

Re-scaling Governance: First Nations and the Challenge of Shale Gas Development in
British Columbia

by

Mathew Murray
B.Sc., University of Victoria, 2009

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Supervisory Committee

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Supervisory Committee

Dr. Karena Shaw, School of Environmental Studies
Supervisor

Dr. James Rowe, School of Environmental Studies
Departmental Member

Abstract

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Supervisor

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Departmental Member

The government of British Columbia faces a host of challenges as it attempts to establish a liquefied natural gas export industry and reignite unconventional shale gas production in northeast BC. Not only must it contend with a competitive and saturated global marketplace, but it must also address conflict with Treaty 8 First Nations whose treaty rights and traditional territories were impacted by early development. Shale gas impacts are intensely local, but First Nations have struggled to gain meaningful influence in colonial decision-making processes to ensure development decisions respect community values and authority. This research, conducted in partnership with Fort Nelson First Nation, explores the challenges and opportunities faced by the Nation in their efforts to reshape governance of the shale gas industry in their territory to address its environmental impacts. The research is situated within a review of multiple literatures including political economy, Indigenous governance, and critical studies of natural resource governance, social conflict and co-management in Indigenous-settler contexts. Through interviews and participant observation with the Fort Nelson First Nation, the thesis documents how those involved in shale gas governance at the local level perceive existing processes, and investigates under what conditions a more localized governance might resolve shale gas conflict in northeast BC. It develops an argument that shale gas governance must be rescaled to address landscape scale impacts and enhance the authority of local First Nations interests and knowledge. While collaborative governance reforms like co-management may not wholly eliminate deeply seated colonial authority, they can be effective and empower local First Nations communities under certain conditions. However, this case poses a unique set of context-specific challenges to governance reform, which the Fort Nelson First Nation are confronting as they work towards their governance and land use goals for their traditional territory. As the Nation

continues to move forward, it is uncertain how they will negotiate the non-renewable industry's political economy, and the current pro-development shale gas politics in BC. As such, this case offers a rare lens into local community experience with this relatively new and contentious global energy industry.

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List of Acronyms

CEA – Cumulative effects assessment

CIMP – Cumulative Impact Monitoring Program

CMC – Carbon Management Canada

CPA – Consultation Protocol Agreement

CRB – Central Region Board

CSSP – Clayoquot Sound Scientific Panel

EAB – Environmental Appeal Board

EBM – Ecosystem-based management

FLNRO – Ministry of Forests, Lands, and Natural Resource Operations

FNFN – Fort Nelson First Nation

FPIC – Free, prior, and informed consent

LNG – Liquefied natural gas

LNGESI – Liquefied Natural Gas Environmental Stewardship Initiative

MEM – Ministry of Energy and Mines

MVRMA – Mackenzie Valley Resource Management Act

NRRM – Northern Rockies Regional Municipality

NWT – Northwest Territories

OGC – Oil and Gas Commission

PRRD – Peace River Regional District

TUS – Traditional Use Study

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Chapter 1

1. Introduction

Treaty 8 First Nations and settler communities in northeast British Columbia witnessed a period of dramatic landscape change following rapid expansion in oil and gas leases for unconventional shale gas exploration and production beginning in the mid 2000's. In the traditional territory of the Fort Nelson First Nation (FNFN), the sudden energy boom manifested in unprecedented increases in seismic testing, well starts, water use, transportation and other oil and gas infrastructure development. Although the community is familiar with natural resource extraction, FNFN members describe a sense of displacement and alienation from the land at a level not before experienced. This is illustrative of the cognitive effect described by Jacquet & Stedman (2013) and others (Brasier et al., 2013; Devine-Wright & Howes, 2010; Stedman et al., 2012) that often occurs when resource development projects degrade spaces valued as psychologically or emotionally restorative.

The FNFN are a Dene and Cree community whose traditional territory overlays three of four prominent unconventional gas plays in northeast BC: the Horn River and Liard Basins, and the Cordova Embayment (Figure 1).¹ As a Treaty 8 First Nation since 1910, the FNFN hold constitutionally affirmed treaty rights to hunt, trap, and fish in their territory and were guaranteed that the arrival of settlers would not “lead to any forced interference with their mode of life” (Laird et al., 1899). However, Usher et al. (1992: 122) note that in treaty-making, “neither party anticipated the full scope and effect of industrial development.” Today, with the land altered by decades of resource development, it is increasingly difficult for FNFN members to exercise treaty rights, maintain critical community-homeland relationships, and steward the environment for future generations.

¹ The word ‘play’ is an industry term used to reference a shale gas deposit or source.

² Unconventional gas development in FNFN territory is the focus of this thesis, but the effects of other resource industries on Treaty 8 First Nations in the Fort St. John area are documented (Booth & Muir,

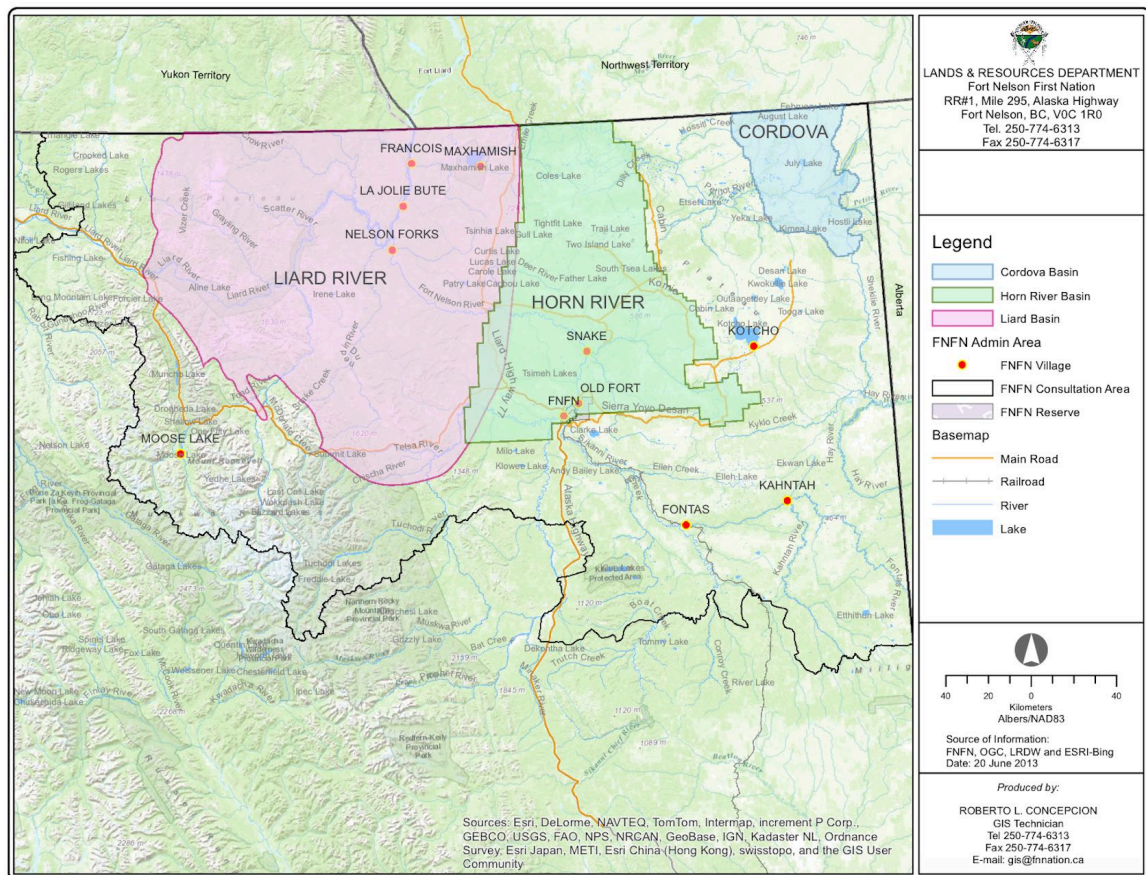


Figure 1: Shale gas plays in FNFN territory
Source: FNFN Lands Department

The shale gas zones of northeast BC are distant from southern political and economic centres of power. However, in the scheme of the province's natural resource-based economy, and cultural and ecological identity, the region is hugely significant. It lies at the headwaters of the largest freshwater watershed in Canada, the Mackenzie River Basin, and its rivers and boreal ecosystems support diverse species including woodland caribou, grizzly bear and other large carnivores (Laliberte & Ripple, 2004). These ecosystems are also critical to the land-based traditional practices, food security, and culture of multiple Treaty 8 communities. In light of the historic and present role of resource development in the region, which includes oil and gas, mining, forestry, wind and hydroelectric power, residents view their homelands as vital to the province's

broader political and economic machine.² However, the FNFN and other Treaty 8 communities feel their interests and values are seldom represented in decisions authorizing resource extraction (Booth & Skelton, 2011a, 2011c; Garvie & Shaw, 2014). The FNFN are consulted by the BC Oil and Gas Commission (OGC) on shale gas projects in their territory, but they have been unable to produce satisfactory outcomes via this mechanism (Garvie & Shaw, 2014).

Unconventional shale gas expansion in northeast BC occurred simultaneously with the industry's growth across North America in the mid-2000s. Unconventional fossil fuel extraction requires more complex and intensive methods than conventional sources. Advancements in these methods, like horizontal drilling and hydraulic fracturing techniques, combined with favourable economic and policy conditions, led to huge shifts towards unconventional fossil fuel energy investment in large parts of the United States and select regions in Canada (Willow, 2014).³ Other countries observed similar shifts: significant shale gas deposits exist on all continents (Kuuskraa et al., 2011; Boyer et al., 2011). Several national and sub-national governments have embraced the “shale gas revolution” (Boersma & Johnson, 2012; Parfitt, 2010), even shifting policies to reduce barriers to its expansion (Jacoby et al., 2011), seeing it as a pathway towards energy self-sufficiency and economic growth (Stephenson & Shaw, 2013). Across North America, the industry quickly transformed rural and suburban areas in British Columbia, Alberta, Pennsylvania, Colorado, Ohio, and Texas, among others. Recently, however, the combination of new shale discoveries, surplus American production, and low oil prices, has reduced natural gas prices drastically. Development in BC is expensive compared to other regions, and in FNFN territory, many companies have stalled or divested from projects entirely (Garvie et al., 2014).^{4, 5} Still, under more favourable economic

² Unconventional gas development in FNFN territory is the focus of this thesis, but the effects of other resource industries on Treaty 8 First Nations in the Fort St. John area are documented (Booth & Muir, 2013; Booth & Skelton, 2011a, 2011b, 2011c).

³ Horizontal drilling and hydraulic fracturing are the techniques used by proponents to access and extract deep and previously inaccessible shale gas resources. Hydraulic fracturing, or “fracking”, uses explosive charges and pressurized injections of water, sand, and chemicals to create fissures in shale deposits, allowing trapped gas to flow to the surface.

⁴ BC shale gas (especially from Horn River Basin sources) requires more processing and purification because it contains high levels of carbon dioxide (Garvie, 2013). As such, BC LNG projects are more expensive and

conditions, northeast BC has vast shale deposits with significant market potential (BC MNGD, 2014). While progress has been slow, the provincial government is aggressively trying to establish a liquefied natural gas (LNG) export sector (BC MEM, 2012) to free these resources from stifled domestic markets.

Governments seeking to expand unconventional gas industries face significant governance challenges, and many of these are manifesting in FNFN territory and elsewhere in northeast BC. Despite its growth, the industry has encountered significant public resistance at the local level (Stedman et al., 2012; Willow et al., 2014). The extensive infrastructure required to sustain shale gas production can transform and industrialize rural landscapes. As Stedman et al. (2012: 391) state, “these new forms of energy development carry more potential to change local economies, ecology, and social relations than any other phenomenon seen in recent (and not so recent) history.”

There is significant scientific evidence that shale gas development impacts the environment in novel and potentially profound ways.⁶ In FNFN territory, impacts take several forms that affect hunting, trapping, and fishing practices. The linear disturbance from oil and gas infrastructure (including roads, pipelines, well sites, etc.) has destroyed important habitat and altered predator-prey dynamics causing reductions in food animal populations like caribou (Bergerud & Elliot, 1986; James & Stuart-Smith, 2000; Johnson et al., 2015). Some trap lines, rivers, and seasonal harvesting locations are either no longer accessible or abandoned by community members due to the intensity of surrounding development (Chapman, 2013). Contamination is viewed as a significant risk among local land users, and wider public interest groups who view the industry as intrusive and polluting. Numerous empirical and risk assessment studies support these concerns, noting the potential for water contamination (Fontenot et al., 2013; Holzman,

less viable than other jurisdictions, because gas commodities must be sold at higher prices in order for producers to break even (Nikiforuk, 2015).

⁵ No new shale gas tenures were purchased in the Liard Basin between 2011-2013, and just one in the Horn River Basin since 2012 (MNGD, 2014). More telling evidence is that capital expenditures and drilling rates have been declining steadily in FNFN territory (Adams, 2014). The availability of NGLs and condensates in the Montney play, however, has helped to offset these effects, so industry is still somewhat active in southern Treaty 8 First Nations territories (Adams, 2014).

⁶ In this chapter I only briefly describe the impacts, but I report on them again chapters two and three.

2011; Jackson et al., 2013; Osborn et al., 2011) and other environmental and human health threats in shale gas contexts (Adgate et al., 2014; McKenzie et al., 2012; Shonkoff et al., 2014).

Many jurisdictions have not developed comprehensive strategies required to manage or mitigate these impacts (Jacquet & Stedman, 2013). In BC, for example, the oil and gas regulatory framework is widely criticized for inadequately regulating greenhouse gas emissions (Horne, 2011), water quality and water use (Parfitt, 2011; Campbell and Horne, 2011), and cumulative effects (BC Auditor General, 2015). Regions hosting development often lack baseline information or adequate environmental monitoring regimes. In general, the state of knowledge is not adequate to detect and avoid potentially irreversible impacts (CCA, 2014). As such, First Nations and other residents often lack access to basic information (Garvie & Shaw, 2014; Willow & Wylie, 2014), and find themselves excluded from impenetrable and unresponsive bureaucratic governance systems (Wylie & Albright, 2014). With limited opportunities to influence development patterns, communities are subjected to the agendas of extractive corporations, themselves influenced by distant shareholders and global markets. As development expanded across northeast BC, recent research suggests its environmental and social costs were disproportionately borne by local First Nations and other residents whose lands and resources were dispossessed and degraded (Garvie et al., 2014; Garvie & Shaw, 2014). Such an outcome is common in the extensive literature on environmental and social injustice cases involving resource development and conflict in ‘local-global’ and Indigenous-settler settings.⁷

In attempting to advance the industry, the provincial government must resolve what has become a site of significant political and social conflict in northeast BC, where multiple Treaty 8 First Nations continue to challenge the Province’s shale gas-LNG agenda

⁷ Additionally, Willow’s (2014) research shows that shale gas development in North America is actually creating new “landscapes of disempowerment and vulnerability” based on its location adjacent to white middle-class communities. This feature transcends the race and class characteristics that are often found in environmental justice literature on topics like white privilege, where the chosen sites for impactful industrial infrastructure are often located among more impoverished, marginalized communities (Mascarenhas, 2012).

(Hume, 2015). Communities are resisting on multiple grounds: many feel the industry poses a very real threat to their livelihoods and is not adequately regulated, nor are First Nations perspectives, interests, and concerns reflected in decision-making. The FNFN have repeatedly called on the provincial government to work with them to address pervasive environmental governance and management issues.

In research on social conflict in extractive landscapes, Perreault (2006: 151) defines governance as “the legal frameworks and institutional arrangements through which decisions about natural resources are taken, and the management practices by which those decisions are enacted.” In this thesis, I explore the FNFN’s response to the governance of shale gas in their territory, and in so doing uncover key tensions emerging as a consequence of some specific failures in current governance processes that impact local communities and produce social conflict. Recent literature on the rapid ascent of unconventional shale gas suggests governance needs to be rethought given the industry’s novel and extensive local impacts, and the various local sites of opposition and mobilization that have arisen against it (Brasier et al., 2015; Stedman et al., 2012; Stephenson & Shaw, 2013; A. J. Willow et al., 2014). It is critical to add to these conversations with intimate narratives of real *on the ground* community experience with the industry. With this objective, this research follows others in political ecology using mixed methodologies to examine local responses to shale gas development to reveal the environmental, social, cultural, and political implications of this new industry as it plays out across space and time (Willow and Wylie, 2014: 232; Andrews & McCarthy, 2014; Hudgins & Poole, 2014; Poole & Hudgins, 2014; Willow, 2014; Willow et al., 2014).

In the context of Indigenous communities’ experiences with extractive industries in South America, Bebbington (2011: 25) argues, “social conflict is a necessary precursor for socially and environmentally progressive institutional change.” Understanding why conflict arose and continues to persist in northeast BC is critical to shaping progressive and lasting solutions. A primary goal of this research is to support FNFN efforts towards the development of inclusive and locally empowering governance processes more capable of responding to emergent challenges and producing just and equitable outcomes.

The following section provides background project information, outlines primary research questions, and the methods employed to investigate them.

2. Methodology

Project background and research questions

This research is part of a broader investigative project that set out to explore public resistance to new energy infrastructure in BC and beyond. With initial funding from Carbon Management Canada (CMC), this research (led by Dr. Karena Shaw) became focused on shale gas development in northeast BC when it became obvious that this industry was likely to dominate energy and political discourse in BC for the foreseeable future (based on the Liberal government's commitment to shale gas and LNG expansion). Conflict and resistance is particularly strong among, though not limited to, Treaty 8 First Nations communities like the FNFN, who by virtue of the constitutional recognition of Aboriginal and Treaty rights, are the only group consistently consulted by the BC Oil and Gas Commission (OGC) and provincial government on shale gas projects. From a legal and constitutional perspective, the purpose of First Nations consultation is to identify whether a Crown decision may infringe treaty rights, and create dialogue around accommodation and infringement avoidance (Woodward, 2015). Following Garvie's (2013) research on the OGC's First Nations consultation process in northeast BC, uncovering why, despite consultation, shale gas impacts and treaty rights issues continue to be a source of conflict in Treaty 8 First Nations communities, created a need for new research. Therefore, in this thesis I set out to investigate the governance of BC's shale gas industry, following others like Ratner (2000: 4) who in writing on governance in contentious resource landscapes argues, "addressing the underlying causes of resource competition requires changing the fundamental ground rules that define *who* is involved in making resource management decisions, what *powers* these different actors exercise, and how they are held *accountable* for their decisions."

Following Ratner, investigating current conflict as a governance issue creates space to characterize the problems I observed in more nuanced ways. For example, this line of inquiry allowed me to question existing configurations of authority, and expose power imbalances and colonial tensions between First Nations and settler governments in the context of natural resource management in British Columbia. It also allowed me to discuss and situate this particular case in relation to wider patterns of resource exploitation and colonial dispossession, local-global tensions in extractive contexts, and wider literatures and topics like social and environmental justice, Indigenous sovereignty, and critical political economy.

The principal research questions examined in this thesis are:

How do those involved in shale gas governance at a local level perceive existing governance arrangements?

Under what conditions might a more localized, collaborative governance framework like co-management resolve conflict over shale gas development in northeast BC?

There is an immediate need to investigate these questions. Recent studies show that shale gas and other industrial development is already negatively affecting ecosystems in northeast BC (Johnson et al., 2015), while Garvie & Shaw (2014) argue that social conflict in FNFN and wider Treaty 8 territory is linked to flawed governance.

Understanding how local people involved in shale gas decision-making processes perceive current governance arrangements is critical to identifying their strengths and weaknesses, and for locating potential governance fixes that may contribute to a more ecologically and socially resilient framework. The outcomes of this research could benefit multiple groups. For example, it could provide insight to the FNFN and other Treaty 8 First Nations in negotiation or seeking to negotiate a new governance regime to address the shale gas industry's environmental impacts, and other challenges; to local communities and municipalities in northeast BC who also share in the environmental and socio-economic challenges of boom and bust development; to government and OGC staff

involved in First Nations consultation and decision-making; to the BC Liberals, whose long-term shale gas-LNG ambitions require that upstream development and governance conditions are socially acceptable; and industry, who under more favourable economic conditions seek to access BC's significant shale resources, but must do so under socially acceptable conditions. This research could also appeal to academics and practitioners interested in the implications of shale gas development, and the possibilities of collaborative governance arrangements in the context of this new and controversial industry.

Fieldwork

To investigate these questions and examine the experience of local Treaty 8 communities on the ground in northeast BC, we felt a substantial field component would be necessary. We also felt that because this research involves chronicling the sensitive experiences of First Nations in a colonial context, it demanded a deeper and more attentive level of engagement in order to observe and begin to understand the power dynamics and other challenges at hand. Therefore, building on an existing relationship between our research group and the Lands Department of Fort Nelson First Nation, the FNFN's experience within BC's oil and gas governance framework became the subject of this research. With three shale basins in their territory, they have observed a significant pace and scale of activity to date, which they expect to increase substantially if an LNG industry is established in BC. The Lands Department has responded by expanding their capacity and committing significant resources to participate in governance processes and challenge outcomes that threaten the ecological and cultural health of their territory, and that fail to respect the vision and standards set by their membership. Based on their familiarity with the BC Oil and Gas Commission's (OGC) First Nations consultation process and the wider governance framework it is situated within, their participation in this research provides an acute lens into these processes.

Primary data was collected over six weeks in Fort Nelson in May and June 2013; a subsequent additional shorter trip was made in April 2014. The primary methods of data

collection were semi-structured interviews and participant observation. These are common qualitative methods in case study and ethnographic research (Atkinson & Hammersley, 1994; Tedlock, 1991). In Fort Nelson, I lived in town and spent the majority of days working on reserve in the FNFN lands office. In addition to conducting the research documented in this thesis, I also contributed research support to help the lands department with community initiatives ongoing at the time. Specifically, I undertook a comprehensive review of alternative governance models for water and land use that could apply to northeast BC. The Nation was interested in learning more about the co-management models and regional governance bodies in the Sahtu and Gwich'in settlement regions of the Northwest Territories. This work occurred in addition to thesis-related tasks, however, their interest early on in such alternative governance arrangements like co-management influenced the focus of my third chapter and the thesis as a whole.

Interviews

In total, I conducted nine interviews with eleven individuals. Seven were conducted over six weeks in Fort Nelson, the additional two interviews occurred in Victoria and Vancouver shortly after returning from the field. Interviewees were selected based on their intimate knowledge of the shale gas industry and BC's oil and gas governance framework. All interviewees could be characterized as individuals who are actively involved in, directly affected by, or due to their role in the region having unique perspective on the current governance framework. I began reaching out to potential participants roughly three weeks into my time in Fort Nelson. I delayed in order to assess and refine initial research questions, develop relationships and communicate with the lands director and other individuals. The process of selecting participants occurred more naturally this way, as it became apparent over time who would be best suited to respond to interview questions. Lands staff also made suggestions and provided contact information for individuals in some cases. This selection process could be characterized as using both targeted sampling and the snowball method where individuals are sought based on their experience and where informants suggest other participants (Noy, 2008).

Interviewees included the FNFN lands director, two members of the FNFN's Chief and Council, one FNFN community member and prior lands director, two FNFN lands department staff members, two FNFN consultants, two local government employees (one from the Northern Rockies Regional Municipality, and one from the Peace River Regional District), and one BC Oil and Gas Commission employee. I hoped to incorporate the industry and BC government perspective and reached out to multiple provincial government employees and industry representatives. However, industry representatives did not reply to my queries, and while I held dialogue with government agency contacts, they ultimately refused to participate. My research is approved by the University of Victoria's Human Ethics Research Board, and supported by the Fort Nelson First Nation Lands Department and Chief and Council, with whom I have an information-sharing agreement.

