

# Critique of Oil Sand Exploitation in Indigenous Community from a Perspective of Political Ecology

Qinghui Zhang \*

Department of Geography, University of British Columbia, Vancouver, Canada

\* Corresponding author: qhz0628@student.ubc.ca

**Abstract.** The high demand of energy and the goal of reducing energy-related pollution emission are both urgent needs in contemporary global discussion, and the topic of sustainable development and the concept of sustainability are integrated through the discussions. Canada is one of the largest oil-producing states due to its large oil sands deposits in Northern regions where is also important reservoir for indigenous communities. The large-scale oil sand extraction by energy corporations and the promotion from governments along with the colonial heritage has caused degradation in vulnerable indigenous communities environmentally, socially, and culturally. This paper adopts a political ecology approach and integrates the study of extractivism and the concepts of consumption and metabolic rift into the case analysis on the power structure underlying the oil sands exploitation in McMurray Metis indigenous community, which provides an insight into unequal and asymmetric power structure among the oil industry, the government, the indigenous community, and the public.

**Keywords:** Political ecology, oil sands exploitation, indigenous community.

## 1. Introduction

The availability of energy has been an important topic since the start of Industrial Revolution. Energy supports our daily lives as the processes of extraction and production of energy also generate a significant number of employment opportunities and economic benefits. However, during the utilization of energy, where the energy sources were extracted and how people live in extraction and processing areas are often ignored. Canada is one of the largest oil-producing states due to its large tar sands deposits, particularly in Northern Canada where a great number of indigenous communities also reside in. In fact, the extraction and transportation of tar sands pose threats to indigenous people ecologically, socially, economically, and culturally [1]. The interactions and reciprocal relationships among governments, transnational corporations, and local communities are some of the main focuses of environmental justice and sustainability during the extraction, processing, and transportation of tar sands.

Parson and Ray [1] have examined how corporate and state entities continue resource colonialism on indigenous communities in Alberta by utilizing the discourse of sustainability as a cover. In their article, they stated that the powerful actors uncritically used the discourse of sustainability to hide unequal power structure and silence political debate, blurring the present colonial power central to the tar sands development project. Similar to the study of power inequality by Parson and Ray, Wanvik [2] investigated the contested energy spaces in Canadian North, and one of his research questions was how to understand the power relationships between the industry, nation, and indigenous communities. He conducted three case analysis which reflect the long-term historical conflicts between government and indigenous communities, the potential to achieve positive collaborations between indigenous communities and other stakeholders that drive beneficial developments and reformations, and the impacts of the non-human agents on the contested energy spaces. Different from the detailed study on specific issues relevant to tar sands, Robbins [3] introduced the political ecology approach and the important idea that political process with unequal distribution of power produces environmental changes and social conditions. One key concept in political ecology is environmental justice, which is defined as both a type of social movement and as a form of analysis [3]. The issue of environmental injustice pays attention to the disempowered, minority communities that are disproportionately posed to hazards. The research of Timoney [4] adapts a totally different

perspective from the previous literatures, and it reveals the physical degradation and losses of wetlands as well as changes in biodiversity in the ecosystem all as results of bitumen exploitation.

This paper provides an introduction of critique on how power imbalance and the ongoing colonialism under neoliberal discourse of sustainability drive the tar sand exploitation in Northern Canada indigenous territory from a perspective of political ecology. The research is based on an analysis of the community of McMurray Metis who live in and around the town of Fort McMurray at the intersection of Athabasca and Clearwater rivers.

## **2. Basic framework of Political Ecology Approach**

The political ecology approach integrates the relationships between political, economic, and social factors and how their impacts stress and change the environment. It attempts to understand how power, politics, and social structures shape the ongoing environmental processes, resource consumption, and social and environmental conflicts. The core of political ecology supposes that the complexity of environmental issues cannot be understood solely by the knowledge of natural science. An integrated analysis of both political and social dimensions interacts with ecological processes to study human society and the human-environment interactions and outcomes. Although this approach still has certain shortcomings during the process of analysis and research, these shortcomings provide valuable references for the subsequent development and improvement of political ecology.

Environmental justice has been a popular topic since the trend of sustainable development and social justice begins. It refers to both social movement and an analysis form, which studies the vulnerable, racial minority communities and urban poor who reside in areas with disproportionate exposures to hazards and risks through mapping, statistics, and sophisticated analysis [3]. Indigenous communities usually reside in areas that are distant from urban areas and experience massive construction in their territories, such as dams, extraction sites, and conservation areas. However, the impacts of construction may receive less attention from the public due to the distance from major populations, and the power relationships and the underlying political, social, and economic structures are often ignored. Therefore, the study on tar sand exploitation in indigenous community requires a careful consideration in the complexity of the background and benefits involved in energy production, the history and temporary relationships among stakeholders, and the interactions across multiple temporal and spatial scales, which are also needed for an analysis on environmental justice.

