family of five for such number of families as may elect to reside on reserves, or in that proportion for larger or smaller families; and for such families or individual Indians as may prefer to live apart from band reserves, Her Majesty undertakes to provide land in severalty to the extent of 160 acres to each Indian, the land to be conveyed with a proviso as to non-alienation without the consent of the Governor General in Council of Canada, . . .

It is further agreed between Her Majesty and Her said Indian subjects that such portions of the reserves and lands above indicated as may at any time be required for public works, buildings, railways, or roads of whatsoever nature may be appropriated for that purpose by Her Majesty's Government of the Dominion of Canada, due

compensation being made to the Indians for the value of any improvements thereon, and an equivalent in land, money or other consideration for the area of the reserve so appropriated.

Report of Commissioners for Treaty No. 8

WINNIPEG, MANITOBA, 22nd September, 1899.

The Honourable
CLIFFORD SIFTON,
Superintendent General of Indian Affairs,
Ottawa.

SIR, — We have the honour to transmit herewith the treaty which, under the Commission issued to us on the 5th day of April last, we have made with the Indians of the provisional district of Athabasca and parts of the country adjacent thereto, as described in the treaty and shown on the map attached.

Our chief difficulty was the apprehension that the hunting and fishing privileges were to be curtailed. The provision in the treaty under which ammunition and twine is to be furnished went far in the direction of quieting the fears of the Indians, for they admitted that it would be unreasonable to furnish the means of hunting and fishing if laws were to be enacted which would make hunting and fishing so restricted as to render it impossible to make a livelihood by such pursuits. But over and above the provision, we had to solemnly assure them that only such laws as to hunting and fishing as were in the interest of the Indians and were found necessary in order to protect the fish and fur-bearing animals would be made, and that they would be as free to hunt and fish after the treaty as they would be if they never entered into it.

We assured them that the treaty would not lead to any forced interference with their mode of life, that it did not open the way to the imposition of any tax, and that there was no fear of enforced military service. We showed them that, whether treaty was made or not, they were subject to the law, bound to obey it, and liable to punishment for any infringements of it. We pointed out that the law was designed for the protection of all, and must be respected by all the inhabitants of the country, irrespective of colour or origin; and that, in requiring them to live at peace with white men who came into the country, and not to molest them in person or in property, it only

required them to do what white men were required to do as to the Indians.

. . . it is safe to say that so long as the fur-bearing animals remain, the great bulk of the Indians will continue to hunt and to trap.

Indeed, the Indians were generally averse to being placed on reserves. It would have been impossible to have made a treaty if we had not assured them that there was no intention of confining them to reserves. We had to very clearly explain to them that the provision for reserves and allotments of land were made for their protection, and to secure

to them in perpetuity a fair portion of the land ceded, in the event of settlement advancing.

Your obedient servants,
DAVID LAIRD,
J. H. ROSS,
J. A. J. McKENNA
Indian Treaty Commissioners.

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