With permission, all interviews were recorded, transcribed, and coded thematically using NVivo 10 qualitative data analysis software. The transcribed interviews totalled roughly 150 pages of single-spaced text. Themes were established based on the information and perspective shared by informants. The following are examples of common themes that emerged: authority, cumulative impacts, planning, pace and scale, the OGC, governance processes, and information. I was as meticulous as possible during the initial coding, creating 55 themes in total; a single paragraph could contain several different themes. For example, a paragraph could be coded under "water" and "authority" and "government processes", where an informant was discussing the matter of authority in relation to water governance. Organizing themes in NVivo allowed me to easily see the "big picture," as in how often all themes occurred across interviews. The themes that emerged most consistently in relation to the overall research questions became the foundations of chapters two and three. In these chapters, I use direct quotes where appropriate. This was important because for many informants, interview questions invoked responses that were emotional, extensive and often multi-faceted. Using direct quotes helped preserve the integrity and intent of their stories and perspective. While this research is informed by the insights of individuals living or working locally, the final product is of my own making.

Therefore all conclusions are my own and may not be shared by interviewees, the FNFN, local government, or the BC Oil and Gas Commission.

Participant observation

DeWalt and DeWalt (2010: 2) define participant observation as “a way to collect data in naturalistic settings by ethnographers who observe and/or take part in the common and uncommon activities of the people being studied.” In this research, participant observation enabled a more open and collaborative process with the FNFN’s research coordinators and lands office. As a practice of observing and listening (Sanjek, 1990b) it elicited a robust contextualization and more intimate engagement with the Nation and its membership. It also allowed for the continual reassessment of the initial research questions; and facilitated a more constructive research pathway that allowed me to check my personal standpoint and theoretical assumptions with a more nuanced understanding of the story unfolding on the ground (Wodak & Meyer, 2001).

The six weeks in Fort Nelson were spent participating in and observing day-to-day activities in the FNFN lands department, at community meetings and events, and in meetings between the FNFN, OGC, and other government agencies related to shale gas governance, consultation, regulation and process. This experience was invaluable in a number of ways. As a researcher, it enabled a much more in depth understanding of the community’s experience as participants in the governance framework, and it exposed a number of important issues and tensions that may not have been visible from an outside perspective. It enabled close communication with the lands director and band leadership, and helped ensure research questions were relevant. As a settler Canadian and outsider, spending time in the community resulted in building relationships with staff and FNFN members. It allowed me to view the industry from their perspective, situate information shared by informants, and identify my own biases and assumptions. From a distance, one might assume the community’s response to such a contentious industry would be entirely negative. However, on the ground and over time you notice complexity, and the real embedded challenges that remote communities face when their incomes are affixed to

modes of extraction, and “opting-out” is not a viable alternative. On the one hand, they value environmental and cultural protection, but they often lack governance authority to ensure development decisions respect these values and other local interests. A central challenge of this research was the dual task of being necessarily critical of the shale gas industry and the political economic forces that promote it, while at the same time being responsive to community context and needs.

Note taking, as a method of documenting my experience as a participant observer in Fort Nelson, became part of my daily routine. DeWalt & DeWalt (2010) and Kawulich (2005) describe field notes as a critical part of fieldwork; in Sanjek (1990), Clifford suggests it as means of tracking social discourse. As I observed and began to develop a more nuanced understanding of the complex scene under study, field notes became my method for recording and tracking the feelings and observations that would later influence the direction and framing of the overall thesis. Field notes were generally not taken in the present, but rather recorded later in the day as a reflection of the day’s events, a more or less coherent representation of an observed reality (Clifford, 1990: 51). Most of the specific events, conversations, and scenes that appear in my field notes are not explicitly inserted into this thesis, but these observations informed an internal process of reflection which I used to decide in what direction to take this research.

It was our expectation (and intention) from the outset that the fieldwork component would shape the eventual direction of research. A critical social research methodology asserts that research done with and for a community should be committed to community development and empowerment (Carroll, 2004). Therefore, being flexible and allowing the research to be shaped by the needs of the community was consistent with this methodology. In particular, chapter three’s focus on co-management is inspired by the ongoing negotiations between the FNFN and the provincial government over a new governance and management framework for shale gas development in their territory. As Verna St. Denis (2004: 292) suggests in Carroll’s text on critical strategies for social research, “communities without socio-political power can use social science research to support their struggle for self-determination by gaining control of information that can

influence decisions about their lives.” I hope this research exposes challenges facing Treaty 8 First Nations and in some way helps advance FNFN efforts towards greater democratization and empowerment as they strive to regain control over their lands and livelihoods.

Thesis structure

This thesis is designed as a manuscript thesis. Chapters two and three present the results of my fieldwork and the main arguments of this research, and are written as stand alone articles. In chapter two I argue that consultation is failing to produce positive outcomes for the FNFN because of key structural flaws in the oil and gas governance process that limit their participation and overall agency. Interviewee perceptions describe how the permit-by-permit scale of decision-making and the centralization of authority exclude Treaty 8 First Nations from decisions, thereby marginalizing their interests while advancing outside political and economic agendas. Governance reform must therefore renegotiate these forms of scale in order to create a framework that is more ecologically resilient, inclusive and accountable to local interests and First Nations rights and sovereignty.

In chapter three I present the various tools and principles that informants ascribed to a more effective governance framework, and contemplate co-management’s potential as a means of delivering these outcomes. I argue that while co-management is often viewed as the default resolution to First Nations-state resource conflict in Canada, it must always be considered in the context of site-specific issues and challenges. The FNFN case presents both promise and uncertainty: in many ways it appears co-management *could* work, yet I argue that several distinctive challenges—specific to non-renewable resource extraction, the political economy of unconventional shale gas, and the current industry-supportive political climate in BC—must be considered as they will likely influence whatever outcomes emerge from the FNFN case.

In chapter four I summarize the overall findings of my thesis and discuss the contribution of this research to the academic community, its limitations, as well as unresolved questions, tensions, and opportunities for new investigative forays into an industry that appears will be a topic of academic thought for years to come.

3. Critical Context

The remainder of the chapter provides additional background information to introduce and situate some of the thesis' core topics in a deeper context. First, I describe Treaty 8: its historical underpinnings, the rights and relationship it established between First Nations inhabitants and the Canadian settler state, and their modern expression and interpretation. To follow is a brief narrative of the rise of the shale gas industry in northeast BC and the FNFN's actions in relation the new industry. The final section engages wider literatures on alternative environmental governance, and co-management in Canada, to ground the FNFN case within the broader shift towards new deliberative and participatory decision-making processes.

3.1 The making of Treaty 8, treaty rights and the treaty relationship

The signing of Treaty 8 established a new relationship between northeast BC First Nations and the settler state. It promised First Nations signatories that they would:

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

During negotiations, additional commitments were made to First Nations by Treaty 8 Commissioners who assured them that continuity in these practices was implicit, 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” (Laird et al., 1899).

Treaty 8 encompasses the northern portions of BC, Alberta, and Saskatchewan, and southern Northwest Territories and the Yukon (Figure 2). The original signatories of Treaty 8 in 1899 included Crown representatives and various First Nations in the Lesser Slave Lake area of Alberta; the Fort Nelson First Nation signed in 1910 (Fumoleau, 2004). Treaty-making became a pressing need for the federal government following the explosion of settler populations in western Canada in the 1890s (Barman, 2007). In the interest of expanding settlement westward, the colonial government advertised that the remote Rocky Mountain region of northern British Columbia had significant mining potential, in order to attract settlers to migrate and take up land. As Ray (1999: 20) quotes from 1897's *Official Handbook of Information Relating to the Dominion of Canada* in reference to the region: "There are large areas still open to the poor prospector, and there are numerous openings to the capitalist." The absence of colonial concepts like private property in local Indigenous societies appeared to justify the taking up of newly settled lands in northern BC (Arnett, 1999). However, the combination of increasing conflict between First Nations and new settlers, and the discovery of vast mineral deposits, provided impetus for the government to seek treaty settlements with local First Nations (Ray, 1999). As such, the need for Treaty 8 in the first place was tied to the needs and imminence of natural resource exploitation, specifically the Yukon Gold Rush (Usher et al., 1992).⁸ It marked the beginning of a period of significant change for First Nations in northeast BC.

⁸ Similarly, the discovery of oil in Norman Wells in the Northwest Territories was the impetus for Treaty 11 (Usher et al., 1992).

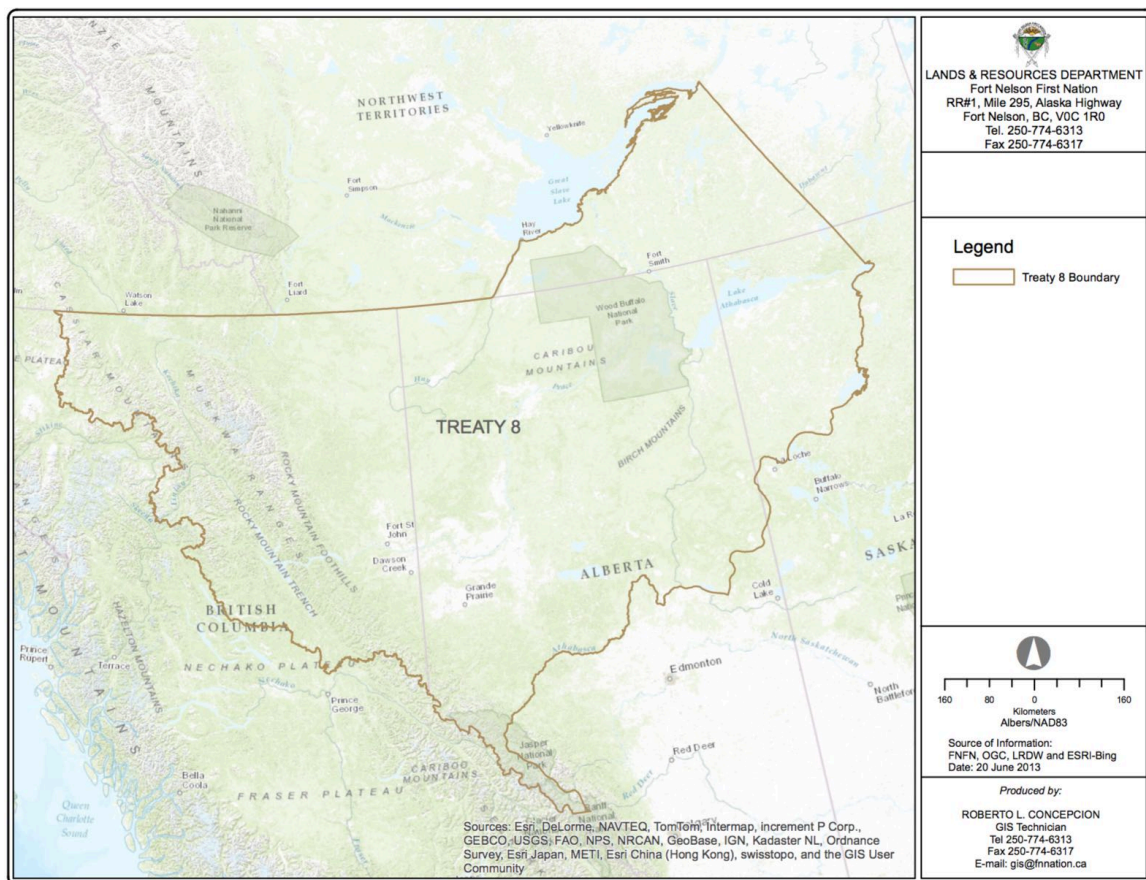


Figure 2: Map showing boundaries of Treaty 8

Source: FNFN Lands Department

Since the signing of treaty, Treaty 8 First Nations have observed booms and busts of industrial logging, mining, and oil and gas activities in their traditional territories. The construction of the Alaska Highway in 1942 and the growth of towns like Fort Nelson and Fort St. John extended mainstream Euro-Canadian political and economic systems into remote areas, introducing wage economies and new modes of living to mostly land-based communities (Nadasdy, 2005).⁹ For the Fort Nelson First Nation (FNFN), members who had lived seasonally dispersed and mobile lives across the landscape were forced to centralize, relocated through Canada's *Indian Act* reserve system; many were later subjected to the residential school experience. Amidst a new colonial social reality, their traditional lands were increasingly settled, cultivated for agriculture, and altered by natural resource extraction. To this day, however, the maintenance of treaty right

⁹ Ratner (2000) notes that the construction of new transportation infrastructure often accelerates the commercialization of rural landscapes and the modernization of non-capitalist economies.

practices and other customs, are integral to cultural, social, and spiritual needs of First Nations communities (Mascarenhas, 2012).

The entrenchment of treaty rights in section 35(1) of the *Constitution Act of 1982* further protected these rights for modern day First Nations in Canada. It states, “The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.” Since this affirmation, the expression of Aboriginal and treaty rights in case law in Canada has bestowed various duties upon the Crown with respect to First Nations people. Foremost is the Crown’s fiduciary duty and duty act honourably. This means that where rights may be threatened by resource development authorizations or other crown decisions, government agencies are required to engage in consultation with First Nations with the intention of substantially addressing their concerns (Morellato, 2008: 69). For the purposes of this thesis, these duties establish the current consultation processes participated in by Treaty 8 First Nations. Therefore, by law, the intention of consultation, as it relates to resource development or other Crown decisions, is to identify and mitigate potential adverse impacts to First Nations treaty rights (Woodward, 2015). In BC, the OGC is charged with honourably upholding these duties in relation to shale gas development.

That Aboriginal and Treaty rights exist, and are recognized and affirmed in the *Constitution Act, 1982*, is undisputed among the interacting groups in northeast BC. However, it appears that Treaty 8 First Nations and the BC government have different conceptions of both the scope and extent of rights, in terms of the use and governance of traditional territories, and the interpretation of the treaty *relationship*.¹⁰ There seems to be relative agreement that Treaty 8 represented a political alliance of peace, friendship, and sharing, and as a compact to permit trading or other commercial activities. However, Usher et al. (1992: 122) note the treaty should be considered in its historical context, that “neither party anticipated the full scope and effect of industrial development.” Present day disagreement centres on the issue of authority, namely who holds it in regards to

¹⁰ I observed this as a critical issue in FNFN territory, but one that required a level of analysis and engagement that fell outside the scope of this thesis.

lands and resources on Treaty lands. Asch (2014) argues that for First Nations party to numbered treaties in Canada, signing did not represent the wholesale selloff of their authority over their homelands for what in return amounted to an allocation of reserve land equalling just 1-2% of their traditional territory, and other offerings like seed and agricultural implements, a small sum of money paid annually, and a reserve school. Asch (2014: 77) also notes that all indigenous groups subject to numbered treaties in Canada hold in common that the Crown asked permission to *share* the land, not transfer the authority to govern it. Yet the *legal* extinguishment of title originally written into Treaty 8 (a condition that likely bore little significance to First Nations at the time) has arguably led to the Crown's assumption of complete authority that seems to inform their general governance approach, as evidenced in this case by the contested mobilization of industry access to land and water across Treaty 8 territory. Usher et al. (1992: 122) present their reading of the treaty implications for First Nations in Canada:

The promises uttered by the Crown's representatives at every treaty ceremony, 'as long as the sun shines and rivers flow', proved hollow in view of the degradation of lands and waters that followed upon river impoundment and diversion, clear cutting, resource depletion and environmental contamination. Such were the foundation of assimilation and termination policies which persisted through to the 1960s.

At the time of signing, First Nations were assured the treaty would not interfere with their way of life (Laird et al., 1899), however, present conflict suggests a divergence between historic promises and modern realities. Booth & Skelton (2011: 688) note that "Treaty and Aboriginal rights are often ignored, abrogated or subject to court challenge to force a government to honour them." The FNFN are one of several nations insisting, and in some cases bringing forth legal challenges, that the Crown has not upheld its obligations (or acted honourably) with respect to treaty rights. In Alberta, the Beaver Lake Cree Nation (Treaty 6) is fundraising to advance its legal case alleging the Alberta government breached its treaty obligations by enabling and failing to consult, monitor, or mitigate treaty rights infringements caused by the cumulative effects of oil sands expansion (Tait & Cryderman, 2013). Similarly, the Blueberry River First Nation (Treaty 8) recently filed a lawsuit against the BC government. They argue that the cumulative effect of all past,

present and proposed resource development in their territory (including shale gas and the proposed Site C dam) has left members with nearly no traditional territory from which to practice protected cultural and economic activities, constituting a mass infringement of treaty rights (Hume, 2015). These cases are spurring new discussion (see Askew, 2015) around a legal argument asserting that the Crown's duty to consult and accommodate treaty rights is tantamount to a 'duty to conserve' the ecological conditions that make their exercise possible; as Thielmann (2010: 2) asks "Can one hunt if there is nothing to be hunted?" This is a useful consideration for my purposes, as the FNFN case represents a scenario where the Crown's application of First Nations consultation and accommodation of First Nations treaty rights is not necessarily preserving their actual *practice* on the ground. While FNFN's treaty rights are critical in that they ensure the nation has some access to shale gas decision-making, so too is creating effective environmental governance processes to allow these rights to be meaningfully exercised.

3.2 BC's shale gas industry and the Fort Nelson First Nation

In general, Treaty 8 First Nations are consulted on shale gas projects that fall within the boundaries of their traditional territories.¹¹ In Treaty 8 territory, development is occurring in four prominent shale gas plays: the Montney Trend, Cordova Embayment, the Horn River and Liard Basins. Oil and gas development is not new to the region, especially in the Fort St. John (Montney) area where conventional extraction has occurred in shallower deposits since the 1990s. Unconventional gas production, however, introduced an unprecedented pace and scale of activity, and now ninety percent of all new wells drilled in BC are targeting shale resources (MNGD, 2014).

Between 2005 and 2009, oil and gas producers aggressively pursued tenures in northeast BC, lured by the purported massive potential of BC resources, and the provincial government's commitment to shale gas development as a key tenet of its economic strategy (Adams, 2012; BC MEM, 2012; Jang, 2014). BC has reserves estimated at greater than 400 Tcf (trillion cubic feet) of marketable shale gas (Adams, 2014). The

¹¹ Garvie & Shaw (2014) provide a detailed description of OGC consultation processes for shale gas projects in Treaty 8 territory.

Montney Trend, for example, is one of the largest and most actively developed deposits in North America, offering proponents multiple forms of shale resources including gas, condensate, and natural gas liquids (BC MNGD, 2014). The province's remaining deposits lie northward in FNFN territory. The Horn River Basin contains an estimated 78 Tcf of marketable gas and has been actively developed since 2006, with numerous companies collectively drilling 376 shale gas wells (Adams, 2014). It is considered to be a high value deposit, as evidenced by the high density of oil and gas tenures sold. By 2012, for example, the FNFN Lands Department determined that 63.5% of the land base in the Horn River Basin had been leased for unconventional gas development (Parfitt & Tate, 2013). Significant leases have occurred in the Liard and Cordova plays as well. Operations in the Liard Basin have been mostly exploratory, but early results suggest its reserves could surpass the Horn River and Cordova plays combined (Vanderklippe, 2012).¹² Despite the recent decline of activity in FNFN territory, the BC Liberal government is marketing BC resources to attract global investment in LNG (BC MEM 2012; MNGD, 2014). Recent reporting suggests they are preparing to approve a major LNG export facility near Prince Rupert (Bell, 2015). If the Province approves the project, the immediate implications or timeline for upstream development in northeast BC would be unclear, especially given the project is sited in critical salmon habitat and was voted against by the local Lax Kw'alaams First Nation (Libby, 2015). Other questions concern the economic viability of these projects in BC in general (OIES, 2015). Regardless, there is an urgent need to address upstream conflict and governance issues given the potential scales of production required for LNG (Bailie, 2014).

For the FNFN, resistance to shale gas development in their territory is a response to the host of environmental and cultural impacts that accompany development, as well as a symbol of frustration with inadequate community engagement in the OGC's decision-making framework. Despite being consulted on individual permits, the FNFN have had minimal influence over development (Garvie & Shaw, 2014).¹³ Prior to signing a new

¹² In 2012, Apache Canada Ltd. announced that one of their Liard wells had recorded one of the highest resource tests in any of North America's unconventional reservoirs (MNGD, 2014).

¹³ Chapter two covers the OGC's First Nations consultation and governance processes in greater detail. See also Garvie & Shaw (2014).

consultation protocol agreement (CPA) with the OGC in 2012, the Nation was not consulted on the land tenure sales that firmly rooted the industry in their territory. The pace and scale of development that followed was unprecedented for the region.

In April 2014, a consortium of First Nations, industry, and government representatives fell upon Fort Nelson to discuss upstream shale gas and LNG topics. Guests were flown above FNFN territory to observe the extent of development, after which BC Grand Chief Stewart Phillip solemnly declared, “the economy of this province is being built on the destruction of the northeast” (Annis, 2014). Unconventional gas production requires building extensive infrastructure to access, extract, and transport the resource. In 2013 alone, the OGC authorized 2,229 oil and gas permits (including processing facilities, geophysical exploration, pipelines, roads, well sites, and water withdrawals) for numerous projects across northeast BC (BC OGC, 2014). These projects intersect ecologically and culturally important landscapes, harvesting areas, and waterways used by Treaty 8 communities for hunting, trapping, fishing, and gathering berries and medicinal plants, all elements of the “mode of life” protected under the terms of treaty (Fumoleau, 2004). Since the arrival of shale gas development, FNFN members have observed ecosystem changes in important harvesting areas across the territory (this research). These observations, for example, include reduced harvesting success and less frequent sightings of important fish and mammal species like caribou and moose, as well as abnormal tissues and growths in some harvested animals. Especially in the Horn River Basin, members report feeling alienated from key cultural places and traditional use zones like village sites, family cabins, and seasonal food gathering areas due to the density of surrounding activity.

In 2009, the FNFN expanded the capacity of their Lands Department to more assertively advocate for the ecological wellbeing of their territory. They have allocated significant resources towards various community initiatives led by the Lands Department, including a community strategic land use plan (FNFN, 2012), an internal water governance and management strategy, and an environmental monitoring program. Land staff have engaged elders and other active land users to collect traditional use information, and

organized workshops where youth are taught traditional harvesting techniques and other knowledge. Through working across generations in the community, the lands department and Chief and Council are able to engage industry with a clearer understanding of their community's vision for what is important on the land and how economic development fits in context with other values and responsibilities.

To communicate and advance this vision, the lands department and Chief and Council have consistently pressured the OGC and BC government to address the Nation's concerns, respect their values and treaty rights, and engage them in more inclusive and meaningful ways. They have applied multiple tactics to challenge and encourage the government to resolve outstanding issues. They have raised public awareness through news media (Corpuz, 2014; Gale & Lowe, 2013) and an online petition that garnered nearly 33,000 signatures (Hume, 2012), while also employing more formal means of intervention to challenge contentious decisions. For example, the FNFN have now brought forth two cases to the BC Environmental Appeal Board (EAB) to challenge the legitimacy of long-term water licenses approved in their territory. The licenses authorize proponents, Nexen and Encana in these cases, to withdraw massive freshwater volumes (for fracking) from culturally significant areas of their territory used by FNFN members.¹⁴

Until recently, despite an accumulation of such efforts over several years, the government still refused to work cooperatively with the Nation to bring forth meaningful and substantive resolutions to their concerns. However, in April 2014, the political landscape shifted when the government decided to exempt certain types of gas plants from provincial environmental assessments (Metcalf, 2014). This decision was met with swift

¹⁴ The Nexen license authorizes the withdrawal of up to 60,000 cubic metres of water per day from North Tsea Lake in the Horn River Basin, up to a maximum of 2.5 million cubic metres per year for 5 years. During a drought in August of 2012, the first year of operations under the license, Nexen, the license holder, broke the conditions of the license and withdrew significantly from North Tsea Lake to lower lake levels by thirty percent, enough of a draw down, experts testified, to have possibly caused irreversible damage to the aquatic systems and fish habitat. The Encana license includes plans to build a permanent concrete water intake into the Fort Nelson River, the FNFN's most culturally important waterway. Despite significant push back from the nation on this issue, the government of BC approved the license, and Encana has refused to change their plans.

resistance from First Nations across BC (many were gathered in Fort Nelson at the time) who immediately responded with a show of collective frustration. They demanded that the government address the concerns of impacted First Nations and threatened to stall the industry should they fail to comply (Prystupa, 2014). The incident seemed to affect the confidence of the pro-development BC Liberal government, who immediately apologized and rescinded its decision (CBC, 2014). It also represented a significant power shift for the FNFN, who now had the ear of the top levels of government, as well as the support of First Nations across BC (UBCIC, 2014; FNS, 2014). At the Nation's demand, BC Liberal Premier Christy Clark flew to Fort Nelson for a "Chief to Chief" meeting. This set in motion the current negotiations over new shale gas governance and management regimes. Past negotiations have ultimately dissipated with few results, but this time there seemed to be more intention on the part of the government.