## **3. Case Analysis of McMurray Metis Community**

### **3.1. Current Situation**

McMurray Metis community lives in and around the boom town of Fort Murray, the urban centre of Wood Buffalo. The community and the town were established as a Hudson's Bay Company trading post in 1870, which nowadays serve as a focal point of Canadian oil sand industry [2]. It is situated in the Athabasca deposit, the largest bitumen deposit in Alberta that covers 50,000 square kilometres of north-eastern Alberta [5]. Fig. 1 provides a reference for bitumen extraction and communities in the Athabasca River Valley in 1986. Since the early twentieth century, the oil exploration has begun, and the growth of Fort McMurray has started from the opening of the Great Canadian Oil Sands plant [2]. The exploitation of oil or tar sands promotes the local development of Fort McMurray, but the accompanied environmental issues and the conflicts between indigenous community and governments rose. Environmental issues include contamination of water sources and soil, leading to unsafe drinking water and poor hygiene. The conflicts are economic, social, and cultural. The projected construction of extraction sites has created difficulties for town planning in population, housing, and infrastructure management [6]. Other socioeconomic impacts of the development on Fort McMurray include increased psychological illness, rising crime rates, infrastructure pressures on a series of facilities, high turnover and mobility, and rapidly increased housing and living costs [6]. Spiritually, there is a strong linkage between indigenous people and their lands as well as the

living species. Extraction of tar sands do not only fragmentize their territory but also threaten the species that share habitat with indigenous people.

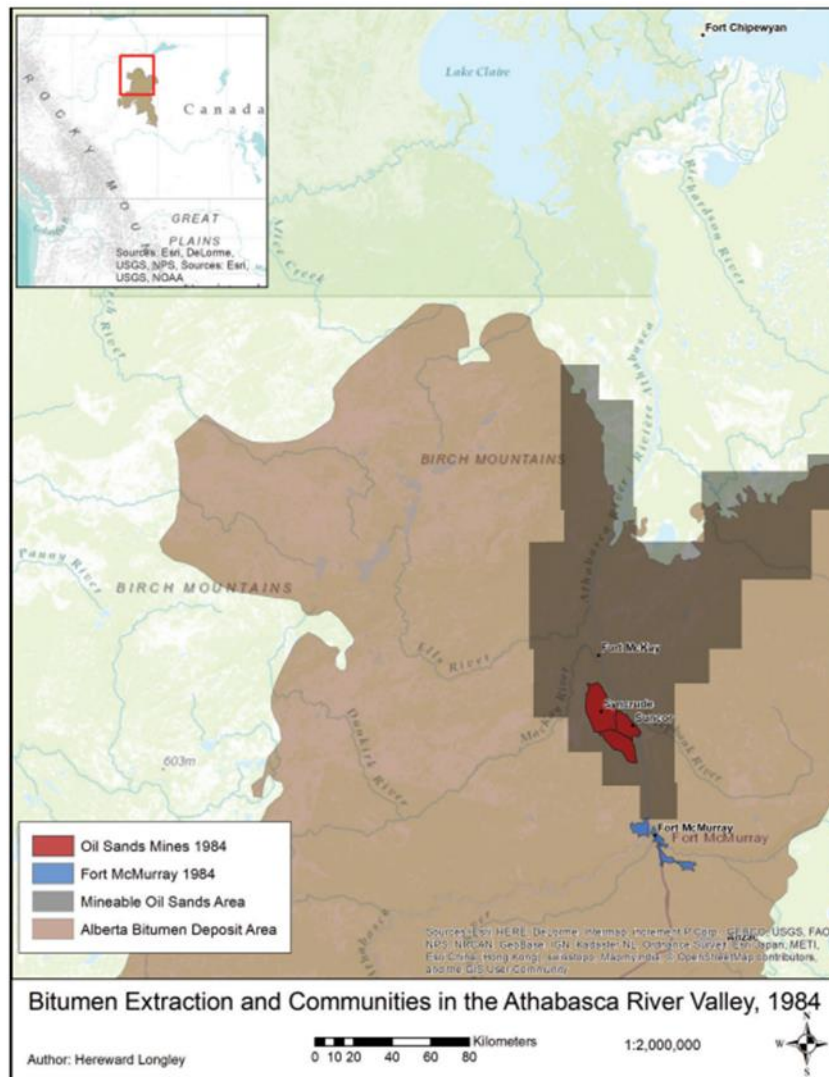


Figure 1. Bitumen Extraction and Communities in the Athabasca River Valley, 1984 [5]