Even the broader political discourse shifted in the months to follow, suggesting the province had prioritized improving First Nations relations with communities in northern BC. They announced the LNG Environmental Stewardship Initiative (LNGESI) in September 2014, as a forum through which to build more collaborative forms of environmental management, and "to work directly with First Nations to create a positive environmental legacy from the development of a safe and sustainable liquefied natural gas industry." (Government of BC, 2014) It is unclear what will manifest from either the FNFN's ongoing negotiations or the LNGESI. However, the pattern of resistance suggests new governance solutions are needed to confront the industry's environmental challenges and address ongoing colonial issues perpetuated by current governance processes, like where the most impacted groups are First Nations who are also the least empowered (Garvie & Shaw, 2014). The following section provides brief context intended to situate the FNFN's challenges within the governance literature, and in relation to the ongoing shift towards alternative governance processes.

3.3 Shifting governance

The FNFN are seeking governance reform for primarily two reasons: to address the novel and intensely local environmental impacts of shale gas development that threaten their treaty rights and cultural practices; and to increase their authority and voice in decisions that affect their custodial lands and resources. That current processes appear to be failing to meet these objectives is a key source of conflict. The results presented in chapter two show that the FNFN feel that their values and interests are not adequately understood or respected by distant decision-makers who are disconnected from the land and local sensitivities, and not privy to the negative implications of their decisions. Garvie (2013) argues that oil and gas governance in northeast BC to date largely reflects the government's desire to expand development. In general, the FNFN feel their concerns are marginal to the wider political and economic agendas determined to advance shale gas-LNG in BC. They believe that to resolve these issues and ensure decisions are ecologically sound and align with FNFN values, a more localized, collaborative governance process with community authority is integral.

The solutions the FNFN seek can be situated within a broader governance trend that has taken root in Indigenous-settler contexts as well as broader civil society based on principles of decentralization and collaboration. This movement is towards governance arrangements that include multiple actors in more deliberative, inclusive, and flexible decision-making processes (Gunningham, 2009). In natural resource settings, these new governance regimes challenge the paternalistic, top-down and more exclusionary nature of centralized state control in the governance and management of resources (Castro, 2008; Kearney et al., 2007). They are at least in part based on the premise that addressing complex and multi-scalar environmental problems often requires novel and collaborative solutions involving multiple scales and actors (Lemos & Agrawal, 2006). Norman et al. (2012: 53) refer to this as a shift from "government" to "governance," where non-government, often local community actors play more significant roles in decision-making and environmental management. Although varied, in that they are structured to respond to context-specific challenges and social conditions, they often entail the devolution of authority, increased citizen participation, new decision-making processes, and new community organizations (Castro, 2008; Norman et al., 2012; von der Porten & de Loë,

2013). As they are often conceived as a potential resolution to conflict or crisis where increasing local agency is viewed as a means of achieving more sustainable and socially acceptable outcomes, these new regimes highlight the dynamic social landscape within which decisions about the environment are made (Baird & Plummer, 2013).

Reviewing environmental governance literature offers several rationales for why this governance shift has arisen in modern political contexts. Agrawal & Lemos (2007), for example, view local movements towards new decentralized environmental governance in part as a response to reduced state capacities in a neoliberal policy era. Neoliberal reforms encouraging deregulation, privatization, and prescriptive tax cuts, create smaller governments with limited budgets and human resources available to enforce remaining environmental regulations, or perform other tasks like consultation with Indigenous peoples (Castree, 2008; Heynen & Robbins, 2005; Himley, 2008; Peck, 2001). Reduced capacities are detrimental to environmental protection, as is the increased motivation to accelerate the extraction of natural resources to make up for lost tax revenues and support economic growth (Agrawal & Lemos, 2007). Bridge (2013: 2) argues that neoliberal states sometimes act as “extra-economic actors” by mobilizing resources at very large scales to support production. Paradoxically, when the result is environmental degradation, states are increasingly less able or willing to address it, which creates a need that local communities often seek to fill.

Demands for governance reform are especially common in colonial contexts. The increasing global recognition of Indigenous rights, and mobilization at the community level around issues pertaining to the appropriation and use of natural resources in their territories, points to the need for more inclusive decision-making structures for ecological governance (von der Porten & de Loë, 2013; von der Porten & de Loë, 2013).¹⁵ In colonial contexts, territorial acquisition and state formation continue to have a devastating effect on the political and cultural autonomy of indigenous peoples (Lane &

¹⁵ These authors work from the premise of self-determination, arguing that collaborative governance arrangements must not view Indigenous peoples as stakeholders or equal parties, but as nations with inherent territorial rights that exist beyond those granted by the legal systems of host states; they note however, that where practiced in BC, the majority fail to uphold these principles.

Hibbard, 2005). In general, states assume ubiquitous control over resources to which Indigenous peoples assert competing claims. State authorized economic development and resource extraction has an especially negative effect on Indigenous territories and communities, who often disproportionately bear the environmental burden of development (Mascarenhas, 2012; O’Faircheallaigh, 1998, 2013b). Conflict in these settings has resulted in a proliferation of new collaborative governance arrangements, or advocacy for such reforms where not realized (Baird & Plummer, 2013; Finer et al., 2008; Low & Shaw, 2012; O’Faircheallaigh, 2012; Perreault, 2006; Takeda, 2014). For Indigenous peoples generally, in the face of oppressive state decision-making regimes that enable the dispossession of their lands, the *reacquisition* of control over their livelihoods is often an impetus for participation and community mobilization in these new arrangements. Collaborative governance seems to offer the rewards of *more* decision-making authority—though not necessarily self-determination or autonomy (Usher, 1997)—allowing them to more assertively challenge the dominant political and economic forces exerting pressure on the health of their traditional homelands. This is consistent with principles of ecological democracy, of which a fundamental claim is that communities suffering ecological injustices “must be afforded greater participation in the decision-making processes of capitalist industry and the state,” otherwise the “short-term irrationalities and profit-making mandates of the capitalist market would undermine any attempt to build a just and sustainable society.” (Faber, 1998: 17) Not all agree or are optimistic, however, that partnering with the state and other actors in collaborative governance processes will necessarily eliminate injustice or produce positive, community-empowering outcomes (Corntassel, 2008; Coulthard, 2013; Nadasdy, 2003, 2005), but absent a clear alternative in current political economic contexts it is often the chosen path.

3.3.1 Co-management in Canada

The third chapter of the thesis provides a more refined review of the co-management literature most relevant to the FNFN case, but here I will provide some general context to situate co-management as part of this environmental governance shift in a Canadian

colonial context. In Canada, when First Nations partner with provincial or territorial governments in collaborative governance, the term often ascribed to these arrangements is cooperative, or ‘co’-management.¹⁶ Numerous examples of co-management exist across Canada dating back to the 1970s (Notzke, 1994; Rusnak, 1997). Every co-management arrangement is distinct and structured to address context-specific challenges. Co-management is based on the principles of cooperation and sharing (Usher, 1997), and generally consists of boards or committees charged with carrying out specific governance and management functions where First Nations and government representatives are meant to participate as equals. The types of duties boards and committees perform include water and land allocations, resource development project authorizations, impact assessments, wildlife management, and land use planning. In theory, co-management entails varying degrees of shared authority in the governance of a territory or resource, and attempts to provide space for the inclusion of the distinct and sometimes competing interests, worldviews, knowledge systems and management perspective of state and First Nations governments (Berkes et al., 1991; Pinkerton, 1992). Co-management in practice has emerged through three distinct scenarios: as a product of modern land claims agreements between federal and sub-national governments and northern First Nations communities; in response to ecological crises where communities will participate with greater management roles (Kearney et al., 2007; Kendrick, 2000, 2003; Nadasdy, 2005); and as resolutions to social conflict in First Nations territories caused by the actions of state authorized industrial resource development (Goetze, 2005; Howlett et al., 2009; Low & Shaw, 2012; Mabee & Hoberg, 2006; Smith et al., 2007; Takeda & Røpke, 2010; Thomlinson & Crouch, 2012).¹⁷ In the case of the latter, communities often must resort to various forms of resistance and local political action in order to force governments to acquiesce to their demands for governance reform (Spaeder and Feit, 2005).

¹⁶ Co-management is different, however, than other, more *ad hoc* collaborative regimes in Canada or elsewhere in that aboriginal participants are politically accountable appointees to an agreement, not ‘stakeholders,’ thus their rights and powers are specified and affirmed (Usher, 1997).

¹⁷ Conflict-based co-management regimes are largely where I focused attention in the third chapter, given the FNFN case under investigation, and staples economy of BC it is playing out within (Carroll et al., 2012), which has a storied history of resource conflict to draw from.

Co-management has served multiple functions for First Nations people in Canada. Critical analyses of past cases suggests it can increase community decision-making authority and control over territories and resources (Goetze, 2005; Scott, 2005; Takeda & Røpke, 2010); increase environmental protection by addressing weaknesses in state management and regulatory frameworks contributing to environmental degradation (Smith et al., 2007), thereby maintaining ecological conditions conducive to the practice of Aboriginal rights; and advance the recognition of First Nations rights to access, and manage lands and resources (Usher, 1997). In chapter three, my review of the literature acknowledges challenges to the “co-management success story” (Nadasdy, 2003) concerning issues with empowerment, the incorporation of First Nations traditional knowledge, and the cross-cultural implications for participating communities. As a form of compromise, co-management has many limitations. As Usher (1997: 119) writes, “Co-management is not autonomy or self-determination. But it is much more than consultation and participation.” The research presented in the following chapters will show that the FNFN believe governance reform is needed to achieve specific goals and view co-management as a potentially positive outcome. I return to the co-management literature in chapter three to draw out important lessons regarding the opportunities and challenges these unique arrangements present in light of the FNFN’s goals.

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Chapter 2

‘From the Sidelines’: Local perceptions of shale gas governance in Fort Nelson First Nation territory

1. Introduction

The provincial government is aggressively pursuing shale gas development in northeast British Columbia to feed the nascent liquefied natural gas (LNG) export industry. Development is concentrated in Treaty 8 territory, where local First Nations hold constitutionally protected treaty rights, and carry on traditional subsistence practices to sustain their land-based cultures. These practices are critical to First Nations culture and food security, and require healthy terrestrial and aquatic ecosystems. Unfortunately, shale gas development presents novel environmental challenges that threaten these ecosystems, including numerous air, land and water impacts with implications for environmental and human health (CCA, 2014; Colborn et al., 2011; Rafferty & Limonik, 2013; Schmidt, 2011; Shonkoff et al., 2014). Gas production, processing, and distribution are carbon-intensive processes (Stephenson et al., 2012). Local air quality is negatively affected by methane leakages from natural gas infrastructure resulting in higher concentrations of local airborne contaminants and other greenhouse gases (Caulton et al., 2014; Colborn et al., 2014; Gilman et al., 2013; Howarth et al., 2011; Miller et al., 2013; Rich et al., 2014). On land, the linear disturbance from oil and gas infrastructure expanding over space and time reduces and degrades wildlife habitat, and influences migration patterns, predator-prey relationships, regional biodiversity and the availability of game (Drohan et al., 2012; Johnson et al., 2015; Nellemann & Cameron, 1998; Nitschke, 2008). Hydraulic fracturing extraction methods require unprecedented amounts of freshwater, which in northeast BC is most often sourced from lakes and rivers (Campbell and Horne, 2011; Parfitt, 2011).¹⁸ Hydraulic fracturing and wastewater disposal (Rozell & Reaven, 2012; Warner et al.,

¹⁸ Hydraulic fracturing (or fracking) is the controversial method used to extract trapped gas from shale. It consists of injecting a pressurized mixture of water, chemicals, and sand into deep sub-surface horizontal wells in order to fracture shale strata and release gas allowing it to flow and be captured at the surface.

2013; Carr-Wilson & Sandborn, 2014) create new pathways for surface and groundwater contamination (Entrekin et al., 2011; Fontenot et al., 2013; Holzman, 2011; Jackson et al., 2013; Olmstead et al., 2013; Osborn et al., 2011). In Treaty 8 territory, development often bisects areas used by indigenous people for hunting, fishing, trapping, and other cultural activities, which disrupts the relationships between “community, clans, families, individuals, homelands, plants, animals”, considered to be at the core of the Indigenous identity and integral to self-determination (Alfred & Corntassel, 2005: 609).

The Fort Nelson First Nation’s (FNFN) traditional territory hosts shale gas development in three major formations: the Liard and Horn River Basins, and the Cordova Embayment. To date, development is mostly concentrated in the Horn River and Cordova plays, but exploratory activities have expanded into the Liard Basin as companies anticipate new market opportunities accompanying future liquefied natural gas (LNG) export. The provincial government and shale gas proponents view LNG as a means of converting local gas resources from northeast BC into a globally tradable commodity. In the course of a decade, unconventional shale oil and gas has risen to global prominence with technological advancements in the drilling and hydraulic fracturing of previously inaccessible geological strata. With the widespread distribution of shale gas deposits (Kuuskraa et al., 2011; Boyer et al., 2011), many countries are expanding the industry including the United States and Australia. In 2012, the BC Liberal government released their Liquefied Natural Gas Strategy setting ambitious targets for multiple liquefaction facilities and tanker shipping by 2020 (BC LNG Strategy, 2012) that will require significant expansion in upstream shale gas infrastructure and extraction. In 2014, the province was already reviewing applications for six pipelines and thirteen LNG plants (Prystupa, 2014a). The FNFN’s traditional territory is a critical hinge point of these ambitions, and the Nation is expecting to observe a three to four-fold increase in activity in their territory. The FNFN are not opposed to the shale gas industry, but they seek to balance economic development in their territory with their environmental and cultural stewardship responsibilities to protect their treaty rights, land and waterways for future generations (FNFN, 2012a). They believe this vision can coexist with industrial oil and gas activity in their territory, but demand to have a say in the direction of development

(FNFN, 2014).

Recent conflict suggests current governance processes for shale gas-LNG development are problematic. Currently, Treaty 8 communities like the FNFN consulted on regional oil and gas activity by the BC Oil and Gas Commission (OGC) by virtue of the constitutional entrenchment of Aboriginal and treaty rights.¹⁹ However, a range of research shows that consultation is not necessarily translating to acceptable outcomes for the FNFN and other Treaty 8 Nations in relation to shale gas specifically (Garvie, 2013), or resource development in general (Booth & Skelton, 2011a, 2011b; Booth & Skelton, 2011). That their input is seldom influencing decisions has resulted in adversarial and contentious First Nations-state relations in northeast BC. This paper explores and documents the local perceptions of current shale gas governance processes as a way of understanding current tensions between First Nations on whose traditional territories extractive activities are taking place, provincial government agencies, and the shale gas industry. The host of impacts commonly experienced in shale gas contexts require novel approaches to manage or mitigate (Stedman et al., 2012) that may be beyond the capabilities of current governance processes (Andrews & McCarthy, 2014). Therefore, addressing governance issues is critical to creating a framework that produces just and socially resilient outcomes.

In northeast BC, this research suggests conflict is at least in part caused by pervasive scale issues in the governance framework that work *against* local First Nations communities and environmental protection, while promoting resource extraction. Scale is a prolific topic in political ecology (see Delaney & Leitner, 1997; Huber & Emel, 2009; Lebel et al., 2005; Meadowcroft, 2002; O’Lear & Diehl, 2007; Paulson et al., 2004). ‘Scale’ has varied definitions, but is often used in reference to the political scales (local, subnational, national, global) where governance is organized, authority is held, decisions

¹⁹ Governance, as defined in Perreault (2006: 151), refers to “the legal frameworks and institutional arrangements through which decisions about natural resources are taken, and the management practices by which those decisions are enacted.” We use governance as a broad term to refer to the decision-making process for land and water allocations associated with shale gas development. Specifically, I investigate how decisions are made and by whom within BC’s regulatory framework for oil and gas activity, and also how local First Nations are consulted and represented in this process.

are made, or where impacts and benefits are distributed. Scale influences who is granted access to the decision-making processes that govern access to the environment and resources, and subsequently who is excluded from these processes (Lebel et al., 2005). Recent shale gas literature argues that new manipulations of scale have been integral to the industry's proliferation despite a host of environmental concerns and local opposition (Andrews & McCarthy, 2014). In northeast BC, scale issues are especially amplified in the colonial context where First Nations have long struggled for greater representation and power in decisions affecting their lands and livelihoods.

My interviews illustrate the various ways FNFN people and their local knowledge, and therefore their overall authority, are excluded in the governance process. These include structural barriers and procedural flaws that ultimately enable development, while failing to protect critical ecosystems and First Nations treaty rights. I argue that scale issues are central to these failures. First, current scales of decision-making reduce the efficacy of First Nations consultation as a means of protecting the environment and treaty rights. Second, the scale of authority in decision-making subjects First Nations to distant sources of power and limits their influence over the decisions that directly affect them. This is a typical dynamic in modern political communities that is aggravated in this case by the colonial history and the grossly inequitable distribution of impacts and benefits associated with the development of this industry in FNFN territory. These issues, I argue, demand a rescaling of current governance processes and authority in order to address conflict.

After a brief discussion of methods, I outline the current consultation process and governance framework for oil and gas activity in BC, before summarizing key themes that arose from interviews. In the results section, I first present interview themes pertaining to the consultation process, because this process provides a window into the broader shale gas governance framework. I then highlight the flaws that these results expose within the governance process, and identify their implications in terms of how those involved characterize the governance framework as a whole. The final section more explicitly discusses scale as a central cause of governance failures that reinforce a

colonial scalar regime of authority that subjects communities and their territories to the impacts of broader political and economic agendas. Finally, I highlight and discuss the implications of the FNFN's efforts to "rescale" governance in their territory in the interest of environmental protection and community empowerment.

2. Methods

Conflict is increasingly common in political-economic contexts where resource extraction activity, often involving multinational firms, subjects local communities to disproportionate, and negative environmental and social impacts (Bebbington, 2011). Braun (1997) and Mascarenhas (2012) suggest there exists an unevenness in the distribution of resource development projects in Canada and elsewhere, as Indigenous or other marginalized minority communities often disproportionately bear the consequences. The state, as the assumed arbiter of industry access to land and water, has the capacity to appropriate and dispossess, and to encourage resource development in ways that may not serve principles of equity and justice (Bridge, 2013). As such, it is important to take a research approach that enables critical examination of the ways in which access to resources is enabled. As such, our methodology is informed by the field of critical social research, which seeks to recognize and challenge status-quo arrangements and power relations that contribute to social and environmental injustice (Carroll, 2004). Semi-structured interviews and participant observation were the principal methods of data collection.

Participant observation was carried out over six weeks within the Fort Nelson First Nation lands office. Considered a pillar of ethnographic research, participant observation is also a common tool in critical social theory and critical discourse analysis research methodologies (Wodak & Meyer, 2001). DeWalt & DeWalt (2010: 2) define participant observation as "a way to collect data in naturalistic settings by ethnographers who observe and/or take part in the common and uncommon activities of the people being studied." In my research, this included observing and participating in daily activities

related to governance processes, for example, attending community meetings and cultural events, government-to-government negotiations involving the FNFN, various provincial government agencies. I also completed research assignments for the lands office, which included researching alternative governance processes in use elsewhere. As a critical method, participant observation allowed us to witness the felt realities of the current consultation and governance processes on those who participate in them, as well as their impact on the wider community. This helped to draw out hidden power relationships among the actors involved, and maintain close communication with the lands director to ensure the research direction was accountable to community concerns, and had practical relevance for furthering community development and empowerment (St. Denis, 2004; Wodak & Meyer, 2001). Field notes and journaling were used to record observations and reflections from the field (DeWalt & DeWalt, 2010).

I carried out fieldwork in Fort Nelson in May and June of 2013. In total, I conducted nine interviews with eleven people. Interviews elicited the unique perspectives of individuals with knowledge of and experience within the decision-making processes for water and land use for shale gas development. Interviewees included members from the FNFN community, FNFN Chief and Council, lands office staff, and consultants involved with community initiatives and negotiation; two local government employees, one from the Northern Rockies Regional Municipality (NRRM), and another representing the Peace River Regional District (PRRD) (both were non-First Nations; representing the two jurisdictions hosting shale gas development in Treaty 8 territory); and one staff member from the province's oil and gas regulatory agency, the BC Oil and Gas Commission (OGC). Oil and gas industry representatives and provincial government staff were repeatedly invited to participate, but either failed to respond or declined. Interviews were transcribed and thematically analyzed with QSR nVIVO 10 software.

Taking a case study approach has allowed me to document the intimate experiences, relationships, and processes involving a specific community, but as a result I cannot make the same "cross-case comparisons afforded to a larger study or to one based on a wider survey of the field" (Sud, 2009: 647). While I cannot claim that the experiences

and perspectives of the FNFN are necessarily the same as other communities, recent research (Booth & Skelton, 2011b; Garvie, 2013) suggests that other Treaty 8 First Nations are dealing with similar issues in relation to shale gas, and other forms of resource extraction in their territories.

3. Critical Context

In British Columbia, the provincial government assumes the power to authorize access to land and water for the purposes of conservation and economic development. The BC Oil and Gas Commission (OGC) oversees oil and gas development in BC, and implements the Province's regulatory framework.²⁰ The OGC is an independent Crown corporation, which is unique with respect to resource management and governance in BC. Oil and gas is also the only industry in BC that is independently regulated. It is a self-described "single window" agency, with regulatory functions and duties that are normally distributed among multiple government ministries. For example, oil and gas is the only industry in BC that is authorized to withdraw and use freshwater from a provincial agency that is not the Water Stewardship Branch (Parfitt, 2011).²¹ The agency has become the subject of criticism due to its close ties to industry (see Parfitt, 2011). It is industry funded, and while charged with protecting the environment and public safety, its primary mandate is to facilitate industry expansion.

To advance a shale gas project, once a company has secured land rights through the BC Ministry of Energy and Mines (MEM), all other development permits are reviewed and authorized by the OGC, including permits for exploration, road and pipeline construction, processing facilities, wells and well sites, and short and long-term water allocations.²² An online query of OGC authorizations showed that in 2013 alone, the OGC authorized

²⁰ The responsibility for regulating oil and gas development is delegated to the OGC through the *Oil and Gas Activities Act*. Through their role, the OGC enacts parts of various legislation including the *Forest Act*, *Heritage Conservation Act*, *Land Act*, *Environmental Management Act*, and *Water Act*.

²¹ The OGC issues short and long-term water permits for hydraulic fracturing and other operations.

²² The FNFN were not consulted on land tenure decisions until 2012 when they signed a new consultation protocol agreement with the MEM and OGC.

2,229 permits for oil and gas activity (BC OGC, 2014). Garvie & Shaw (2014) found that permits are almost never denied, and the approval process is plagued by a general lack of transparency: Treaty 8 First Nations are often left wondering how a decision was made, and based on what information.²³ As the statutory decision-maker, the OGC's influence over Treaty 8 territory is hugely significant as they oversee all oil and gas projects in BC, as well as the governance processes at the focus of this paper.