### 3.2. Stakeholders in the Tar Sand Industry

Stakeholders refer to those people or groups that are directly or indirectly crucial to other actors, the results of their interactions are the shared benefits or both positive and negative impacts. Stakeholders in energy industry usually include corporations, governments at various levels, and communities. Before the formation of environmental regulation and environment agencies, the government of Alberta and consortium in oil sands industry did not prioritize the associated environmental costs and consequences. From 1958 to 1966, Sun Oil, Great Canadian Oil Sands Limited (GCOS), and the Syncrude consortium formed by Cities Service, Imperial Oil, and Royalite and Atlantic Richfield Canada continually planned two bitumen extraction plants and considered the extraction and the relevant growth over environmental and social justice [5]. Until the rise of environmental movements and public consciousness of environmentalism by the late 1960s and the 1970s, the Alberta Social Credit government passed the Environment Conservation Act and created the Environment Conservation Authority that aimed at acting on environmental issues. The Progress Conservative party took over the government after the federal election in 1971, simultaneously expanding the powers and scope of the previous government's environmental policy and seeking for a role in the growth of the oil sands industry [7]. The new government bought a ten per cent position in Syncrude with investments from the federal and Ontario governments, and invested in the research,

infrastructure, and loans to oil sands industry, which allowed Alberta government to become both the developer and regulator of the resource [5]. The confrontation and cooperation exist among the environmental agency, the government, and the corporations or consortiums at the same time.

Beside the developer and regulator, another stakeholder is McMurray Metis indigenous community who undertake both the most adverse consequences and possibly, few benefits. Indigenous communities may either experience dramatic economic growth or disadvantaged development depending on whether the communities are urban or rural [2]. The scholars and the oil sands industry used to treat indigenous peoples as “passive victim” rather than “conscious, pragmatic actors in cultural change and adaption” until they have been aware of the ability of indigenous peoples on supporting their own goals and actively reacting to industrial development and processing information external factors [2]. The industrial activities and development lacked the consideration of indigenous ecosystems in Alberta, causing reduced wildfire activity and the increase in risk of large and costly catastrophic, unstable wildfires, which threatened mostly on the rural indigenous communities [2]. In addition, indigenous peoples in RMWB region expressed dissatisfaction on the unequal distribution of consequences that they have received the most adverse impacts such as environmental degradation, reduced employment opportunities and increased heavy transportation activities while the urban core of Fort McMurray benefited the most from taxations [2, 8]. The unequal distribution of benefits and adverse consequences within indigenous communities is another important focus beside the unfair experiences among corporations, governments, and indigenous communities. In addition to the current situation of indigenous communities, the colonial history and the remained effects of colonialism on indigenous peoples are key to understand the temporary conflicts surrounding indigenous sovereignty, environmental justice, and anti-colonialism.

Overall, in terms of power structure, the imbalance does not only exist vertically from governments and corporations to indigenous peoples, but also horizontally among indigenous communities. Also, the inequality remains in a variety of spatial scales from global scale among countries and transnational trades to local scale between urban and rural areas. Another crucial group that the public often ignores but drives the exploitation and the environmental degradation in indigenous territories is the consumer and the general public. The consumption of oil sands and the industrialization leads to metabolic rift, which will be analyzed in detail in the following section.

### **3.3. Political Ecology Approach to Interpret Oil Sands Exploitation**

The political ecology approach holds several assumptions. Two of three assumptions are crucial for the critique of oil sands exploitation in Northern Alberta. First, nature and society are socially constructed and our understanding about them is the result of the interaction and negotiation between people at a particular cultural history. Second, the relationship between nature and society is produced from particular historical relations. In the case of oil sands exploitation, the particular historical relations can refer to the resource colonialism and the sustainable colonialism.

Sustainability, as an emerging signifier, does not hold any substantive meaning until it is provided meaning by the society, which is often carried out by those who dominate power and are influenced by the power structure as a whole. Same to the concept of nature and society, sustainability is socially constructed. The debates and discussions of sustainability often conceals what is being sustained and for whom, while the determination of what is sustainable has been made undemocratically by the unequally powerful roles within the power systems [1]. As a political concept, it often forecloses political debate, which adopts apolitical approach that ignores the underlying political nature and always explains from an objective perspective [1, 3]. Thus, the issue of sustainability surrounding the oil sands exploitation cannot be independently interpreted environmentally but should be integrated to the long-term colonial history and the unjust treatments between the colonial power and the colonized communities.