As a member of Treaty 8 since 1910, the FNFN have established treaty rights that legally protect members' abilities to hunt, trap, fish and carry on a pre-treaty "mode of life" consistent with past generations who preceded the arrival of settler populations, and mainstream colonial politics and market economies.²⁴ The entrenchment of Aboriginal and treaty rights in section 35(1) of the *Constitution Act, 1982*, further recognizes and affirms these rights, while providing a constitutional framework for reconciliation and the protection of distinctive aboriginal cultures (Woodward, 2015).²⁵ Judicial interpretation of section 35(1) requires the Crown to consult and reasonably accommodate an Aboriginal or treaty right that may be adversely affected—or "infringed"—by a Crown decision or course of action (Woodward, 2015). In general, provincial government agencies employ First Nations consultation processes based on their interpretation of this legal and constitutional responsibility.²⁶

In the context of shale gas development in northeast BC, the Crown has a duty to consult with Treaty 8 First Nations' communities on proposed projects that could impact section 35(1) treaty rights. Crucially, in this case the Province downloads this responsibility to the OGC. The FNFN have a consultation protocol agreement (CPA) with the OGC where

²³ The one documented case where First Nations resistance led to the denial of an application resulted in the proponent, Hunt Oil, successfully suing the Province, claiming that by not consulting with Halfway River First Nation at the point of tenure, the Province failed to inform the company of potential opposition in the area prior to their tenure purchase.

²⁴ See Fumoleau (2004) for a detailed historical account of Treaty 8.

²⁵ Aboriginal and treaty rights are practices, customs, and traditions integral to a distinctive aboriginal culture, but the burden of proof lies with any given First Nation to prove a right's existence and importance (Woodward, 2015: 15).

²⁶ That this responsibility lies with the Crown does not mean it is necessarily done well and in good faith, or that all parties are consistently satisfied with the outcomes of consultation, as evidenced by the extensive history of First Nations-state conflict and case law in natural resource contexts in BC and Canada.

they are consulted on a permit-by-permit basis when companies seek authorization for land and water use in their territory.²⁷ In the current process, the FNFN Lands Department receives a separate notification, or “referral”, for every development application within their territory. Applications are for all types of activity including well sites, water withdrawal permits, pipelines, and other forms of infrastructure like roads. Referral packages include information about the project from which the FNFN’s lands department staff cross-reference with their own information to assess the project’s potential impact on treaty rights, or other environmental or cultural values. As set out in the FNFN’s CPA, lands staff must report back to the OGC within a specified time frame.²⁸ From May 2011 to April 2012, northeast BC First Nations received 3,882 oil and gas referrals (Garvie, 2013). Garvie’s (2013) research shows that consultation is very arduous and frustrating for the FNFN and other Treaty 8 First Nations lands departments because of a range of issues like high referral volumes, tight time constraints, and the narrow scope of site-specific consultation. Permit-scale consultation only considers site-specific infringement; OGC consultation is not project or area-specific.

From a legal perspective, a First Nations consultation process to determine the potential infringement of a section 35(1) right is a distinct process from governance, or decision-making. However, in northeast BC, consultation and governance are couched together within the OGC’s permit-by-permit authorization process for shale gas projects. For the FNFN and other Treaty 8 First Nations, consultation is the only formal mechanism through which they can gain access to the broader oil and gas governance framework.²⁹ However, this research and Garvie’s (2013) suggest several failings: these processes are poorly structured to assess infringement; the FNFN remain excluded from the point of decision-making; and their input in consultation seldom affects final shale gas decisions.

²⁷ When discussing the FNFN’s consultation experience in this chapter, I am referring to the OGC process, which is the application of the provincial government’s interpretation of the Crown’s legal duty to consult and accommodate on oil and gas projects.

²⁸ See Garvie (2013) for a detailed breakdown of the OGC’s permit-by-permit consultation process, and the experiences of several Treaty 8 nations with this form of engagement. The FNFN-OGC CPA can be viewed at: <https://www.bcogc.ca/node/11248/download>.

²⁹ Treaty 8 Nations are sometimes invited to participate in government or OGC-led projects or forums, but these opportunities arise in an ad-hoc fashion, and may be declined due to capacity constraints, or feelings informed by past experiences that these projects seldom lead to outcomes that change the status-quo process, or improve the overall management of their lands.

These issues and others described in the following sections have produced continuous and varied forms of conflict and First Nations resistance in northeast BC. The FNFN, for example, have actively fought permit approvals considered irreconcilable with community values. Recently, they appealed two long-term water licenses issued for hydraulic fracturing in their territory on the grounds that the Nation was not adequately consulted, that the license clearly threatens treaty rights in important cultural use areas, and that the conditions of the license fail to protect ecological integrity (Chapman, 2013).³⁰ An online petition to draw attention to the second license and the contentious actions of the proponent, Encana, garnered over 32,000 signatures (FNFN, 2012b; Hume, 2012). The FNFN have had significant media coverage and public support in recent years (Gale & Lowe, 2013; Corpuz, 2014), especially following a 2014 incident where they firmly asked government and industry to leave an FNFN-hosted gathering to discuss shale gas-LNG issues for First Nations across northern BC (Prystupa, 2014b). The action was in response to policy changes to further deregulate the industry by removing certain gas processing facilities from the Province's environmental assessment process (Metcalf, 2014).³¹ Conflict in northeast BC is not isolated to the FNFN, recent news pieces (Prystupa, 2014c; Prystupa, 2014a) and legal challenges (BRFN, 2015) from communities across northern BC suggest shale gas-LNG proponents are struggling to attain social acceptability.

These events, and conflict in general emerging from BC's shale gas zones, are evidence that First Nations participation in the governance of the industry is not producing positive outcomes for communities. The following section introduces interview themes signalling

³⁰ The first license authorizes the withdrawal of up to 60,000 cubic metres of water per day from North Tsea Lake in the Horn River Basin, up to a maximum of 2.5 million cubic metres per year for 5 years. During drought conditions in August of 2012, the first year of operations the license-holder, Nexen, the license breached the conditions of the license and withdrew significantly from North Tsea Lake. They lowered lake levels by thirty percent, enough of a draw down, experts testified, to have possibly caused irreversible damage to the aquatic systems and fish habitat. The second license was issued to Encana who plan to build a permanent concrete water intake on the Fort Nelson River, the FNFN's most culturally important waterway. Despite significant push back from the nation on this issue, the government of BC approved the license, and Encana has refused to change their plans.

³¹ Due to the magnitude of resistance, the government immediately rescinded its decision and apologized (CBC, 2014).

why consultation is failing First Nations as an entry point into the broader oil and gas governance framework. I move the focus beyond the specific procedural challenges mentioned in reference to the referral process, and identify consultation's constraints on the inclusion of First Nations people and knowledge, which limit their inclusion and representation in shale gas impact assessment and decision-making.

4. Results

4.1 Issues with shale gas consultation processes

Local perceptions signal at least three flaws in the current consultation process that make it very difficult for First Nations to ensure their land is protected, and their knowledge and interests are represented. First, the scales of consultation and impact assessment, and the preference for quantitative information, render the effective inclusion of First Nations knowledge nearly impossible. Second, the scales at which the FNFN are consulted are irrelevant to functioning ecosystems and traditional land use practices, and thus do not allow the Nation to carve out adequate protection. Third, despite consultation the FNFN are still separated from the point of decision-making, and subjected to the authority of distant and disconnected decision-makers. In this section I engage these issues individually.

4.1.1 Consultation excludes local knowledge

There was broad agreement across interviews that consultation processes are failing to adequately incorporate the valuable local knowledge held by members of the FNFN. The cause of this exclusion was primarily attributed to two procedural barriers. First, since the FNFN are only consulted on individual permits, the spatial and temporal scale of the permit in question sets the parameters for what is considered relevant information. Information shared by FNFN members is often excluded if it does not abide these constraints. Second, the procedural preference for scientific information often excludes FNFN knowledge unless it is verified by quantitative data. The exclusion of FNFN

knowledge reduces the Nation's overall input in the decision-making process for shale gas. I address these issues individually below.

Scale challenges affecting knowledge-sharing

The narrow spatial and temporal scales employed by permit-by-permit consultation processes act as critical barriers to the incorporation of local First Nations knowledge in northeast BC. FNFN knowledge is derived from lived experience and observations across their territory over long time scales; it is embedded in cultural practices.³² Because of this, it is well attuned to identifying indicators of changing ecosystems (Turner et al., 2000), for example, shifts in predator-prey relationships that affect hunting and trapping, or changes in fishing patterns and rates of success. A key issue reported by interview participants is that FNFN knowledge seldom “fits” within OGC permit-by-permit processes, because they only consider information concerning the impact of an individual project on the environment or treaty rights.³³ For example, in practice, OGC staff sometimes request specific information like the location of community member's trapline to ensure a project does not affect access and harvesting practices. However, if the trapper reports to lands staff that since the arrival of multiple projects in the area they have observed fewer animals and harvesting has been poor, the information could be rejected as outside the site-specific scope of consultation for the project in question, despite that infringement of treaty rights it suggests. As such, the FNFN can share knowledge, but it must respect the scalar conditions of the proponent's project application as defined by colonial governance processes. Without a broader scale view of development impacts that might allow FNFN knowledge to have utility, interviewees view current OGC attempts to incorporate it as meaningless. As an FNFN consultant states:

...without, again, that kind of broader accommodation and analysis, [consultation]

³² FNFN self-identify as “river people” who have relied on travelling the complex river systems within their traditional territory to access the hunting, gathering, and village sites that provided food, and social and cultural reproduction, both historically and in modern times.

³³ To specify, an individual project consists of just one form of infrastructure like a single well pad. The road leading up to it, however, or the other nearby well pads, or the water needed to service it, and the pipeline needed to transport gas, would all fall outside the scope of consultation for that original well pad. In fact, these other projects would be represented in their own referral, but never considered in context.

just ends up being a check-point or a box-check for the Crown... where they're able to say, 'well, we met with you, we've recorded some site-specific interests and we now have fulfilled our duty. Our view of the infringement is that it's, at least with respect to this site, low,' and it doesn't consider the broader displacing effect.
(FNFN consultant)

In this case, the scales of consultation and impact assessment influence what information is included, and how problems are understood and analyzed (Lebel et al., 2005).

Ultimately, FNFN knowledge is having little effect on decisions for oil and gas projects. The following section suggests other challenges are also contributing to this outcome.

The preference for quantitative data

Case study research in northern Canada (Ellis, 2005; Nadasdy, 2005; White, 2006) discusses the challenge of incorporating contextual, and often sacred, First Nations knowledge in technical, bureaucratic resource management processes dominated by 'credentialized' scientific information and expertise (Mascarenhas, 2012: 18). When asked how First Nations knowledge was incorporated in decisions, a FNFN council member responded:

(Laughs) It's not. It's... you know our land users they may make comments and industry, they might just dismiss it, 'oh that's just anecdotal comments', you know, like we need stats, we need scientific data, we need this and this. So they're not, the traditional knowledge isn't being given its due respect and acknowledgement.
(FNFN Council member)

This response highlights a common theme among FNFN affiliated interviewees: in consultation, local knowledge sharing is frustrated by procedural demand for quantitative scientific information. In the referral process, lands department staff has the opportunity to share member knowledge with the OGC to describe how an oil and gas project will impact treaty rights, but find that unless it is supported by documentation, it is often rejected as anecdotal or non-specific.³⁴ Other related issues include transparency and discretion in the use of culturally significant information. Interviewees stated that elders

³⁴ FNFN has conducted traditional use studies (TUS) for specific areas of high cultural value in their territory in order to document this information. It is helpful for consultation purposes, but lands staff stated that it is costly and time consuming.

and other members are increasingly reluctant to share information because its relevance is often questioned, and it is unclear how it will be used. For example, an FNFN consultant described an occasion where the community shared knowledge on one referral, and this information was taken and used to justify the government's duty to consult on a separate project without the lands department's or knowledge holder's consent. This is especially problematic given the authorization supports the growth of an industry that degrades the land in which FNFN knowledge is grounded, and which some members oppose. While such incidents may be infrequent, my interviews suggest that when they occur they are viewed as disrespectful to knowledge holders and conjure local frustration and mistrust in government agencies, igniting colonial tensions concerning issues of dispossession and cultural appropriation.

4.1.2 Consultation occurs at the wrong scale

The second major way OGC processes are failing is that consultation is occurring at the wrong scale. Traditional land use and the terrestrial and aquatic ecosystems that sustain treaty rights across the territory are affected by wider resource patterns beyond the single permit, yet the FNFN are only consulted at that scale. For FNFN interviewees this is a critical procedural limitation. Permit, or project-scale consultation does not allow the FNFN to express how their treaty rights will be affected at a scale that is necessarily relevant to the *exercise* of those rights. Treaty rights require healthy ecosystems to be meaningfully exercised, but the scale of consultation does not allow the FNFN to establish commensurate environmental protection. In general, the Nation feels the government's current approach to consultation is fundamentally at odds with the holistic way the community relates to and uses the land:

The whole idea, they talk about different worldviews, the worldview is so different. I don't even know how to put that into words, because when we see consultation, we see it as really all encompassing, long-term. It's looking at absolutely everything in terms of how they all fit together. Because, well that's our approach, that's what we see, whereas the one CPA they talked about this 100 x 100 well site pad, okay yeah, one referral for that, and one referral for that, but again it's all isolated in little sections like that, and to them that's consultation. So we're encountering this totally different, we're coming from totally different directions. (FNFN Council member)

The Nation attempts to balance resource development in their territory with cultural and ecological values, the narrow scale of consultation within the current governance process undermines their ability to achieve this vision.

4.1.3 Consultation is separate from decision-making

My interviews as well as Garvie's (2013) research suggest a third issue with consultation: it separates First Nations from the point of decision-making, and separates decision-makers from the impact of their decisions. This separation contributes significantly to the negative local perceptions towards current processes, especially given the lack of positive outcomes achieved through consultation. Interviewees with consultation experience stated that consultation is more difficult because OGC and government staff have no familiarity with the land, and cannot contextualize the decisions they must make, or understand the impact they have on local ecosystems and people. For example, when asked who was making decisions on water withdrawals for oil and gas activity in their territory, one participant responded:

The lowest bureaucrat in the water management department, and they have no connection to the land, they are a nine-to-fiver and they're a life'r. And they strictly go on the paperwork put before them. (FNFN community member)

Local government interviewees shared similar feelings regarding current processes. While the region is scarcely populated compared to the remainder of the province, participants understood its political economic importance. Interviewees felt that OGC and government decisions that have a significant effect on their communities are often not theirs to make, nor are their interests always adequately represented. FNFN interviewees feel that too often environmental decisions are based solely on consultant reports and industry data collection, and that despite consultation, communities and First Nations who are the most knowledgeable and most impacted are not effectively engaged. These perceptions represent important sources of conflict and feelings of injustice. Interviewees feel that more local representation in decision-making is needed in order to ensure

decisions are balanced and respect local interests:

It has to be localized because the people living and breathing the effects of what's going on live here, whereas someone in Vancouver or Victoria, they don't have a clue, they don't know. You know, they just look at the last provincial election where everything was weighed on the economy, and the LNG plans with that. So if they don't see the big picture they don't understand and they're able to make decisions affecting our lives and our future generations-- not just our future generations, like when I'm speaking I'm speaking collectively, speaking collectively. (FNFN Council member)

The FNFN's experience in consultation is that when they make comments regarding treaty rights infringement and other concerns with a specific permit, these rarely affect the OGC's final decision on that permit. This issue is exacerbated by the separation between consultation and the point of decision-making, which establishes distance between those with authority at the provincial scale, and those subject to that power locally. My interviews show this as a source of frustration and feelings of powerlessness at the community level, from which conflict and resistance are natural responses.

4.2 Issues with shale gas governance processes

For participating First Nations, the OGC's consultation process acts as a window into the wider shale gas governance framework. This section documents local perceptions of this broader decision-making framework, and shows that the FNFN's frustrations with consultation are suggestive of more systemic governance failures, specifically the absence of broader scale processes like land use planning and cumulative effects assessment, and the overall lack of information to base decisions and support accurate impact assessments.

4.2.1 Decisions are not guided by landscape-scale planning or impact assessment

The FNFN's inability to influence wider development patterns in consultation is evidence of the lack of long-term, landscape scale planning or cumulative effects assessment in the

wider decision-making process.³⁵ In total, nine of eleven interviewees identified these omissions as fundamental flaws in the shale gas governance framework that make consultation very challenging. Beginning with the issue of cumulative effects, a single drilled well could be connected to upwards of twenty separate applications for things like roads, work camps, water permits, frack sand quarries, and pipelines (Garvie, 2013). Collectively, these make accessing the well, and extracting and distributing resources, possible. However, at no point in the current system are these projects viewed as part of a connected pursuit of resources through a broader scale cumulative effects assessment (CEA). As such, current decision-making processes are blind to the actual footprint of development and the displacing effect that multiple projects can have on First Nations land users. Here, an FNFN consultant connects the procedural implications of the lack of CEA as it relates to the assessment of treaty rights infringements in First Nations consultation:

So what you, what you end up having is decisions that are a chain of decisions such that, you know, each individual decision isn't seen by the Crown as adding much, or potentially representing a serious infringement in and of itself. And you have no holistic look at the aggregate effect of the chain of decisions. (FNFN consultant)

Additionally, without a formal land use planning process, that could include other measures like impact thresholds, to guide decision-making, there is nothing to safeguard against over-industrializing and doing irreparable damage to ecological systems and treaty rights at significant scales. My interviews suggest this is already occurring in the Horn River Basin where members are alienated from important cultural sites and practices in intensively developed areas.

The issue of cumulative effects emerged in local government interviews as well. For example, an NRRM employee familiar with the FNFN acknowledged the Nation's concerns, stated that this issue finds resonance with the municipality as well, and offered

³⁵ Cumulative effects are derived from spatial and temporal landscape change and their impacts have been the focus of research in relation to oil and gas activity in northeast BC (see Nitschke, 2008). The concept of cumulative effects assessment recognizes that while the environmental and cultural effects of a single permit may appear insignificant in the context of that permit, all impacts accumulate as multiple projects unfold on the landscape over space and time to produce a significant effect (Forest Practices Board, 2011).

a reason for not wanting projects considered in isolation:

We don't, as a municipality and community, we don't deal with and/or absorb the results of activity in isolation. It is sort of a holistic experience, you know, we are here, and we take in everything that happens. (NRRM employee)

For the FNFN, the lack of planning and CEA remain key governance issues that reduce the efficacy of consultation in general. Lane (2006: 385) argues that comprehensive planning processes can be “crucial for fashioning just and sustainable futures for indigenous communities,” and for resolving land conflicts between communities and nation states as they offer a means of identifying and protecting indigenous values, and ensuring they can co-exist with other land uses (see for example, Lane & Hibbard, 2005; Takeda & Røpke, 2010). Similarly, while implementing CEA is complex, it is increasingly viewed as a critical tool for mitigating significant environmental degradation in resource development contexts like BC (BC Auditor General, 2015) and extractive landscapes in general (Baxter et al., 2001; Canter & Ross, 2010; Nitschke, 2008). The literature is in wide agreement that CEAs are effective when applied with a land use planning process (Baxter et al., 2001; Duinker & Greig, 2006; Peterson et al., 1987); others believe well executed CEAs can help contribute to environmental justice (Krieg & Faber, 2004). In their review of CEA, Canter and Ross (2010) found that a common barrier to implementation is the challenge of achieving collaboration among multiple groups (local, state, private) to determine management and mitigation measures.

4.2.2 Decision-making lacks adequate information

Garvie & Shaw (2014) found that when the FNFN and other Treaty 8 First Nations request more information during consultation to gauge the potential ecological and cultural implications of specific projects, they are often not met. This is indicative of a critical issue in the shale gas governance framework consistently raised by all interviewees in this research, which is the lack of baseline information available, and the lack of resources allocated towards environmental monitoring and data collection in northeast BC. In the FNFN's experience with development to date, little has been done to

close information gaps to better understand and identify ecological and hydrological changes that could be occurring due to development. Interview participants feel that decisions are being made without sufficient information to be confident that shale gas development is not having a negative impact on natural systems. For example:

So there are permits and licenses being granted based on very very minimal information, and potentially, we won't be able to quantify the impacts because we don't have the significant baseline datasets to compare them to, so...there's the possibility that it may be construed that these [impacts] are normal variations when in fact they aren't, and this is being told to us by Fort Nelson community members. Because we're definitely hearing from community members that they are seeing changes, they have been seeing changes for a long time. They're scared to drink the water on the land, they see changes in the wildlife, in the fish tissues, things like that... the next big thing we need is information, so that then the right decisions can be made. We can't just...we're not just making decisions based on assumptions then. (FNFN consultant)

The information deficit creates scepticism at the community level about how accurate OGC and government impact assessments really are. It also makes it very difficult for local First Nations to ground their own knowledge and members' observations of change, with possible trends in scientific data, which I noted earlier, they feel they must do or otherwise it could be rejected as anecdotal. By my observations from spending time in the FNFN lands office, the types of studies they wish to see represent key concerns among land users. For example, what are the effects of landscape disturbance on wildlife populations? How do large-scale water withdrawals affect water quantity and quality, particular in smaller river systems? Is there evidence of surface and groundwater contamination that might be associated with hydraulic fracturing or other shale gas activity? Are we monitoring any of these risks? Water contamination is an especially significant concern because members harvest fish and wildlife to maintain cultural practices and provide food for their families and community. Members are aware of the linkages between shale gas development and human and environmental health (Adgate et al., 2014; Bamberger & Oswald, 2012; Colborn et al., 2011; Schmidt, 2011; Shonkoff et al., 2014). A Council of Canadian Academies report on the environmental implications of the industry states that information deficits are an issue in all shale gas regions across Canada. The report argues that the industry's expansion has outpaced research and

monitoring, as such, “the extent and significance of environmental damage is difficult to evaluate” (CCA, 2014: 215). There is still much work to do to substantively address information gaps in FNFN territory.

4.3 Implications

The preceding sections suggest there are serious weaknesses in the ways communities are consulted and decisions are made in relation to shale gas projects development. In this section, I list three broad but telling themes describing how those involved locally view the governance framework as a whole.

4.3.1 Shale gas decision-making processes are inadequate

When asked if the current decision-making process is working to protect land and water, an FNFN community member replied:

No, absolutely not. It’s not designed to protect the environment. It’s designed to give industry access to the resources. That’s it.

Overall, interviewees believe shale gas decision-making processes are inadequate and fail to protect the environment, which results in treaty rights infringement. Specifically, permit-by-permit consultation and decision-making processes are seen as poorly informed, and unable to protect the environment, and engage First Nations communities in a way that enables them to protect their treaty rights, other interests, and responsibilities to the land. Despite consultation, the FNFN are still bearing significant impacts, leading some to question whether traditional harvesting practices can be viable in the context of future shale gas-LNG development:

It’s still important for me to take my grandchildren out and show them what is there, you know, what we did. I try to involve them in the activities as much as I can, and hopefully they will adopt it and take it forward. But, I mean if last year was any indication of the future to come and the activities that were out on the land—and they say that was just the...it wasn’t even ramped up yet, they were just

doing exploratory activities—I don't want to see the real thing...It was just crazy. They pushed through more roads, and more pipelines, and more sites, and, you know, it was the most water extraction that they've done in probably ten years previous. (FNFN community member)

Absent baseline information and environmental monitoring, and other tools like cumulative effects assessment and land use planning, current decision-making is seen as ad-hoc, not guided by good information, and not representative of the actual industry impact. The FNFN lands director stated that the Nation's elders describe the permit-by-permit governance process as a "death by a thousand cuts" because of the pattern of small, isolated authorizations that build over time and across landscape. This can result in increasingly fragmented habitat and the dense industrialization of culturally significant areas like Two Island Lake where, Apache Corps set an industry record for water usage in 2010 by injecting 980,000 cubic metres of water into multiple wells to complete fracking operations at just one of the company's well pads in area (Parfitt, 2011). Members now seldom use the area because of the scale of surrounding development and health concerns. Overall, however, the FNFN community is divided in their support of the industry. The leadership is approaching it as a potentially positive economic opportunity if governed by an improved framework that addresses the Nation's concerns. However, interviewees used terms like irrational, and short-term, to describe the current scenario, which clearly lacks support at the local level and needs addressing if the government has any hope of progressing the industry with some degree sustainability and social license.

4.3.2 The FNFN are excluded from decision-making

Despite consultation, the FNFN feel their input is excluded from current decision-making processes. Scale issues permeating through the governance framework are central to this perception. The permit-by-permit, or project scale of consultation and decision-making is not conducive to the inclusion of FNFN knowledge and assesses impacts at scales that offer limited protection for the environment and treaty rights as development expands. The second issue is the scale of authority, as decisions are made by distant individuals

and agencies, guided by their own values and interests.³⁶ For local interviewees, the community's concerns feel secondary to the government's interest in advancing shale gas and economic growth. An individual with FNFN Chief and Council stated that the nation does not place trust in the OGC, the agency charged with accommodating their interests, because they feel its actions are more representative of its mandate to support oil and gas development than address First Nations concerns. This perception is supported in practice by the steady stream of project approvals despite First Nations opposition. Multiple FNFN interviewees referred to OGC consultation as a "box-check", in reference to something the province *must* do, but the outcomes of which rarely influence decision-making. On the ground, consultation does not feel like a meaningful attempt at accommodation. As an FNFN consultant states:

But at the end of the day, the government can say that...you know, they don't feel that what they're doing will have an impact on Fort Nelson's treaty rights, and away they go and grant the licenses... So what ends up happening is that Fort Nelson's input ends up happening at the very end of the design process, when the companies have already made all the decisions regarding what they're going to do, and they just want the rubber stamp. (FNFN consultant)

When asked how the Nation is engaged in decision-making, the FNFN lands director replied, "from the sidelines", representative of the overall exclusionary character of shale gas governance to date. The FNFN continue to pressure the government and OGC to address these symptoms, but the lack of progress fuels conflict and community frustration in regards to governance and the overall character of First Nations-state relations in the context of this industry, and more broadly.

4.3.3 Industry is seen as the dominant decision-maker

Overall, the perception among FNFN interviewees is that industry is the dominant authority over the direction of development, as they consistently receive permit approvals despite local opposition, and because the FNFN has not been given the opportunity to influence development, or establish any protection for their values on the land. For

³⁶ Both interviewees with local governments also viewed this as a challenge for local communities.

example, here the FNFN lands director refers to the Encana water license approval to procure water for fracking from the culturally significant Fort Nelson River:

It's all about what industry wants, that's how decisions are made. It's not about, 'well what can the river handle,' cause there's no, as [the Chief and Council member] said, there's no baseline studies, there's no monitoring, there's no flow stations, like, there's nothing. It's just, 'industry wants this, we have to make a decision, we don't want to say no to industry, so there you go'. It's...it's ludicrous... So some dude in Calgary decides it's a really good idea to take 3 trillion litres of water out of the Nelson River, and the BC government has to make a decision on it— it's bullshit. (FNFN Lands Director)

The information deficit and lack of industry monitoring further contribute to the perception of industry dominance. It is current protocol that companies provide much of the information concerning the potential impacts of their own project applications. The OGC then uses this information in its impact assessment and authorization process. As there is often no baseline information, or public sector data collection, the OGC depends largely on industry science or industry-funded consultant science to base decisions.³⁷ FNFN interviewees find it deeply troubling that the benefactor of the application not only drives, but also informs the decision-making process, particularly given the challenges around the incorporation of First Nations knowledge. They view this as further benefitting industry as it increases their control in the decision-making process.

Multiple interviewees, including local government representatives, raised concerns about industry compliance and enforcement monitoring. For example, in reference to the OGC's capacity to monitor activity on the land, an NRRM employee felt that the regulator is not equipped "from a purely staffing point of view to be able to cope with all the demands that are placed on it locally", in reference to the small number of OGC field officers compared to the potential scales of development during periods of high production.³⁸ Also concerned with a lack of regulatory oversight was an FNFN member who owned a water truck and was hired by companies to withdraw freshwater from lakes

³⁷ A recent study by Lave (2012) discusses the trend towards industry-funded knowledge production as a site of neoliberalization, where regulatory agencies seldom question the legitimacy of commercialized science from which proponents benefit.

³⁸ The NRRM employee qualified that while they did not necessarily believe it was a case of a runaway or completely negligent industry, the lack of oversight was still a real problem.

and rivers for delivery to industry sites. They stated that withdrawals would sometimes extend beyond permit limits, but they were never once requested information on withdrawal points or volumes by any regulatory staff.

In promoting the industry, the BC Liberal government constantly refers to the province's environmental standards and regulatory framework for oil and gas development as world leading, but these types of local perceptions refute that claim. For Treaty 8 communities like the FNFN who constantly voice their concerns in consultation, shale gas development still expanded rapidly from 2008 to 2011. The Nation observed significant evidence of environmental degradation, and across significant tracts of their territory, the ability to practice treaty rights was impeded. The tone of interviews expressed deep frustration with the government. One FNFN consultant stated that, in its support of industry and failure to accommodate First Nations concerns, they are not upholding their constitutional responsibility to First Nations. With the province adamantly trying to build an LNG industry in BC, addressing the inadequacies of the current governance framework at the root of these negative local perceptions is critical for addressing conflict, and for creating processes where more just and equitable outcomes are possible.

5. Discussion

From the evidence provided in my interviews, it appears that the current governance framework is failing First Nations and the environment. Examining the FNFN's experience exposes a host of governance failures. Local perceptions suggest that land and water governance is not informed by data in a robust and transparent way due to the information deficit; processes ignore cumulative impacts, and are not guided by a planning mechanism to prevent the over-industrialization of critical ecological and cultural systems; and environmental regulations are not adequately monitored or enforced. Further, the impacts of development are intensely local, and while industry has consumed large swaths of their territory, the FNFN have not received commensurate

benefit.³⁹ They view decision-making as driven by government and corporate interests, and within the current framework consultation is futile because it does not allow them to protect the environment, or their treaty rights and other values. Collectively, these symptoms invariably result in social conflict and community resistance. The FNFN are not alone. Recent research suggests similarities between the FNFN's experience and other Treaty 8 First Nations facing resource development in their traditional territories (Booth & Skelton, 2011c; Garvie & Shaw, 2014). In order to progress towards a governance framework that can produce more equitable and representative results requires rethinking priorities and addressing FNFN concerns.

The FNFN case exposes key scale issues operating through the shale gas governance framework that make it very difficult for the Nation to influence decisions in meaningful ways. These issues include the scale of consultation and decision-making, and the scale of authority created by the OGC's oil and gas governance framework. The latter refers to the centralization of decision-making power, and thus the separation between those with authority over decisions (OGC, BC government) and the impacted communities subjected to that power (First Nations, local governments). This separation is a common characteristic of modern states for whom a primary concern is administering access to nature for the purposes of economic development, typically through bureaucratic resource management schemes contingent on centralized power and control (Scott, 1998). Such configurations can become problematic, however, especially in neoliberal contexts where governments can behave as 'extra-economic actors' by mobilizing resources at large scales (Bridge, 2013). These issues are aggravated in the FNFN case by the colonial context, within which, the inequitable distribution of impacts, contested land and resource allocations, and lack of local authority, reflect ongoing patterns of dispossession and marginalization (Braun, 1997; Mascarenhas, 2012).

In many ways, the FNFN case offers a good empirical representation of some of the scalar tensions engaged in literature on the politics of scale (Delaney & Leitner, 1997;

³⁹ Garvie (2013) makes a similar assertion, using Harvey's (2003) "accumulation by dispossession" theory to describe shale gas expansion on Treaty 8 land in northeast BC.

Meadowcroft, 2002; O’Lear & Diehl, 2007; Swyngedouw, 2000), especially in relation to the notion that scale in environmental governance can create means of inclusion and exclusion, both in terms of access to resources *and* the decision-making processes with respect to those resources (Lebel et al., 2005). Interview results showed how the project scales of consultation and decision-making exclude most FNFN knowledge, as well as their interests in protecting treaty rights and ecosystems at more relevant scales. Also, the scale of authority excludes the Nation from the point of decision-making, subjecting them to the power and interests of others. These scales further control the contours of, and opportunities for contestation (Huber & Emel, 2009). The only formal mechanism through which the FNFN can contest development is consultation, but given its limited scale it confines local opposition to the single project and offers no influence over wider development trajectories.

The question that remains is: how do we begin to *address* ecological governance and authority issues in northeast BC? The literature on the politics of scale is limited regarding specific fixes for contextual challenges. However, it does provide an encouraging reminder that scale in resource governance is largely constructed, the product of ‘scale choices’, and something that is enacted by policy, laws, regulations (Delaney & Leitner, 1997) and other “deployments of state authority” that establish centralized power and its various forms of articulation (Andrews & McCarthy, 2014: 7). From this perspective, governance that is *constructed* can similarly be *deconstructed* and reformed to produce better outcomes. It seems that any attempt to resolve ongoing challenges in northeast BC will require renegotiating the current scale of decision-making to expand the scope of ecological governance beyond the single permit. Interviews suggest more landscape scale management tools are required to ensure the pace and scale of development respects ecological limits, and decision-making processes are more conducive to local knowledge, and more responsive to treaty rights and other interests. These tools, as mentioned, include land use planning, cumulative effects assessment, expanded data collection and monitoring networks, and ecological thresholds. This would entail a significant departure from the current permit-by-permit system that will likely require more capacity, more inventiveness, and a re-prioritization of values towards

ecological and social protection. However, based on the colonial context within which these issues are occurring, I argue ecological fixes alone are unlikely to resolve the suite of challenges facing the FNFN, nor guarantee just and equitable outcomes, over the long-term.⁴⁰

That consultation has been so ineffective, and that permit-by-permit processes are viewed by the Crown as an adequate fulfillment of their duty to consult with the intention of accommodating First Nations rights, may in itself be an expression of a larger problem: that they may not understand how to honour treaty rights. Colonization has introduced a scalar regime that displaces First Nations authority, and subjects them to consultation processes based on colonial legal interpretations of their “rights”. These tend to treat treaty rights as practices, and dissociate them from the healthy territories and community-homeland relationships that are central to their exercise (Corntassel, 2008). I argue that in order to fix this scenario, a rescaling authority is also needed, so that communities are able to carve out their own protection for their rights, values, and interests in relation to their lands and resources. Given the imbalances of power that exist between the community scale, and the provincial/national/global scale of pro-development politics, without rescaling authority, future economic development could reintroduce negative practices.

In pushing the provincial government on governance issues, the FNFN are doing this, they are seeking scalar reforms to increase community power, and authority in decisions that implicate their people and territories. Lebel et al. (2005) argue that in contexts where the decisions and actions of actors at one scale create unjust outcomes at another, the “scale capabilities” (Rankin, 2003) of the less powerful must be enhanced through new governance mechanisms that are integrated and deliberative. The FNFN seek a framework where they are able to govern their own futures, and advance their vision for

⁴⁰ Addressing these issues without addressing the scale of authority is unlikely to result in lasting conflict resolution, as evidenced by recent attempts. In 2013, for example, the OGC announced a pilot planning initiative called Area Based Analysis in an attempt to address cumulative effects (BC OGC, 2013). The FNFN, however, were not invited to participate in its design and feel their values are not represented in it. They view the initiative more as a makeshift attempt to address a real problem, but still ignoring other issues like the authority claims of the nation in relation to their territory, and their demand for meaningful engagement.

environmental protection and industrial development in their territory. My research suggests they hope to achieve this through some form of decentralization and more local, collaborative decision-making. The FNFN's pursuit reflects a broader shift from "government" to "governance" (Norman et al., 2012) where more frequently, communities are seeking and attaining more significant roles in environmental management and decision-making.⁴¹ This movement is especially strong among Indigenous groups who view themselves as stewards of the land and resources in their territories, and who continue to push for the recognition of their rights and sovereignty against varied colonial legacies (Bebbington, 2011; Perreault, 2006; von der Porten & de Loë, 2013). There remain aspects of the scalar colonial regime (or colonial authority) that remain embedded in these types of alternative governance approaches (Coulthard, 2013), however they are harder to resolve absent more thorough decolonization. Still, as evidenced by other cases (Goetze, 2005; Takeda & Røpke, 2010), these scalar reforms are possible and can be desirable. Such an outcome is a necessary move towards lasting conflict resolution and social justice in northeast BC. While the outcomes of this scenario are still unfolding, the implications are significant for the FNFN given the potential scales of upstream development that would be required to support LNG export, and the threat it could pose to ecological and cultural wellbeing of their territory. As an FNFN consultant states:

How do you flip the whole regime to proactively protect the ongoing way of life of an entire community of people? (FNFN consultant)

6. Conclusion

In summary, social conflict between the provincial government, the oil and gas industry, and Treaty 8 First Nations communities like the FNFN in shale gas regions can be linked in part to procedural and structural flaws in the province's shale gas governance framework. Local perceptions of current governance processes highlight that these processes are failing due to key flaws that reduce the functional utility of First Nations

⁴¹ Devolution of responsibility and authority to more local scales, increased citizen participation, and new decision-making processes, they note, are common features of new environmental governance arrangements (Norman et al., 2012).

consultation for protecting local rights and interests, enable a mode of development that can produce large-scale impact but avoids adequate environmental scrutiny, and disempowers local First Nations communities in relation to more distant political and economic authorities and interests, thereby amplifying colonial tensions. From an ecological governance perspective, negative environmental outcomes are caused by ad-hoc decision-making within a framework that is marred by an information deficit, and lack of cumulative effects assessment and landscape scale planning to ensure pace and scale respects ecological and social limits. When development interrupts cultural practices and alienates First Nations community members from the land, the scales at which they are consulted do not allow them to shape development trajectories to address these types of critical issues. I argue building towards solutions and addressing conflict in FNFN territory and perhaps more widely across northeast BC, demands rescaling ecological governance processes and authority to more accurately reflect the scale of impact, and to allow communities to determine their own lives.

The FNFN case illustrates how environmental governance and regulation can become shaped in ways that reflect dominant political agendas, and establish authority in ways pursuant to resource extraction.⁴² Further, it highlights the scalar tensions and power dynamics common in extractive contexts involving the varied interests of local communities hosting development, and the national and sub-national governments, and globally influenced corporations who authorize and carry it out. The experience of the FNFN is especially relevant in relation to the rapid rise of unconventional shale energy development aided by permissive environmental governance regimes across North America, and the local community opposition movements that have risen simultaneously (Andrews & McCarthy, 2014; Stedman et al., 2012; Willow, 2014; Willow et al., 2014). It provides new fodder for critique of the state's role as an enabling authority over resource extraction, and on the appropriate sites and scales of authority and environmental governance, particularly in the context of new industries with known but often poorly monitored risks.

⁴² Andrews & McCarthy (2014) note that updating Pennsylvania's oil and gas laws have gone hand in hand with centralizing the state's regulatory authority.

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Chapter 3

Co-management and Shale Gas? An assessment of the possibilities for local governance in Fort Nelson First Nation territory

1. Introduction

In northeast British Columbia, the Fort Nelson First Nation (FNFN), a Treaty 8 First Nation, is negotiating a new governance framework and land management system for unconventional shale gas development with the provincial government. Their goal is to manage the industry's impacts on community members' treaty rights and land-based way of life on their traditional territory, and to create new opportunities for the Nation to assert control over their lands and resources. While there is division on this matter in the community, a general consensus among the FNFN membership and Chief and Council is that shale gas development *could* be beneficial to their community if expansion is managed appropriately. However, they have no confidence in existing governance frameworks to achieve this. As such, the Nation seeks to transform the current governance framework for oil and gas development in their territory into something better suited to engaging communities and addressing the novel environmental and social impacts associated with the shale gas production. The Nation recently witnessed an unprecedented pace and scale of development that is threatening their land, treaty rights, and culture. As a consequence, the FNFN wants to be directly involved in the governance of the lands and resources within their territorial boundaries. Co-management has been forwarded by the Nation as a potential governance arrangement that could address the challenges they are facing. This paper will critically assess what co-management might offer, and what challenges would have to be negotiated for it to potentially realize the ambitions of the FNFN.⁴³

⁴³ In this chapter I use the term “co-management” for three reasons: it is common in the literature, it was referenced explicitly by interviewees, and it has been used publicly by the Fort Nelson First Nation in reference to a more collaborative form of governance and decision-making. It is important to note, however, that “co-governance” or “shared decision-making” is perhaps a more accurate descriptor of the type of arrangement the FNFN and other First Nations often seek as resolutions to conflict, especially where

Co-management is a collaborative governance arrangement where First Nations and provincial or federal governments participate cooperatively to manage lands and natural resources and share decision-making responsibilities, generally on boards or committees responsible for some aspect of governance like land use planning, wildlife management, impact assessment, or water management (Usher, 1997). The literature poses co-management as an alternative to centralized state management systems. It attempts to harmonize the distinct worldviews, knowledge systems, and governance perspectives that differentiate Indigenous and “western” approaches to natural resource management. It also purports to address and balance inherent power differentials in state sanctioned resource development contexts in colonial settings where historically marginalized Indigenous communities often lack authority and equitable access to decision-making processes; in theory, state and Indigenous representatives participate in co-management as equals (Berkes et al., 1991; Pomeroy & Berkes, 1997). Power differentials are particularly explicit in cases of resource conflict, to which co-management is often forwarded as a resolution. In Canadian contexts, such cases reflect the continued insistence of First Nations “on retaining the basic elements of their aboriginal land systems and ensuring some measure of control over their own lives and livelihoods.” (Usher et al., 1992: 129) In British Columbia, for example, co-management ensued from long-term community struggle in three high-profile cases where logging agendas threatened vital ecosystems, interfered with First Nations rights, sovereignty, and land use visions. Each case involved extensive political mobilization, direct action and community resistance to unsolicited resource extraction in their territories (Goetze, 2005; Low & Shaw, 2012; Spaeder & Feit, 2005; Takeda & Røpke, 2010).

Critical analyses on the practice of co-management depict it as a complex socio-political relationship. When co-management emerges as a response to conflict in extractive

communities are asserting their own competing claims for jurisdiction and authority over their traditional territories. In certain cases, like the Haida and Great Bear Rainforest examples cited in this chapter, the Indigenous groups themselves have used these other terms in place of co-management. Co-governance or shared decision-making, as a language choice, more explicitly reflects how these groups view themselves as sovereign and self-determining Nations distinct from the colonial Canadian state, and as Indigenous peoples who have governed their territories since time immemorial.

settings, it is often viewed by communities as a way of confronting state and corporate power in decisions affecting their lands and resources. These scenarios often bring to the fore concepts like ownership, indigenous rights, sovereignty, and authority. In these ways, co-management resembles broader indigenous movements pursuing more representative and inclusive decision-making, social justice, and equity in the distribution of impacts and benefits from resource extraction on custodial lands (Perreault, 2006). In general, however, scholars are careful not to endorse co-management as an unquestionably empowering outcome for First Nations. Berkes et al. (1991) for example, describe how, despite appearances, co-management can result in highly varied degrees of First Nations authority, showing that both real and token power-sharing are possible outcomes depending on how power is negotiated and structured. Others argue that contrary to its intent, co-management has had limited success at incorporating indigenous knowledge and governance perspectives in a meaningful way (Kofinas, 2005; Nadasdy, 2005; White, 2008). Nadasdy (2005) asserts that in any context where co-management is practiced, the perceptions of it as a success or failure can be strikingly different based on who is asked.

The FNFN are interested in co-management as a means of resolving long-standing issues stemming from the current governance framework for shale gas development. This research (previous chapter) shows that to be successful, co-management must address key weaknesses in the current ecological governance and management regime, and increase community authority in relation to their lands and resources. In this chapter I explore the possibilities and limitations of co-management as a means of advancing these goals. Several cases in the literature suggest co-management could at least *advance* the FNFN's objectives (Goetze, 2005; Scott, 2005; Takeda & Røpke, 2010). However, the diversity of co-management cases also implies that what determines the success of these arrangements is their ability to respond to complex, context-specific challenges. This often requires overcoming countervailing political and economic forces that benefit from status quo governance processes and configurations of authority. What resonates most strongly from the literature is that co-management is a process of negotiation where positive outcomes are often achieved with struggle and community mobilization around a

clear set of demands and community vision. Given this, I have undertaken interviews with the community to determine their goals.

Compared to other examples of co-management, the FNFN seem to be progressing down positive paths. However, the unique industry at hand, and the importance of context in co-management, demands a more critical look at what the Nation is attempting to do in relation to the distinctive political economic challenges it faces. These include specific physical and economic characteristics of shale gas-LNG development, as well as the pro-development politics associated with the industry in BC at the moment. These realities must be considered as they potentially place limits on what co-management can accomplish, or at the very least cast uncertainty regarding how some tensions will resolve in northeast BC. I believe they could influence both the process of negotiating a new way forward with government, as well as the final outcomes of the FNFN's struggle. The collective challenges facing the FNFN, I argue, are rather novel in relation to wider co-management literature. Overall, the FNFN case emphasizes the importance of contextual factors in considering the potential success of alternative governance models like co-management.

I begin by providing brief context on unconventional shale gas development and its recent expansion across FNFN territory, followed by a summary of methods. Results are then presented, which document FNFN perspectives on what is needed to address ecological governance failures and other community goals. The discussion section engages the literature to draw out the opportunities and limitations of co-management, the relevant lessons, and the challenges facing the Nation moving forward in their efforts to govern shale gas development under new conditions.

2. Critical context

The FNFN is a Dene and Cree community whose traditional territory lies in the province's northeast corner and encompasses three of BC's four significant shale gas

deposits: the Horn River and Liard Basins, and the Cordova Embayment. In addition to the Montney trend, these gas deposits are ground zero of the BC government's LNG strategy (BC MEM, 2012a). As a signatory to Treaty 8 in 1910, the Fort Nelson First Nation's treaty rights are legally enshrined in section 35 of the *Constitution Act, 1982*. As rights-holders, any breach of an FNFN member's ability to practice a pre-treaty "mode of life", which includes specific rights to hunt, trap, and fish, is potentially an infringement of the nation-to-nation compact symbolized by the treaty (Fumoleau, 2004; Ray, 1999).

The "shale gas revolution" transformed the energy landscape of North America in the mid 2000s (Boersma & Johnson, 2012; Jacoby et al., 2011; Parfitt, 2010), causing shifts in national and sub-national environmental and energy policy, local economies, community structure and social relations (Stedman et al., 2012). Northeast BC observed massive oil and gas lease purchases for shale gas exploration and extraction, followed by unprecedented increases in all forms of activity including well starts, seismic testing, water use, road construction and other forms of linear disturbance in FNFN territory (Figure 3).⁴⁴ By 2013, nineteen companies (including several multinationals) drilled 376 shale gas wells, producing 635 billion cubic feet (Bcf) of gas in the Horn River Basin, where there is an estimated 78 trillion cubic feet (Tcf) of recoverable reserves (Adams, 2014; BC MEM, 2011; BC MNGD, 2014). To access more profitable markets, the provincial government has committed to develop BC shale gas to supply a nascent liquefied natural gas export industry; several coastal LNG terminals and pipelines are approved, but the industry is stalled due to a lack of committed foreign buyers.

⁴⁴ Gas production slowed beyond 2011 in congruence with falling North American gas prices caused by the over-production of shale oil and gas in the United States; several companies, however, still continued with exploration and infrastructure development.