The conflicts between extraction industries and the indigenous communities can be traced back to the late nineteenth century when the Canadian government and the colonial corporations established the colonial system in indigenous territories and signed the Treaty 8. The homogeneity and the unfair

treaty, taking advantage of indigenous misconceptions about land ownership under the treaties, transformed the power that belonged to indigenous groups into benefits provided by the colonial government to the indigenous groups, depriving them of control and use of the resources in their territories and continuing to exploit and process the local oil sands resources thereafter [1]. Indigenous communities have long been in a vulnerable position in matters of tar sands extraction. Although the position of indigenous communities in decision-making has increased with the development of environmentalism and environmental impact assessments, their participation remains limited and ineffective.

The unsustainable extraction of oil sands hiding behind the discourse of sustainability exerts significant environment and social pressure on indigenous communities and relevant groups. The political ecology is significantly influenced by lessons from a broadly defined political economy. One of the lessons is that “exogenous imposition of unsustainable extractive regimes of accumulation results in environmental and social stress” [3]. The contemporary study of extractivism has provided more detailed analysis of natural resource extraction, particularly in relation to Indigenous Peoples. Chagnon et al. [9] stated that extractivism underwrites and rationalizes socio-ecologically destructive modes of organizing life through subjugation, violence, depletion, and non-reciprocity, and as a concept, it forms a complex composed of self-reinforcing practices, mentalities, and power differentials. A group of scholars have demonstrated that the European colonization and the resulted industrialization have caused extremely unequal labour relations as cheap labors and abundant natural resources fuel up the development of capitalism, while capitalism in turn creates asymmetric power structures and long-term exploitation, which drives the contemporary large-scale extractivism [10-16]. The oil industries, including energy companies and the Canadian government, often claims that oil sands extraction is essential to advancing social and economic development, while concealing or minimizing the actual harm to human health from extraction, the likelihood of potential spills and the status of actual spills during extraction and transportation, and often using the economic benefits of extraction as a cover-up for the environmental and cultural damage suffered by indigenous communities [1]. At the same time, they selectively avoid discussing the disproportionate distribution of benefits and harmful consequences in order to maintain the legitimacy of "sustainable extraction".

Such ignorance of benefits of indigenous community is not simply caused by oil industries but is also tied to the global consumption of oil sands products. As last section demonstrated, the public awareness is one of the key factors that impact decisions of oil industries. Metabolic rift is a concept of Marxist economic theory, which is defined as disruption and imbalance in the regular metabolic relationship between anthropogenic society and the physical environment. The manifestations of metabolic rift are typically spatial, temporal and social. First, the extraction or destruction of a region may be driven by the consumption or dispossession of another region across scales. The local processes can have global impacts while vice versa [17]. The region of consumption can be physically segregated from the region of extraction [18], leading to the ignorance and unconsciousness of the extraction and production processes. Second, capitalist production and consumption usually focuses on short-term benefits and disregards the long-term ecological consequences, causing a series of disruptions environmentally. The affluent communities and regions are the major driver of environment degradation in regions where minority or vulnerable groups reside, particularly those with conflicts (Wiedmann et al., 2020). Socially, the costs and consequences of degradation are disproportionately distributed and marginalized communities and future generations are most vulnerable to adverse impacts while the profits are concentrated among privileged groups. Income, consumption, and social impacts are interrelated, so the inequalities in income can translate into inequalities of impact (Wiedmann et al., 2020). That says groups with consumption ability are usually not aware of the unequal distribution of costs and the consequent vulnerability and marginalization in the regions of production. Adams [17] advocates that the consequences of overconsumption and environmental change can be understood in terms of the distribution of economic benefits and costs and the phenomenon of social vulnerability and marginalization, which are all revolved around

capitalism. The political-ecological interpretation of metabolic rift calls for adjusting the unsustainability of the current capitalist extractivism.

#### 4. Conclusion

This paper conducted an overview of oil sands exploitation in Northern Alberta and analyzed the power structure underlying the unjust exploitation in the McMurray Metis indigenous community. The analysis and critique adapted a political ecology approach, integrating the study of extractivism and the concept of consumption and metabolic rift in combination to spatial and temporal scales, which provides an insight to unequal and asymmetric power structure among the oil industry, the government, the indigenous community, and the public. The development of oil industry has brought economic and social benefits to local communities, but the ecology and the environment are ignored and sacrificed. Sustainability, as a popular topic in international discourse and social discussion, has been involved in every aspect of our daily lives, while the construction of the concept of sustainability has been dominated by the top of power pyramid, and the use of sustainability as an excuse or reason for rationalization of extractivism may mislead the community and cause irreversible consequences.

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