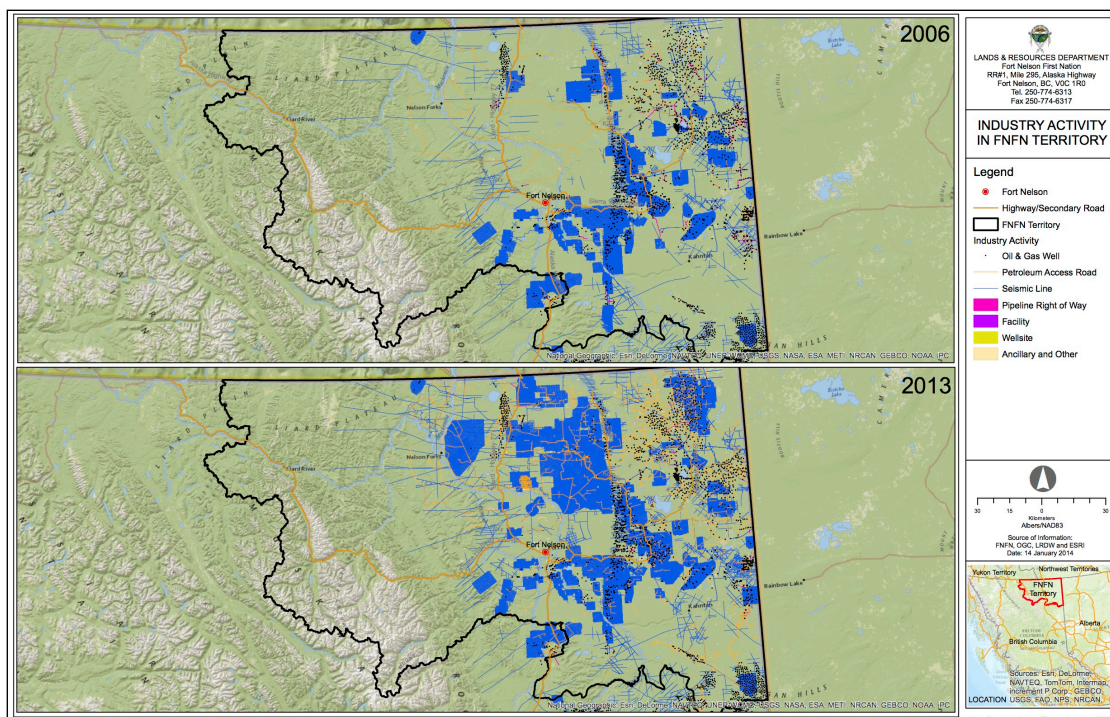


Figure 3: Map showing shale gas development in FNFN territory in 2006 and 2013
Source: FNFN Lands Department

Potential shale resources are widespread, with significant deposits on all continents (Kuuskraa et al., 2011; Boyer et al., 2011). The province is competing with multiple nations bidding for shares of global demand in higher priced markets, particularly in Asia (Ernst & Young, 2014). What some advanced as a possible “golden age of gas” (IEA, 2011) has become a global race. The provincial government remains optimistic and is keen to facilitate development, though some question the viability of BC LNG (OIES, 2015). To help advance the industry, the government is significantly subsidizing the industry to encourage investment (Nikiforuk, 2014), and offering a very favourable royalty and tax regime (Lee, 2014). While production has mostly stalled in FNFN territory due to current low prices, the FNFN and other BC First Nations are anticipating a potentially massive scale-up in development with LNG (O’Reilly, 2014). As such they are urgently organizing towards achieving their governance goals.

The FNFN have consistently maintained they would support *some* shale gas development in their territory if it is managed in a way that reflects their cultural values and

responsibilities to the land and future generations (FNFN, 2012a). However, the rapid pace and scale of development in their territory exposed critical weaknesses in the OGC's permit-by-permit oil and gas governance and First Nations consultation frameworks, which resulted in dramatic and poorly assessed landscape scale impacts (Garvie et al., 2014; previous chapter). Growing evidence highlights the real ecological and public health risks associated with shale gas extraction, which include impacts to air quality (Caulton et al., 2014; Colborn et al., 2014; Gilman et al., 2013; Howarth et al., 2011; Miller et al., 2013; Rich et al., 2014), surface and groundwater (Entrekin et al., 2011; Fontenot et al., 2013; Jackson et al., 2013; Olmstead et al., 2013; Osborn et al., 2011; Rozell & Reaven, 2012), and wildlife and biodiversity from the loss and fragmentation of habitat (see Garvie et al., 2014). Through the OGC's permit-by-permit framework, only site-specific environmental impacts and treaty rights infringements are considered in decisions; without cumulative effects assessment or landscape-scale planning, these impacts are neither assessed nor mitigated at broader scales (previous chapter). Without these formal tools, and others like protected areas and development thresholds, the current framework leaves unanswered key governance and regulatory questions that relate to how the pace and scale of development could be controlled to avoid over-industrialization and irreparable harm to critical boreal habitat and cultural territory.⁴⁵ Further governance issues include the baseline information gap for ecological and hydrological data in northeast BC, and the absence of coordinated environmental monitoring and compliance and enforcement. Scholarship suggests the information deficit, and a generally poor scientific understanding of shale gas' environmental impacts, is ubiquitous in all regions and the industry overall (Bamberger & Oswald, 2012; CCA, 2014).

These governance issues made the OGC's permit-by-permit First Nations consultation process with Treaty 8 First Nations a very challenging and frustrating experience for the FNFN and other communities (previous chapter; Garvie & Shaw, 2014). This system limits consultation and impact assessment to narrow, project-specific scales, ignoring

⁴⁵ The FNFN territory is critical habitat for mega fauna like woodland caribou, moose, elk, and bear that are important culturally for First Nations, but also for northern hunting and guide outfitters who comprise the region's eco-tourism sector.

development's wider affect on treaty rights and the ecological and hydrological systems that define and sustain the FNFN community and culture. For the FNFN, consultation was seldom producing positive outcomes or decisions that reflected their input. Their experience is consistent with that of other Treaty 8 First Nations in consultation around oil and gas and other resource industries (see for example, Booth & Skelton, 2011a; Booth & Skelton, 2011b).

Until recently the provincial government and the OGC have showed little interest in addressing governance issues, perhaps due to their desire to advance the industry (Stephenson et al., 2012; Stephenson & Shaw, 2013). The FNFN have resorted to public pressure and intervention through media campaigns (see for example, Gale & Lowe, 2013; Corpuz, 2014), online petitions (FNFN, 2012b; Hume, 2012), and the BC Environmental Appeal Board (EAB), where they have filed two appeals challenging long-term water withdrawal licenses granted in the Horn River Basin (UBCIC, 2012). In 2014, an incident in Fort Nelson garnered significant media attention (Prystrupa, 2014). It occurred during an FNFN-hosted shale gas-LNG summit when the Liberal government changed legislation to exempt sweet gas processing facilities from the Province's environmental assessment process (Metcalf, 2014).⁴⁶ The decision, made without consultation, was seen as an insulting 'last straw'; the FNFN proceeded to request that government and industry representatives remove themselves from the gathering. The FNFN then declared a ban on further shale gas development in their territory, stating: "we will have a say in what happens in our territory" (FNFN, 2014). In the days that followed, statements from First Nations in northern BC chastised the province's token consultation process, demanding authority in the governance of lands and resources within their territorial boundaries. The statements received wide support from other First Nations. The provincial government apologized and rescinded the exemption, commencing a process of resolution that now sees the FNFN negotiating towards new land protection and management systems, and a new governance relationship with the

⁴⁶ "Sweet gas" refers to the quality of natural gas upon extraction. Sweet gas requires less purification because it lacks the higher sulphur concentrations of "sour gas". The government's decision on sweet gas plants exempts from the EA process most future gas processing in FNFN territory where the gas is characterized as sweet and dry (BC OGC, 2012).

province. They appear to have the provincial government prepared to meaningfully negotiate towards a new regime, but the FNFN must decide what it must encompass in order to truly address the pressing context-specific challenges they face.

3. Methods

My methods for primary data collection included semi-structured interviews and participant observation. I conducted nine interviews with 11 individuals over a six-week period in 2013. Participant observation occurred during the same period and on two other shorter duration trips to Fort Nelson. Interview participants included members from the FNFN Chief and Council, lands department, community, and consultants, as well as two local government employees in the Northern Rockies and Peace regions of northeast BC, and one BC Oil and Gas Commission employee. Participants were asked to comment on the strengths and challenges of the current framework for land and water use decision-making, the potential advantages and disadvantages of more localized, collaborative governance, and what a new framework would need to accomplish in order to be successful. Informants were sought using targeted sampling (Newing, 2011) because they were either directly involved in or had intimate knowledge of the decision-making processes governing water and land use activities in FNFN territory. The majority of interviews were conducted in person. With permission, all interviews were recorded and transcribed, and analyzed thematically with NVivo 10 software. I draw extensively from interviews, using direct quotes to give voice to those who participated who are living through and engaging with these issues.

Participant observation was facilitated by the FNFN lands department and included living in Fort Nelson, participating in and observing day-to-day activities in the FNFN lands department, going out on the land with FNFN members, attending community meetings and events. Time and observation enabled a deeper analysis of the experience of the FNFN and how they engage in the governance framework, and allowed for a continual reassessment of research questions. A formal information sharing agreement was entered

into with the FNFN Lands Department in 2012, supported by the Nation and the University of Victoria.

4. Results

In this section, I summarize the results of interview questions that illustrate the FNFN's understanding of their key governance needs. These results and more recent public commentary from the FNFN and Treaty 8 Tribal Association (Logan, 2014) show that the Nation views co-management as a possible means of improving ecological governance and achieving more control over their territory. Goetze (2005: 247) notes how Nuu-chah-nulth co-management in Clayoquot Sound, has both an environmental, and a socio-political objective: it attempts to address environmental crises by improving the way resources are managed, while seeking to negotiate and redefine "*relationships between people* with varying interests in, and varying degrees of authority over, the resource(s)." In this section, interviewees emphasize both technical and human aspects of governance that seek to address both of these objectives. These are listed in the following sections, and represent both key *tools* needed to mitigate impacts and improve land and water management, and important *principles* to ensure decision-making is more respectful, inclusive, and just.

4.1 Governance tools: expanding scales and building data

All interview participants affiliated with the FNFN spoke about the need for more landscape-scale approaches to governance, in reference to tools like land use planning, landscape-scale management, data collection, and cumulative effects assessment. The FNFN lands director and other interviewees described that a broader scale planning approach, in theory, would serve several purposes: it would allow the Nation to carve out lasting protection for key ecological and cultural use zones in their territory; implement special management requirements in sensitive areas like riparian environments; and it would encourage the government to work with the Nation to implement an integrated

monitoring network to track indicators of environmental change at scales more relevant to members' harvesting practices and ecological dynamics. These changes are integral to addressing failures in the OGC's permit-by-permit decision-making and impact assessment processes (previous chapter; Garvie & Shaw, 2014). The current framework fails to assess the additive effects of past, present, and future development over space and time, thereby failing to consult communities in a way that allows them to mitigate these impacts and ensure cultural survival. As the lands director states:

Again we don't look at it as 'this water license, that well site'. It's more: we want protected areas, we want baseline studies, we want landscape-level management. Those are the decisions we want to be involved in. (FNFN Lands Director)

A BC Auditor General report (2015) recently criticized the provincial government for failing to do anything about cumulative effects in the context of shale gas and other northern resource development. Several interviewees identified cumulative effects as a critical issue in FNFN territory. An FNFN consultant also felt that thresholds are needed to avoid over-developing certain areas beyond sustainable levels for ecosystem health and function:

So when does, you know, when does density in a particular watershed... when is enough, enough? When do you start seeing changes to a watershed? When do you start seeing changes to...to flows, to water quality? So I think that all falls under kind of this whole land use planning type of governance...where it's all sort of tied together. (FNFN consultant)

Thresholds are critical for controlling the pace and scale of development, one of the most significant challenges with the shale gas industry, especially in favourable economic conditions. Garvie et al. (2014) provide an example threshold that could apply in northeast BC: the 61 percent anthropogenic impact threshold for caribou habitat, a limit beyond which further impact becomes unsustainable for caribou populations (Sorensen et al., 2008). A past BC government study found that 12 of 15 core caribou habitat zones in northeast BC had already surpassed this limit (Theissen, 2009). In theory, the rationale for thresholds, cumulative effects assessment, and land use planning is that these features would allow communities, experts, and other actors to work together to identify

environmental limits and make informed decisions on how to proceed within these limits. The FNFN has demanded on multiple occasions that proponents submit pre-development plans for their oil and gas tenures (FNFN, 2012c). This is so the Nation can assess the potential cumulative impact of all activity on the land, establish adequate protection, and provide feedback prior to permit applications to avoid conflict and wasted proponent expenses.

And we want to do the coordinated approach, because the current assessment that's required, each company says, just shrugs their shoulders and says, 'well, I'm just concerned about my little area, I don't care what the guy next door to me does, I don't care if it's on the same river, it doesn't matter to me'. So we're making it matter to them. (FNFN Lands Director)

In pursuing these governance tools, the FNFN wants decision-making systems that are comprehensive, integrated, and informed. They feel resolving the current information deficit requires building adaptive processes at relevant scales capable of responding to new scientific information and First Nations knowledge, and indicators of changing ecological conditions.⁴⁷ The lack of baseline information and intention to address the gap was a problem consistently raised by interviewees. For example:

...we need to be looking for indications of what's actually happening. We need to look for indicators of fracking, we need to look for indicators of impacts, and then from there we can—you know, right now decisions are being made without the information, without the proper information to back them up. (FNFN consultant)

The FNFN believe their community could play a prominent role in environmental monitoring and data collection assuming this information would be integrated into a more meaningful, holistic approach that assesses impacts at broader scales.⁴⁸ Similarly, all interviewees who spoke of FNFN knowledge directly responded that it is poorly utilized in current processes, because of their site-specific requirements. Therefore, fixing the information deficit is at least partly contingent on fixing the scale of governance to

⁴⁷ Interviewees seem to be insinuating an “adaptive management” (McLain & Lee, 1996) or “adaptive co-management” (Armitage et al., 2010) type of approach or process.

⁴⁸ The FNFN has prioritized increasing monitoring of all types in their territory (ecological, hydrological, climate). It has been a constant demand in negotiation, and the FNFN have done some partnering with industry that has resulted in industry funding the installation of new monitoring stations in their territory.

accommodate a broader scope of information, for example, like the knowledge possessed by land users pertaining to observed changes in natural systems over time. In sum, the results show that in demanding landscape-scale planning and other governance tools, the FNFN is working to create a framework that reflects the scale of development, and the scales at which the community experiences its impact.

4.2 Governance principles: accountability and representation

The previous section summarized participant commentary highlighting important ecological governance and management issues that could be characterized as more technical problems with procedural fixes. The remaining themes represent various *principles* that refer to an overall improved quality of decision-making. These are more distinctly social in that they address the relationship between the FNFN community, the governance framework, and decision-makers.

For example, interviewees felt governance must create more accountability. This was referenced primarily in two ways. First, the lack of accountability was associated with the lack of regulatory presence on the land to monitor industry compliance, enforce regulations, and hold companies accountable to the local environment and land users. Second, interviewees feel that there is a general lack of accountability in decision-making, due to the separation between decision-makers and First Nations. Those who participate in the governance framework through consultation rarely feel that their input, knowledge, and values were meaningfully integrated.

Several participants feel expanded monitoring is needed to ensure companies are adhering to regulations and regulations are adequately protecting ecological and hydrological systems. Some interviewees felt the OGC lacked capacity and resources, and that regulators lean too much on industry self-monitoring and reporting; they felt some companies adhere to regulations more than others. One FNFN member recalled being contracted by companies to withdraw and deliver surface water:

You know we were told by a company to go take it out of here: ‘until I tell you to quit you pull out water.’ And under their regulations, you know, you might have been able to pull ten loads, but I know for a fact we pulled twenty loads out. So, you know, without squealing on myself (laughs). (FNFN community member)

Industry self-monitoring was a focus of the Environmental Appeal Board (EAB) case brought forward by the nation to challenge the first long-term water license granted by the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) to Nexen for hydraulic fracturing in their territory. Due to errors in Nexen’s hydrological monitoring of the Tsea Lakes system, during drought conditions their withdrawal practices continued beyond the “zero withdrawal limit” and lowered lake levels by thirty percent. The FNFN had opposed the license from the outset, because the Tsea Lakes watershed is an important fishing and harvesting area. Scientific experts testified that Nexen’s actions may have caused long-term damage to the aquatic system and fish species (Chapman, 2013). FNFN members were actually the first to identify the problem at Tsea Lakes. For several years, the lands office has run a small monitoring program employing community members to monitor industry and collect environmental information. The FNFN have expressed interest in expanding the scale of community-based environmental, and compliance and enforcement monitoring, to ensure their interests are actively defended on the land.

In general, the concept of ‘community-based,’ and more ‘local’ governance processes, perpetuated across the spectrum of interviewees, including the FNFN and local government. The desire for localization was grounded in feelings that decision-making processes are distant and disconnected from the land, thus decisions are poorly representative of local interests, and often driven by the agendas of more dominant actors. For example:

I guess for us in the northeast that live here... we know we're the breadbasket for the province, but yet, our concerns aren't even registering on their scale. (FNFN community member)

There is from time to time a perception here that the decision-makers from afar, call them southerners, don't really appreciate the context in which they're making the

decision. And again, I think, you know, FNFN might in fact say things in parallel to this. Consultation, perceptions around consultation can be an issue. I think very often, as the community we can feel that...we're the cow that's being milked, but we have to grow our own hay at the same time. And that decisions that affect us aren't always in our hands to make. (NRRM employee)

Interviewees were asked about the potential benefits and challenges of doing something like co-management as a more locally based, collaborative governance process. They responded that a more local arrangement could help address the information deficit and that decision-making would be better informed by local knowledge, accountable to the interests of impacted communities, and thus more just, sustainable and socially acceptable.

But, the advantages, obviously, are that the local decision-making body has...like there's no group that's more intimately familiar with the actual system than the people on the ground, and that is, say, Fort Nelson First Nation members... (FNFN consultant)

It has to be localized because the people living and breathing the effects of what's going on live here, whereas someone in Vancouver or Victoria, they don't have a clue, they don't know... So if they don't see the big picture they don't understand and they're able to make decisions affecting our lives and our future generations, not just our future generations, like when I'm speaking I'm speaking collectively, speaking collectively. (FNFN Council member)

Collectively, FNFN perceptions are influenced by years of experience participating in consultation with the OGC and other government agencies. The principles of inclusion, representation and accountability represent a better quality of First Nations engagement whereby those most affected by decisions are meaningfully included in the process of making them.

4.3 Co-management, authority and potential challenges

The preceding themes represent many of the tools and principles the FNFN associates with a more local, collaborative governance framework. My results suggest they view co-management as a possible means of advancing these goals, while becoming more empowered in relation to their lands and resources. Authority is central to ensuring

resource development adheres to their governance and land use vision. Some referred to co-management directly, for example, in relation to a more comprehensive and integrated governance model co-designed by the nation:

And that model would have to include co-management, and not just the buzzword co-management, but real co-management...with the whole idea of a very comprehensive look at where everything's absolutely included. (FNFN Council member)

Others referred more generally to a collaborative approach to dealing with pressing management issues. Still, the need for authority remained central. When asked how the FNFN envisioned their role in a more local governance model, the FNFN lands director responded:

We're the boss! (laughs) One of the elders said once, the land is the boss, and I think us being who we are, and who we are as a community and as a Nation, being so tied to the land, I think that we should be the boss. (FNFN Lands Director)

Specifically *how* this authority could be organized and asserted was expressed in several ways. The following statement, for example, suggests the Nation should have the power to veto project applications that fail to meet community criteria:

Well we would be part of the regulatory approval, I mean, if the Nation does not approve it, then that permit doesn't go forward. 50/50. (FNFN community member)

Others referred to a board, or committee, where the FNFN would participate alongside government regulators not only in the authorization process, but also at more strategic levels, like policy creation and regulation. An FNFN consultant stated that it was integral that such a board have real decision-making power as opposed to being merely a “sounding board” where the crown purports to listen to First Nations concerns. The same interviewee expressed that expanded FNFN participation and authority in shale gas governance would have the wider public interest benefit of incorporating Indigenous perspectives, which in general take a more sustainable and integrated view of resource management, based on an inherent culture of stewardship.

After the April 2014 incident in Fort Nelson (nearly one year after I conducted our initial field research), the term co-management became increasingly advanced as a potential outcome through which the FNFN could negotiate these types of reforms. It became public that the FNFN and other Nations under the banner of the Treaty 8 Tribal Association, were interested in collaborating with the Province, under the condition that First Nations would take a leading role in decision-making and environmental management (Government of BC, 2015). The FNFN view Haida models of shared decision-making, land use planning and management as positive examples of First Nations authority (CHN, 2014).⁴⁹ In working towards their goals, the FNFN continue to build both capacity and a comprehensive strategic land use vision for their territory. However, interviewees also anticipate the path towards co-management will confront real challenges. For example, the Nation will be relying on working to meaningfully address issues with a government that prior to 2014 was mostly unwilling to negotiate substantive reform. One FNFN member stated that political will is critical:

I mean, yes politics has to be part of it, because in order to get the provincial regulators...to adopt a co-management, it's the political will that needs to be there. (FNFN community member)

Another interviewee questioned whether there was incentive for the provincial government to do co-management; that they might see it as setting a precedent that First Nations in resource-rich regions across BC would seek to replicate:

All the mining areas, and forestry areas, the hydropower areas... if they started trying to incorporate that everywhere, I think they're afraid that the economy might suffer, because right now, BC's open for business and we're selling off our natural resources like they're going out of style. (FNFN consultant)

Some more structural political economic challenges emerged as well. Interviewees referred to shale gas companies as politically influential actors resistant to change, especially when change increases cost and creates more regulatory hurdles. The

⁴⁹ The Haida Nation initially finalized a co-management agreement with the province in 2001, however refusal on behalf of the BC government to uphold and implement the agreement resulted in further Haida protest and resistance. Finally in 2007, both parties signed the Haida Strategic Land Use Agreement. For a thorough historical narrative of Haida co-management see Louise Takeda's (2014) book.

provincial government's goals in relation to shale gas-LNG are seen as virtually the same as industry: increase investment, reduce barriers, and expand production. In noting the tension between protecting FNFN treaty rights and maximizing profits, one interviewee was concerned about how the government would handle industry pressure in response to progressive governance changes. Given the competing interests and land use visions that co-management would attempt to balance, interviewees expressed concern that achieving cooperation could be very challenging, and questioned how internal conflict would be managed and resolved. One person stated, for example:

...who has the final say? You know, at the end of the day someone has to have the final say. And probably that's government, you know, probably that would not be Fort Nelson or industry. So at the end of the day, you know, there could still be significant issues that Fort Nelson feel aren't being addressed. (FNFN consultant)

The preceding quote and others showed some concern that even in co-management FNFN authority could be limited. Interviewees questioned how existing industry tenures and oil and gas rights would be resolved in co-management. They commented on the challenge of supporting moderate development to maintain economic opportunities while also trying to implement more stringent regulation, and other barriers to manage pace and scale and the movement of industry across the landscape, actions which companies may view as prohibitive:

Fort Nelson is saying that they're not saying 'no' to development, right? So they are saying that they do agree to some development. But the thing is, there are some areas where they don't want to see development and leases have already been sold in those areas. So, how do you rectify those two conflicting uses? (FNFN consultant)

That such a range of issues emerged through our interviews suggests the FNFN is aware of the challenges of achieving their governance goals. Still, the overall feeling among FNFN interviewees was that the community must take measures towards protecting their traditional territory in the interest of future generations. Their feedback suggests this includes creating locally driven, inclusive, and representative decision-making through which the Nation can assert more authority in the direction of ecological governance, and over the movement of industry across its territory. There is still some apprehension

moving forward. One community member was uneasy about becoming more deeply integrated into colonial management systems, and of “being looked at as one of them”, as if participating legitimized these systems and conflicted with a personal sense of indigeneity. Such concerns are represented in studies of the colonial tensions that often persist through collaborative governance arrangements (see von der Porten & de Loe, 2013). Ultimately, however, they viewed this direction positively, insofar as it enhances community authority:

I think the disadvantages will...would be outweighed by the advantages of having another generation to pass on to. You know? If we continue the way we're doing it today, you know, it won't go beyond the next generation cause there will be nothing left for them. (FNFN community member)

The following section investigates critical assessments of co-management in the literature, as we explore its potential to address FNFN goals in terms of ecological governance, and the authority they seek in relation to decisions impacting their community and territory.

5. Discussion

In theory, a co-management agreement establishes a new formal governance relationship between a First Nation(s), and the government, which outlines roles and responsibilities, participation, structure, and process (Rusnak, 1997). Where practiced, agreements take on distinctive forms to address context-specific management challenges and conflicts.⁵⁰ Critical scholarship on co-management negotiation in resource landscapes depict it as a political contest and struggle for power (Pomeroy & Berkes, 1997). In Canada, where dominant political and economic interests have aligned and benefited from industry-friendly authorization processes, communities attempting to change the course of governance to be more representative of local interests, often encounter resistance from these parties. Nevertheless, the literature suggests that, at least in some ways, local First

⁵⁰ Early research focused on co-management as a means of managing common-pool resources like fisheries or forestry to mitigate scarcity and degradation, or to minimize conflict between local land and resource users and government resource managers (see for example: Berkes et al., 1991; Pinkerton, 1999; Pomeroy & Berkes, 1997).

Nations (sometimes with support from local non-First Nations) have prevailed against systemically more dominant actors (Takeda, 2014). The result has been a swath of innovative governance processes, new environmental management systems, and varied forms of exercised First Nations authority over lands and resources.

Based on my interviews, the FNFN believe good governance includes land use planning, and a broader scope of decision-making and impact assessment that accounts for cumulative effects. They also want to ensure decisions are guided by good information, and thresholds are put in place to control pace and scale, and prevent excessive industrialization and irreparable environmental degradation on their land. Finally, they seek decision-making processes that are community-driven and representative of local interests. Together, they believe these features will allow them to proceed with development in a more balanced way, guided by an increased community authority, respectful of the environment and other local values. Co-management, as a governance model that to the Nation symbolizes shared decision-making, has been forwarded as an arrangement that could allow them to promote this vision. In what follows, I explore the promise of co-management and discuss briefly a spectrum of cases where it has approximated the outcomes that the FNFN is seeking (and conversely, where it has not). I then draw out *why* co-management resulted in a more empowered First Nations authority by highlighting important lessons and conditions that were integral to the success of other communities who assembled similar features and outcomes. I end the section by discussing potential core challenges to the FNFN's land use vision.⁵¹

5.1 Co-management and ecological governance

⁵¹ In this section, there is a strong emphasis on several co-management cases in BC (specifically, the Haida-Gwaii, Great Bear Rainforest, and Clayoquot Sound models) due to key similarities with the FNFN case: (1) these also arose from conflict over the extraction of natural resources; (2) these cases are well represented in the literature, especially in relation to topics like power, authority, and indigenous rights; (3) and finally, because many of the problems and potential solutions sought by First Nations in these cases rival those of the FNFN. However, an important distinction exists between these cases and the FNFN scenario: conflict took place on unceded First Nations territories. Legally, the lack of "title" argument weakens the FNFN's position, but the Nation has forced the provincial government to the negotiating table by being assertive and mobilizing creatively to challenge the Province in multiple ways.

The literature suggests co-management has restructured decision-making, and acted as a mechanism through which new planning and management processes were negotiated and implemented. In BC, for example, land use planning and ecosystem-based management (EBM) were key outputs of several co-management negotiations, including those of the Coastal First Nations in the Great Bear Rainforest (see Howlett et al., 2009; M. Smith et al., 2007), the Nuu-chah-nulth in Clayoquot Sound (see Goetze, 2005; Lane & Hibbard, 2005), and the Haida Nation on Haida Gwaii (see Astofooroff, 2008; Takeda & Røpke, 2010; Thomlinson & Crouch, 2012).⁵²

For First Nations, comprehensive land use planning has been a particularly prominent and important feature of co-management. In colonial contexts, planning can lead to new forms of land protection and force governments to formally recognize Indigenous rights and sovereignty, and create a plan that supports the “coexistence of indigenous and non-indigenous interests in land” (Lane & Hibbard, 2005).⁵³ On Haida Gwaii, the Haida’s Strategic Land Use Plan significantly expanded land protection in Haida territory, simultaneously enhancing the nation’s collective power, capacity, and control over their lands and resources (Takeda & Røpke, 2010). While power imbalances and procedural inequalities persisted through the planning and negotiation process, the final land use plan ultimately affirmed Haida sovereignty and jurisdiction.

In the Great Bear Rainforest Agreements, the coastal land and marine use plan, and the commitment to ecosystem-based management, quadrupled the amount of protected areas, noted by Smith et al. (2007: 8) as “a feat that has been applauded as one of the greatest events in history of wildlife conservation.” Equally critical was the novel “conservancy” approach to protection, which entrenched the rights of Coastal First Nations to harvest for economic, social and ceremonial purposes across their territories. Unfortunately, a good precedent for cumulative effects assessment (CEA) eluded my investigation. CEA

⁵² In northern Canada, “claims-based” co-management arrangements emerged from comprehensive land claims negotiations between the Gwich’in and Dene Sahtu Nations, the NWT territorial government, and the federal government. These included provisions for regional land use plans.

⁵³ Factors that negatively affect indigenous collaboration, on the other hand, include language and cultural barriers, a lack of capacity and resources, consultation fatigue, cynicism of the potential outcome of participation, a lack of familiarity with state planning and governance, among others (Lane, 2006).

literature suggests that in Canada the concept is often discussed but seldom practiced (Baxter et al., 2001; Duinker & Greig, 2006). The Northwest Territories' Cumulative Impact Monitoring Program (CIMP) is the only established framework we located in a co-management setting. Unfortunately, there is little commentary on its status, efficacy, assessment process, or First Nations engagement with the program in resource development areas.

Beyond planning, other community-driven governance mechanisms have taken root through co-management with a focus on increasing local capacity in areas like monitoring and data collection, and compliance and enforcement. For example, the Coastal Guardian Watchmen Network, formed through the Coastal First Nations-Great Bear Initiative in 2005. Guardian Watchmen monitor commercial and recreational land and marine user compliance, report unlawful behaviour, and collect ecological data on BC's central and north coast.⁵⁴ Local communities consider the Watchmen program a resounding success. In contrast, the Clayoquot Sound Scientific Panel (CSSP) recommended establishing an ecological monitoring program to support an adaptive ecosystem-based management (EBM) model for stewardship in Nuu-chah-nulth territory. It was never implemented, however, as the BC government failed to allocate their portion of the funding (Bunsha, 2012). A lack of government funding and support is a common cause of failed community-based monitoring and enforcement programs (K. Turner & Bitonti, 2011).

5.2 Co-management and First Nations authority

The above cases show that co-management has enabled at least some of the governance changes sought by the FNFN. Comparatively, the literature is more convoluted on its potential to restructure the socio-political dimensions of resource struggles, and on matters of authority and representation. Goetze (2005: 262) suggests that for co-management to be truly “effective” and “empowered” it must help communities retain

⁵⁴ The Guardian Watchmen program educates and employs community members from every CFN community. Guardian Watchmen apply traditional laws in monitoring and stewarding key custodial lands and resources in carrying out their inherited authority and responsibility to the land and future generations (see website: <http://coastalguardianwatchmen.ca/guardian-watchmen-programs-overview>).

“determinative decision-making authority” over their traditional territories, challenge oppressive First Nations-state relationships, and advance local rights, access, and ownership of lands and resources. Evidence suggests co-management has advanced at least some of these goals, but *how* differs by case. For example, in the Clayoquot agreement, the Nuu-chah-nulth negotiated a de facto veto power into the decision-making structure of the Central Region Board (CRB) through which they could deny unwanted logging projects in their territory (Goetze, 2005).⁵⁵ In the Northwest Territories, Dene communities in the Sahtu region can exercise a similar authority even without formal veto recognition, because of the commitment to consensus-based decision-making from all Sahtu Land and Water Board (SLWB) members. Thus, Dene authority is a product of the cooperative nature of the governance process, and in practice, no SLWB decision has ever been overruled by the territorial government who maintain that power (personal communication).⁵⁶

While there is evidence that co-management can lead to positive outcomes for communities seeking more authority over their lands and resources, many scholars remain skeptical of its endorsement as an entirely empowering project for Indigenous communities. First, the authority of indigenous groups in co-management institutions is highly variable (Berkes et al., 1991), and the spectrum of cases in Canada suggests there is no guarantee it will advance importance principles synonymous with broader Indigenous sovereignty movements like the right to free, prior and informed consent (FPIC) (Scott, 2005), the restoration of jurisdiction over lands and resources (Mulrennan & Scott, 2005), or meaningful participation in decision-making (Ross et al., 2009).⁵⁷ Moreover, significant literature investigates the structural and cultural tensions that arise

⁵⁵ The veto power was produced through the Central Region Board’s (CRB) “double majority” clause where in order for a decision to pass, it had to be supported by a majority of Nuu-chah-nulth and a majority of government representatives. Further, CRB board members agreed on a consensus-based decision-making process (Goetze, 2005).

⁵⁶ A federal devolution Bill C-15 was passed in April with controversial amendments to the *Mackenzie Valley Resource Management Act* (MVRMA). Therefore, it appears the regulatory structure for resource development and land and water governance in the NWT will change, with a large territorial board replacing the more decentralized regional land and water boards. First Nations do not approve these changes as they significantly reduce proportional representation for each of the Aboriginal governments.

⁵⁷ In many cases, the state retains the ultimate authority over decisions and policy recommendations that come out of co-management boards, a discretionary power that is particularly significant when parties cannot reach agreement, or when their decision does not align with a broader political or economic agenda.

in attempts to integrate First Nations and state governments in bureaucratic resource governance schemes. Many argue, for example, that co-management in practice has a dismal record of increasing the agency of indigenous values, forms of knowledge, governance and stewardship (Kofinas, 2005; Scott, 2005; Spak, 2005; White, 2006, 2008). As communities often must conform to technocratic, and science-dominant colonial models of resource management, co-management fails to fully challenge their legitimacy and hegemony (Nadasdy, 1999; Stevenson, 2006; Takeda & Røpke, 2010). Nadasdy (2005) cautions that in participating in these systems, communities risk bureaucratization themselves, and the subtle erosion of their own knowledge systems, worldviews, and culture.⁵⁸

In sum, while co-management appears less adept at addressing some of the broader structural dimensions of indigenous marginalization and oppression, it still offers promise as a means of enabling the exercise of community authority over lands and resources threatened by resource development. For the consortium of Coastal First Nations, the Haida, Nuu-chah-nulth, and others (see Scott, 2005), mobilization and engagement in co-management allowed them to address context-specific challenges and advance their goals. The literature offers some distinct lessons in regards to the question: under what types of conditions did First Nations achieve positive outcomes through co-management?

The first lesson is that authority and control is not an assured outcome of co-management, but rather a product of negotiation. As Singleton (2000: 6) notes, although it “has the potential to manage resources more equitably, efficiently, and sustainably, there is obviously nothing inevitable about such an outcome.” Rather, it is contingent upon negotiating good agreements that solidify the rights and responsibilities of those involved in ways that advance local authority and governance goals (Carlsson & Berkes, 2005).

⁵⁸ Usher argues that self-determination, and autonomy are not fully realized in co-management regimes (Usher, 1997). Others, however, believe these principles can be advanced by co-management, because it is a process of negotiation rather than imposition (Scott, 2005), and because in some cases the governance processes that arise are premised on First Nations consent (Goetze, 2005).

The second lesson is that communities should have a clear, and cohesive land use vision to assert and negotiate towards. In scenarios like northeast BC where state managers are operating without a land use plan, decision-making is reactive and ad-hoc; extraction is driven solely by the development plans of proponents. This presents an opportunity for communities to assert their own governance vision. The Haida Land Use Vision (CHN, 2005), for example, became the guiding document in the design of the Haida-Gwaii Strategic Land Use Agreement that established significant land protection and Haida authority (Lee, 2012). The document contains powerful language asserting Haida sovereignty and authority. Their mobilization around this vision was critical to reclaiming jurisdiction, and in shifting the direction of logging practices on Haida Gwaii (Takeda & Røpke, 2010).

The third lesson is that empowering co-management scenarios are almost always the product of struggle and community resistance.⁵⁹ In Canada, natural resource governance is largely premised on providing access to natural resources for economic development. Some actors benefit from current processes and configurations of authority more than others and will fight to protect their standing; this is epitomized in the lengthy and often adversarial process of negotiating co-management in nearly all cases mentioned.⁶⁰ Scott (2005) argues that First Nations must be perceived as legitimate threats to the broader political and economic agendas of government and industry; that when this happens co-management negotiation is more likely to genuinely reshape power (Scott, 2005).⁶¹ O’Faircheallaigh, (2013b: 21) asserts that resource conflict creates opportunities for advancing indigenous rights and authority, but requires “extensive and sustained political mobilization” to exploit, and this can take many forms. In the James Bay Northern Quebec Agreement (JBNQA) and Clayoquot agreement, for example, a wide range of oppositional strategies like direct action, litigation, public relations campaigns and coalition building all contributed to the development of “real power sharing” (Scott,

⁵⁹ The Haida, Nuu-chah-nulth, and Coastal First Nations are good examples (see for example, Atleo et al., 2002; Goetze, 2005; Low & Shaw, 2012; Takeda & Røpke, 2010)

⁶⁰ Co-management in the NWT was the result of land claims negotiations, not conflict over the extraction of natural resources directly.

⁶¹ In the JBNQA and Clayoquot cases, Cree and Nuu-chah-nulth political action signalled that there would be a pragmatic advantage to negotiating processes based on genuine power sharing and Aboriginal consent (Scott, 2005).

2005: 155).⁶² This type of mobilization encourages the negotiation of outcomes that advance local First Nations goals and objectives, thereby avoiding “weak” co-management (Berkes et al., 1991) and “perpetuating the fallacy” (Mulrennan & Scott, 2005: 208) of genuine power sharing that many assume is an inherent product of co-management. Experience suggests this can take time and persistence. On the position of Cree governments after finalizing the James Bay Northern Quebec Agreement, Scott (2005: 136) concludes, “if power is now better shared, it is because power was won and not because it was happily conceded.”

5.3 The potential challenges of co-management in FNFN territory

Based on this assessment of the literature, the FNFN case contains many characteristics observed in other co-management cases that introduced similar forms of environmental protection and First Nations authority. For example, the FNFN have challenged the province’s authority over their territory and decisions they deem are counter to their values and interests, while simultaneously working to clarify their own vision for the land.⁶³ They are building capacity and undertaking projects to better understand and manage industry impacts and hold proponents accountable to environmental and social values. Since 2012, the Nation has developed a water management strategy, expanded the lands department to include research and environmental monitoring programs, worked with proponents to install hydrological and climate monitoring stations, and continue to work within the community to gather traditional use information and identify values. They are working with lawyers, ecologists, hydrologists, archaeologists and negotiators and hosting forums and collaborative workshops bringing together public, experts, industry, government, and other First Nations communities, to table issues, explore solutions and expand public awareness. Interviewees explained these efforts in context with the Nation’s relationship with and responsibility to the land and future generations. Like the Haida and other First Nations, they represent assertions of FNFN authority, and

⁶² In several cases of indigenous-state conflict, governance or policy reform has been won with the help of diverse coalitions of social actors including communities, activists, NGOs, and labour groups (ex. Perreault, 2006; Smith et al., 2007; Takeda & Røpke, 2010).

⁶³ The nation is currently revamping on their 2012 Strategic Land Use Plan, built significantly from community consultation.

symbols of their intention, their disdain for current processes, and the continued marginalization of their interests.

Following the “incident” in Fort Nelson in April 2014 it seemed the government more fully accepted that the FNFN and other First Nations across northern BC could present a real barrier to their LNG goals, and addressing First Nations discontent at least appeared to be a key priority.⁶⁴ The FNFN are now in renewed negotiations over new land protection and management strategies, and are more hopeful of real procedural and structural change.⁶⁵ When considered in the context of existing literature on co-management, the tactics used and current position of the FNFN seems to suggest they are in good standing to negotiate towards co-management that could address their priorities. For example, they are confronting challenges and working across knowledge systems and worldviews. They have organized, mobilized, and continue to sustain pressure on the government and challenge industry’s social license, and in doing so, are progressing (in their own way) along well-trodden paths. Still, my analysis suggests there are other pressing challenges unique to the FNFN case that require consideration beyond what exists in the co-management literature, which speaks to the importance of contextual factors in influencing the outcomes of resource conflict and negotiation.

The FNFN’s experience with shale gas development highlights the physical and political economic complexity of this relatively new industry, which introduces novel challenges and potential barriers to local governance movements that will undoubtedly shape the outcomes of current negotiations. These challenges relate to the ongoing politics of shale gas and LNG in BC, the incentive structure associated with non-renewable resources like shale gas, as opposed to renewables, and the political economy of unconventional shale industries.

⁶⁴ About one month after the “incident”, the Province announced the LNG Environmental Stewardship Initiative (LNGESI): <http://www.newsroom.gov.bc.ca/2014/05/bc-to-engage-with-first-nations-industry-on-eco-stewardship.html>

⁶⁵ In the past several years the FNFN have participated in numerous rounds of government-to-government negotiations amounting to little procedural change.

5.3.1 Shale gas and LNG politics in BC

BC's Natural Gas Strategy (BC MEM, 2012a) and Liquefied Natural Gas Strategy (BC MEM, 2012b) outline the provincial government's plan to become globally competitive exporters of unconventional shale gas-LNG. For nearly a decade, they have supported industry, both in discourse and political action, and taken a pro-development orientation that is arguably unprecedented for a governing party in this province. Praised as a low-carbon replacement for coal-based energy abroad, shale gas-LNG is the heart of the provincial government's political agenda, referred to as a generational opportunity for revenue potential and job creation (BC MEMNG, 2013).⁶⁶ Nearly a decade since its arrival in northeast BC, however, industry subsidies are roughly equal the public revenues derived from its expansion; the government has awarded over a billion dollars in incentives and tax breaks to shale gas companies over the last five years (Nikiforuk, 2014).

Singleton (2000: 7) and others describe "captured" government agencies as those whose "interests are so tightly bound up with those they are charged with regulating" that their ability to represent and serve the broader public interest is jeopardized (Pinkerton, 1992; Nikiforuk, 2010). In order for new collaborative governance processes to function successfully, state partners must prove they are independent and free from control by the corporate sector and capable of representing local community interests (Crabtree & Crabtree-Condor, 2012; Pinkerton, 1992).⁶⁷ As a potential co-management partner, the enthusiasm with which the current government supports this industry is a deeply concerning quality. As several interviewees suggested, co-management requires sincere political will to address important local issues and support processes that are more community-driven and democratic. It is positive that both parties are again in discussion, however, the FNFN have been involved in prior negotiations that were ultimately unsuccessful. It is still too early to tell whether current negotiations will evolve into the substantive shift in governance they seek, but some concern, I argue, is warranted. Co-

⁶⁶ However, both the greenhouse gas emissions and public revenue projections are refuted in recent research (see Lee, 2014; Stephenson et al., 2012).

⁶⁷ Singleton also notes that state agencies engaging in co-management must view "community well-being as a legitimate component of the overall public interest" (Singleton, 2000: 9).

management, or other progressive policy change, seems irreconcilable with the province's economic goals in relation to this industry, and other challenges associated with the industry's unique political economy (Stephenson & Shaw, 2013), which I address next.

5.3.2 Economic challenges and implications

The FNFN's "balanced development" vision is premised on avoiding the boom and bust patterns they observed in the Horn River Basin from around 2008 to 2012. It entails a framework where strategic planning and development thresholds control pace and scale, minimize the negative social and economic instabilities associated with production booms, and mitigate against doing irreparable damage to critical ecosystems. While co-management itself is not novel, by confronting the specific challenges of this industry, I argue the FNFN are attempting something that is altogether unique. In my review of the literature there was not a clear scenario, in Canada or abroad, where co-management (or any form of territorial scale collaborative governance) was implemented to govern a non-renewable resource industry's access to land and water amidst similar contextual challenges.⁶⁸ In Canada, the co-management experience is mostly limited to renewable sectors like forestry (see Goetze, 2005; Smith et al., 2007; Takeda & Røpke, 2010), fisheries (see Kearney et al., 2007; Pomeroy and Berkes, 1997; Singleton, 2000), and wildlife management (see Kendrick, 2003; Kofinas, 2005; Nadasdy, 2003).

I believe the lack of precedent could be explained by some key differences between renewable and non-renewable resource extraction. Renewable resources are *harvested* from a potentially continuous flow of resources from the environment, whereas non-renewables like oil and gas, and minerals, are *extracted* one time from a fixed and finite stock that is eventually exhausted (Schulze, 1974). Capitalist firms pursue, above all else, high profits and high returns on investment for their shareholders, so it is especially advantageous to increase rates of production when the price of any non-renewable

⁶⁸ The only one that somewhat resembles this is the Sahtu claims-based co-management model in the NWT. There are key differences though. Oil and gas development in the Sahtu is truly 'northern' in that it is more remote and smaller scale, thus it interferes less with traditional land use; it is mostly conventional production, and there is little evidence of significant conflict between local communities and producers.

resource is deemed to be high, hence the propensity for boom patterns (Bridge, 2008).⁶⁹ This helps explain, at least in part, the recent trends in shale gas activity in northern BC, an industry whose gas prices are particularly speculative and volatile (Stephenson & Shaw, 2013).⁷⁰ Regrettably, non-renewable economics present real challenges for communities like the FNFN who prefer more stable economic development in their territory.

In terms of the implications for co-management, I see two potential challenges based on recent research, industry discourse and behaviour. The first is the focus of Hughes's (2013) research, which suggests rapid expansion is an inherent and unavoidable aspect of shale gas production: that because well production rates diminish (sometimes rapidly) over time, production levels can only be maintained by constantly building infrastructure and drilling new wells. This "drilling treadmill" (Nikiforuk, 2014) conflicts with the FNFN's rationale for wanting tools like land use planning and cumulative effects assessment. Their intention is to limit growth within a set of spatial and temporal parameters, thereby restricting the continual expansion Hughes indicates is integral to the industry.

The second challenge is that the capital costs of unconventional oil and gas extraction exceed (sometimes significantly) those of conventional fossil fuels (IEA ETSAP, 2010). Further, BC is already one of the most expensive jurisdictions globally (Nikiforuk, 2015). By industry accounts, shale gas production in FNFN territory is marginally profitable, and only feasible under the right combination of price, regulation, and incentives. The veracity of these claims aside, the use of this discourse by proponents has effectively deterred more progressive policy creation, and influenced host governments to lessen regulatory and tax barriers.⁷¹ For example, the Alberta government increased oil and gas

⁶⁹ Similarly, it is rational to leave resources in the ground when they expect prices to rise in the future. This is the Hotelling Rule (Bridge, 2008) describing the non-renewable resource extraction and conservation; it is a key principle in resource economics.

⁷⁰ In 2008, when the North American gas price reached \$13 companies expanded production, domestic gas prices fell to below \$4 due to American over-production and have remained low since.

⁷¹ In BC, for example, potential LNG investors have responded negatively to the government's proposed tax regime for shale gas-LNG. Malaysian oil and gas corporation, Petronas, for example, has threatened to terminate its proposed \$11-billion LNG facility unless it received more tax incentives (Tieleman, 2014).

royalties following its 2007 *Our Fair Share* review. Companies immediately reduced drilling activity, to which the provincial government responded by restoring the public royalty share to even below 2007 levels (IHS, 2010).⁷² Evidence suggests this discourse will likely have greater effect in regions supportive of extraction, like Alberta, often because residents are often familiar with, or economically dependent upon industrial development (Brasier et al., 2013; Stedman et al., 2012). That said, there does appear to be correlation between industry discourse and behaviour. Shale gas activity in host regions across North America began to stagnate when domestic gas prices fell, including the Horn River Basin. Recent reports argue that BC's shale gas-LNG industry is currently not competitive or viable compared to more advanced industries elsewhere (Ernst & Young, 2015; OIES, 2015). In general, recent trends in industry activity and narrative indicates there is at least some truth behind the purported challenges associated with the price dynamics, production costs, and overall profitability of unconventional gas.

While their implications are uncertain, I argue that these challenges pose critical questions concerning the FNFN case. For example, can shale gas development co-exist with a framework that controls pace and scale and limits the expansion companies reportedly to require to maintain production levels and capitalize on high prices? Is the FNFN's co-management vision too restrictive: will it make development prohibitively expensive even if domestic prices increase? Further uncertainty surrounds how companies will respond to governance changes. I expect reactions will be negative, as some major players are already showing signs of struggle and restructuring their investments in northeast BC (Healing, 2014).⁷³ How then will the provincial government handle proponent pressure? Especially given industry is already using its influence to shape provincial shale gas-LNG policy in its favour (Moore, 2014). For the moment, the Liberal government is presenting itself as committed to addressing First Nations concerns. However, the task of getting them to actually act in ways that constrain industry could prove to be very challenging given their heavy political investment in promoting development.

⁷² Drilling levels remained the same in British Columbia, insinuating that the decrease was directly linked to royalty share changes in Alberta.

⁷³ Many operators in northern BC have diverse global investment portfolios.

Ultimately, given these uncertainties, the outcome of the FNFN case is impossible to predict. They are engaging novel challenges with a new industry as they work towards governance reform in their territory. Where communities have brokered agreements around non-renewable resource development in other jurisdictions, the role of government is marginal. O’Faircheallaigh (2013) discusses the “explosion” of impact-benefit and Indigenous land use agreements negotiated directly with extractive firms in Canada, Australia and Latin America in recent decades (see also O’Faircheallaigh, 1998, 2004; O’Faircheallaigh & Corbett, 2005).⁷⁴ The FNFN have already worked with Apache Corps. in the planning and operation of a significant seismic project in the Liard Basin.⁷⁵ From the nation’s perspective the partnership produced some positive outcomes, but I question whether this route alone can address their governance concerns. Industry agreements may empower the nation in relation to some proponent activity, but it is not clear whether or how this could be scaled up to resolve ecological governance, authority, and other colonial tensions for all operations across FNFN territory, particularly when the Nation’s goals become irreconcilable with industry profits (Hayward, 2014).⁷⁶

In sum, the FNFN is seeking specific outcomes through co-management that in many ways resemble past cases where First Nations achieved various measures of success. However, whether the final outcomes they seek can be accommodated may depend on contextual factors over which they have minimal control, like the dynamic political and economic forces influencing shale gas and LNG development in northeast BC. In relation to the FNFN case, the co-management literature is helpful for understanding some of the *possible* outcomes these agreements could broker in terms of ecological governance and empowerment. It also provides broad but critical lessons on the importance of

⁷⁴ These vary greatly in content and scope, and are often limited to a single project or the operations of a single proponent. Generally, their purpose is to minimize negative impacts and share more economic benefit locally.

⁷⁵ The FNFN received funding to build capacity, and install new water and climate monitoring stations in the Liard. FNFN placed staff at the project site to help mitigate or manage impacts to wildlife, and other valued ecosystem and cultural components.

⁷⁶ O’Faircheallaigh (2013) lists a number of other issues with community development agreements (CDAs) related to their enforceability, representation, equity, and legitimacy (as well as a several conditions for positive CDA scenarios).

mobilization and resistance in the process of negotiating the best possible outcomes for communities. However, the FNFN case shows that assessing co-management's potential for success on the ground, demands close attention to context-specific challenges.

6. Conclusion

In this paper I presented empirical results from field-based research with the Fort Nelson First Nation in northeast BC. In order to protect their treaty rights and culture, mitigate environmental destruction, and enact more control over the pace and scale of unconventional shale gas development in their territory, the FNFN is exploring co-management as a new governance model to replace the current permit-by-permit OGC-led process. In co-management they envision a comprehensive framework that employs specific tools like landscape scale planning and management, cumulative effects assessment, expanded environmental monitoring and data collection, and industry compliance and enforcement monitoring, to create more informed, accountable, and ecologically resilient decision-making. They are also seeking a framework that recognizes and enables the exercise of FNFN authority, so governance is grounded in local values and interests, rather than distant political economic agendas. I reviewed the literature on co-management, which suggests co-management has the potential to accomplish these goals for the FNFN, especially given their ability to challenge proponents, and mobilize as a nation around a cohesive land use vision for their territory.

A more thorough analysis of the FNFN case, however, exposes some key contextual challenges. For example, the different incentive structure with non-renewable versus renewable resources, the ideological focus of the current BC government, and the political economy of the industry. These are likely to be determinative of the eventual outcomes, but are less well explored in the co-management literature, which suggests some limitations in this literature when used as a proxy for understanding and conceiving solutions to complex resource conflict. I also argue that these limitations are at least partly indicative of the fact the FNFN are navigating new territory as an Indigenous community attempting to negotiate resolutions to the unique set of challenges posed by

this relatively new, globally influenced, non-renewable extractive industry. As such, the evolving FNFN case is significant for observers interested in co-management or alternative collaborative governance more generally. The outcomes (positive or negative) could hold implications for other communities facing unconventional oil and gas development in Treaty 8 territory and beyond.

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Chapter 4

Conclusions

As a “southerner”—a term synonymous with *distant* and *urban* that is sometimes used by northern residents in reference to outsiders—there is a tendency to make certain assumptions about other regions that, when tested against actual experience, no longer hold water, or are revealed as generalizations of a far more complex reality. At the outset of this research experience I went into the field armed with a set of fairly broad questions that I expected (or at least hoped) would yield definitive answers and lay out tangible solutions to conflict in FNFN territory. As I prepare to finish my degree I have a much deeper and more nuanced understanding of the FNFN case, but many questions remain open as it continues to evolve. Given the energy invested in this research, this lack of clarity at the final hour is a bit unnerving, but given the context it seems fitting. The FNFN and other Treaty 8 communities are facing a suite of incredibly complex challenges, the kind that are long-term and constantly shifting.

I was raised in the bedroom communities of Greater Vancouver, and reside in Victoria. Prior to this master’s project, I had only once travelled to the Fort Nelson area, but for a totally unrelated endeavour. In setting out this time, I certainly had some assumptions of what I might find. For example, I knew the town had a relationship with the resource sector, but while I expected industry to be visible, its ubiquity and entrenchment in the region and community was surprising. The four-hour stretch of Alaska Highway from Fort St. John to Fort Nelson is dotted with signposts marking the leases and infrastructure of some of the most prolific natural gas producers in North America. In Fort Nelson, the same names are emblazoned everywhere: above the doors of the regional offices of oil and gas companies (some of which have now closed), on the walls of sports and recreational facilities, on the sides of trucks in local driveways. The newest buildings are hotels: emblems of the service industry that grew to meet the demand created by the troves of fly-in workers and temporary settlers accompanying the early gas booms. So

much about the town feels transient, but now in retrospect, a lot of this is superficial. Certainly, the boomtown features tell an important part of this remote resource-dependent town's story, and it *is* an industry town through and through. Yet beyond them also lies a deeply rooted and connected community. The FNFN's relationship with the region extends long before these industries arrived, and will outlast them should they come and go, as others have. Other folks too have chosen to settle and take solace in quieter northern living.

I suppose I was also a transient, a temporary settler. I arrived and tried to absorb as much information and perspective as possible over the collective eight weeks spent in Fort Nelson for research purposes, but it was still a short term. I was welcomed by the FNFN lands department and treated kindly by the staff and others in the community whom I was fortunate to engage with (at the band office, at the gas station on reserve, around a fire, on the land). In this thesis, I often reference the connection community members feel towards the land, and the practices and local knowledge at its core. I was fortunate enough get to explore parts of the surrounding landscape, sometimes self-guided, but on a couple of occasions with FNFN members and active land users. The boreal muskeg landscape is beautiful, but it *is* heavily developed; evidence of shale gas development is everywhere. FNFN members try to remain active on the land, but some are deeply concerned that if the industry returns with similar vigour, the remaining spaces available for harvesting and other restorative and regenerative purposes may be threatened.

Throughout this thesis I have noted that the FNFN are not opposed to shale gas and other resource development in their territory, insofar as it respects their treaty rights, and they can continue to sustain healthy relationships with the land and uphold their stewardship responsibilities to future generations. For the Nation, this approach is consistent with the original "peace and sharing" terms Treaty 8 that continues to inform their relationship with the settler community, visitors, resource developers, and others, as long as they come in good faith and respect these principles. From afar, it could be easy to criticize any community's openness to a high profile industry often associated with water contamination, seismic events, and public health risks. However, doing so would lean

towards some problematic assumptions. For example, that the FNFN or other Treaty 8 First Nations were ever given the opportunity to offer or withhold their consent to the industry in the first place, or that alternative means of income are readily available to support community members livelihoods. Further, it isolates the debate to a specific industry without confronting the ongoing colonial realities, and broader political and economic structures and power configurations that authorize industry expansion, and enable the dispossession of lands and resources across First Nations territories in northeast BC.

In this thesis, I avoided debating the merits of fracking, instead choosing to pursue arguments pertaining to the governance and authorization of the industry. It is not that I want to accept or legitimize the provincial government's promotion of shale gas and LNG in BC, as that path carries with it a host of negative implications for local environments, and emissions reductions efforts, for example. Rather, my intention was to support the FNFN's efforts as they seek new ways to confront a globally driven extractive industry by making it more accountable to their community's interests and vision for sustainable local economies and livelihoods. Throughout, I tried to interrogate power dynamics in relation to important governance questions, namely: *how are decisions made, who has the authority to make these decisions, based on what information, and how are they held accountable?* In taking this approach I hoped to engage the crux of conflict, and support the FNFN's efforts towards the eventual implementation of governance conditions that are just, equitable, and representative. The following section reviews the main conclusions from this thesis. I then move on to consider the limitations of this research, future research considerations, and wider implications.

In the second chapter I set out to explore how those involved in shale gas governance at a local level perceive existing governance arrangements. My interview results are largely from the FNFN perspective, and they reveal several flaws in the current governance processes that constrain their ability to participate in ways that allow them to protect their interests, their land, and their treaty rights. I argued that scale is central to these

challenges. First, the permit-by-permit scale of consultation and decision-making excludes First Nations knowledge, and reduces their influence over shale gas development to scales that are inconsequential to the ecosystems and practices they seek to protect. These issues also exposed a number of other flaws in the governance framework, for example, that decisions are not adequately informed, nor are they guided by a land use plan or cumulative effects assessment, processes that in their design would require taking a more integrated and long-term view. Second, the scale of authority within current processes excludes the FNFN from decision-making, and reinforces a colonial scalar regime that poorly accommodates the nation's rights while subjecting them to the power of broader political economic agendas. Ultimately, I argue that governance reform is needed to address current conflict, offer better environmental protection, and to work towards decision-making processes that promote more just and equitable outcomes. The latter goal is contingent upon increasing Treaty 8 First Nations authority over the decisions and development trajectories that directly impact their lands, and by allowing them to determine and craft governance arrangements that from their perspective on the ground, are needed to address critical challenges. The FNFN have constantly pressed the provincial government to confront these issues, and are pursuing specific reforms that are more informed, inclusive, and collaborative. These reforms seem to offer tangible solutions to current environmental governance issues, and while they may be vulnerable to criticism regarding their ability to confront colonial regimes of authority, they could still offer plausible and desirable outcomes. Ultimately, it is important that Indigenous nations in similar circumstances consider how any governance reform confronts, or reinforces oppressive articulations of power.

Chapter three builds on these topics by asking: under what conditions might a more localized, collaborative governance framework like co-management resolve conflict over shale gas development in northeast BC? The chapter is framed by the FNFN's current negotiations with the provincial government over land protection and governance in their territory, where they have forwarded co-management as a possible outcome. In governance reform, interview responses show that the FNFN is trying to address key weaknesses in the ecological governance and management regime, while encouraging a

new culture and character of governance through increased community authority in more inclusive, accountable, and representative decision-making processes. The literature suggests co-management has the *potential* to meet these objectives if the Nation continues to maintain pressure, and mobilize as a community in asserting their vision for governance and land use in their territory. However, successful co-management ultimately hinges on its ability to address context-specific issues. In this case there are a litany, which draws attention to the challenges at hand. In negotiating for collaborative governance in the context of a non-renewable resource industry like shale gas development, the FNFN are navigating seemingly uncharted waters in confronting pressing and dynamic challenges. Their vision of more balanced, sustainable resource development hinges on suppressing powerful pro-development political and economic forces over the long-term. Co-management in this case is also tied to an industry that is notoriously reactionary and accountable in more ways to global markets, distant shareholders, and short-term profit making, than it is to the local regions it targets. Based on this analysis, I argue that the FNFN case points to the importance of engaging contextual challenges and broader systems in envisioning local solutions in places affected by globally organized extractive industries. The Nation *is* moving forward strategically and seeking to influence these wider contexts through resistance, negotiation, and experimentation in novel proponent agreements. However, how the FNFN scenario will unfold is ultimately uncertain, but it will be a very interesting and evocative case to observe.

Ultimately, these conclusions and arguments are based on my own understanding of the case and wider literatures. This research *does* have some distinct limitations. First, the FNFN case is not necessarily representative of other Treaty 8 First Nations' experience with shale gas development in their territories. The perspectives and experiences documented in this research, and the nature of the relationships between actors involved, relate solely to the FNFN, whose approach and territorial vision may differ from others. Garvie & Shaw's (2014) research does suggest that other Treaty 8 First Nations are similarly frustrated with oil and gas consultation processes, so it is possible my chapter two findings apply more broadly to other northeast BC First Nations. Further, while I

would expect at least some of the FNFN's goals and opinions described in chapter could also compare to those of other nations, without a more comparative regional analysis no such assertions can be made.

Second, my interviews primarily encompass the perspectives of individuals associated with the FNFN lands department and elected Chief and Council. I would expect a wider survey would yield much more variation among community members in terms of their opinions on what direction the nation should take (or is taking) in relation to the shale gas industry and resource development in general. Given the Nation's distance from larger economic centres, the extensive history of regional resource development, and the lack of diversity in local employment opportunities, many FNFN members like other Fort Nelson residents, are involved in the various resource industries either through entrepreneurial ventures or direct employment. My experience suggests a wider survey could draw out more nuance and complexity, even points of internal division within the community, than I was able to account for given the scope of this research, and the length of time in the field. However, in seeking "balanced development", the Chief and Council and lands department hope to account for and respect this division as they move forward in negotiations. My interviews and observations suggest they do have a strong base of community support.

The third limitation applies to other perspectives also missing from this research, which currently fails to include the voices of all actors it interrogates. As mentioned in the first chapter, we made efforts to include government and industry staff in this research, however, neither followed through with participation. Their perspectives could have enabled an interesting comparison of responses across groups, perhaps even exposing commonalities in each group's perception of governance challenges and potential conflict resolutions.

Finally, a fourth limitation of this research, which I found was a significant challenge throughout the writing process, is the fact that this thesis is a commentary on an evolving process. In the third chapter I was forced to make assertions about *potential* outcomes of

a case that could completely change course. Similarly, the FNFN's vision, and chosen direction could also shift, especially a particular approach begins to show less promise, or if priorities change over time, over if new information emerges.

However the dust settles, I hope this research will offer helpful insight to the FNFN as the community moves forward in negotiations with the provincial government, and continue to shape their internal strategies in relation to this new industry. In working towards publication, I hope the individual chapters of this thesis will serve as an empirical account of the complex challenges that accompany unconventional shale gas development, while offering governance considerations for impacted communities and policy-makers. These pages contain lessons that could serve other communities debating the implications of opening their doors to the shale gas or other extractive industries. These lessons could also serve communities in similar negotiations, or others seeking to mobilize against more dominant actors and oppressive power structures to retain more control over their own livelihoods.

Throughout the research and writing process I was exposed to new literatures and made connections that ultimately were not pursued to their full extent, either because my data was better suited to the current analysis, or because another direction more closely responded to immediate local challenges. Still, these other literatures informed my interpretation of the FNFN case, especially in relation to broader Indigenous movements pursuing self-determination and justice. I believe exciting new research directions exist for the keen individual should they wish to test the FNFN case in relation to other topics. Based on my observations and others (Garvie & Shaw, 2014), the FNFN's consultation experience strikes me as an especially salient example of the limitations of a "rights-based" discourse (Corntassel, 2008) as a way to identify and protect First Nations interests within a colonial legal framework where the state ultimately retains authority and control over what constitutes an "infringement." The FNFN case shows how rights-based frameworks, when applied at narrow scales, confine the expression of an Indigenous existence to a set of practices, severed from the intimate land-based relationships at their core. Further, these discourses sever the "right" in the present tense,

from the FNFN's responsibility to preserve the conditions that sustain these rights for future generations. In my observation, the pace and scale, the physical complexity of shale gas development, and the scale challenges of the permit-by-permit governance process described in chapter two, especially amplify these struggles. This research also creates space to question *who* really benefits from rights-based consultation in northeast BC, and to advance the argument for more progressive and empowering First Nations-state engagement at territorial scales reflecting the sovereignty that nations enact in relation to their lands. The FNFN have advanced co-management as one means of circumventing a broken consultation process, but exploring Indigenous governance positions may offer alternative perspectives that confront power and engage these challenges in different ways.

On the topic of alternatives, I will conclude with a line of inquiry that remains with me at the final hour. Given what I learned about co-management in constructing the third chapter, both the promise it could offer the FNFN, but also the potential challenges and uncertainties it is mired in, the question that seems worth asking is: what is the alternative to co-management for communities seeking greater control and authority in relation to their lands? Often, co-management becomes the default resolution forwarded in cases where the land use visions of the state and First Nations collide. However, the authority that First Nations achieve in co-management often remains subject to the state, and their interests as well become at least somewhat bound to those of government. Alternatively, communities sometimes choose to engage with industry through agreements that try to address project-related challenges, and the distribution of impacts and benefits. The FNFN have participated in these types of agreements as well, but they also present limitations in that community interests remain either subject to the governments that authorize these industries, or to the interests of profit-seeking corporations. Indigenous governance scholar Glen Coulthard (2013) argues that in both more state-centric and industry-based agreements, communities remain bound to destructive industries and a predatory economy that is "predicated on the perpetual exploitation of the human and non-human world," and "that is entirely at odds with the deep reciprocity that forms the cultural core of many Indigenous peoples' relationships with the land." Coulthard and

others (Alfred & Cornthassel, 2005; Cornthassel, 2008) present ideas as to what an alternative future could look like that over time becomes increasingly less reliant on such industries and economies. Coulthard calls for an “Indigenous political-economic alternative” (Coulthard, 2013) predicated on new economic ventures tied to land-based practices and the revitalization of Indigenous peoples’ connections to the land. He asks how such a local movement could be scaled-up to “produce a transformation in the colonial economy more generally?” I raise these topics out of my own curiosity, and not to suggest this in place of the FNFN’s current governance negotiations. I feel this line of questioning flows somewhat naturally from the conclusions drawn in the third chapter regarding the broader political economic challenges of co-management in BC. Perhaps the outcomes of the FNFN case could act as a proxy for such conversations, as they attempt to temper and make accountable powerful political economic forces. Still, at the conclusion of this research, I believe the FNFN are facing some of the most difficult and pressing issues of our time, as a local community on the frontlines of a new, globally organized fossil fuel industry. Faced with a changing climate and increasingly degraded ecosystems, a wider transition towards more sustainable economies, and socially just and equitable decision-making processes is necessary. We should pay attention to the FNFN’s struggle and learn from whatever outcomes emerge. It represents a local manifestation of a much broader societal challenge.

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Appendix

Appendix A

Interview questions


1. Can you please introduce yourself, and the organization you work for, and talk about your connection to the Horn River Basin?
 - a. How long have you been working in this region?
 - b. What is your role in the decision-making process for land and water use in the Horn River Basin?
2. What is the importance of water in this region?
 - a. What role does water play in your work? (If applicable)
3. What are the challenges related to water use for shale gas development in the Horn River Basin?
 - a. Who is making decisions about water use?
 - b. Is the decision-making process working to protect water resources?
4. What are the strengths and weaknesses of how decisions concerning land and water use permits and licenses are currently being made?
5. Under what conditions would your community/organization support a model for more localized decision-making around water allocation and use in the Horn River Basin?
 - a. What role would your community/organization be able, or be willing to play within such a model?
6. In your opinion, what might some of the advantages and disadvantages be of taking a more localized, collaborative approach to decision-making about water in the Horn River Basin, and northeast BC?
 - a. What challenges would a regional approach be better able to address?
 - b. How would it address those challenges?
7. If a regional and collaborative approach to water use decision-making were put in place, what would it need to achieve in order to be successful?
 - a. How would it need to be structured in order to achieve these things?
8. Do you have any final thoughts or comments you would like to share?

Appendix B Human Research Ethics Board Approval



Human Research Ethics Board
 Office of Research Services
 Administrative Services Building
 PO Box 1700 STN CSC
 Victoria British Columbia V8W 2Y2 Canada
 Tel 250-472-4545, Fax 250-721-8960
 Email ethics@uvic.ca Web www.research.uvic.ca

Certificate of Renewed Approval

PRINCIPAL INVESTIGATOR: Karena Shaw	ETHICS PROTOCOL NUMBER 12-131
UVic STATUS: Faculty	Minimal Risk - Delegated
UVic DEPARTMENT: ENVI	ORIGINAL APPROVAL DATE: 20-Apr-12
	RENEWED ON: 09-Apr-14
	APPROVAL EXPIRY DATE: 19-Apr-15
PROJECT TITLE: Towards Effective Engagement: Assessing Public Engagement in the Development of the Shale Gas Industry in BC	
RESEARCH TEAM MEMBERS: Co-investigator: Dr. Michele-Lee Moore(UVic) Graduate Student/Research Assistants: Matthew Murray (UVic), Christine Twerdoclib (UVic), Kathryn Garvie (UVic)	
DECLARED PROJECT FUNDING: Carbon Management Canada (2011-2013); Water Economics, Governance and Policy Network (2013-2014)	
CONDITIONS OF APPROVAL	
<p>This Certificate of Approval is valid for the above term provided there is no change in the protocol.</p> <p>Modifications To make any changes to the approved research procedures in your study, please submit a "Request for Modification" form. You must receive ethics approval before proceeding with your modified protocol.</p> <p>Renewals Your ethics approval must be current for the period during which you are recruiting participants or collecting data. To renew your protocol, please submit a "Request for Renewal" form before the expiry date on your certificate. You will be sent an emailed reminder prompting you to renew your protocol about six weeks before your expiry date.</p> <p>Project Closures When you have completed all data collection activities and will have no further contact with participants, please notify the Human Research Ethics Board by submitting a "Notice of Project Completion" form.</p>	
Certification	
<p>This certifies that the UVic Human Research Ethics Board has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Participants.</p> <div style="text-align: center;">  <hr style="width: 20%; margin: 0 auto;"/> <p>Dr. Rachael Scarth Associate Vice-President Research Operations</p> </div>	

12-131 Shaw, Karena

Certificate Issued On: 09-Apr-14