

# Planning A "Cultural Center" for Athabasca Oil Sand Mining Region in Canada:

## Establishing A Cultural Ground for Techniques of Reclamation in Fort Mckay First Nation

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### Abstract

*In order to address the environmental and cultural issues brought on by heavy resource extraction, this article examines the planning of a "Cultural Center" for the Athabasca Oil Sand Mining Region (AOSMR) within Fort McKay First Nation (FMFN). The project, which draws inspiration from Baku's urban planning paradigm, aims to achieve regional harmony by integrating both industrial and natural landscapes in a balanced development approach. There are three primary centers identified: Fort McKay, Fort McMurray, and Fort Chipewyan. Fort McKay is positioned as the cultural center to meet the social and cultural needs of the indigenous community. At the heart of this idea is the construction of a "non-stop tailings pond," which combines cultural practices and reclamation to create a dual-use landscape that promotes indigenous customs and ecological restoration. The idea of the "Toxic Sublime," which turns contaminated industrial areas into places of cultural significance, further strengthens this strategy. The design promotes sustainable practices, indigenous land use, and "community capitalism" that honors both regional customs and the demands of the global market. The strategy's ultimate goal is to combine reclamation and cultural reoccupation to build a resilient and culturally thriving future for Fort McKay.*

### Keywords

*Athabasca oil sands, Fort McKay First Nation, reclamation, cultural hub, regional planning, toxic sublime*

## 1. Regional Scope and Planning Models: From Baku to Athabasca

### 1.1. The Regional Complex: Integrating Urban and Natural Landscapes

In *the Oil City of Socialist Man*, Eve Blau introduced a model for viewing Baku through a regional lens. During the city planning of 1969–1973, Baku was conceptualized as an urban region comprising an integrated system of production and reproduction. The plan aimed to balance the distribution of people, services, and goods through new towns, satellite cities, and existing urban hubs, with municipal and industrial centers interconnected by small clusters of nearby neighborhoods. An essential component of this vision was the establishment of "vacation zones" with holiday homes, tourist sites, sanatoria, and health facilities, which were seen as integral parts of the metropolitan area (Blau, 2018).

The case of Baku suggests several regional planning principles that resonate in resource extraction contexts, like the Athabasca Oil Sand Mining Region (AOSMR) and its Fort McKay First Nation (FMFN). In the article *The Regional Framework of Civilization*, Lewis Mumford's framework offers insights on the concept of "regional planning," precisely in contrast with "metropolitan planning" (Mumford, 1995). Applied to the realities of AOSMR and FMFN, this framework supports exploring the potential for regional planning to create distinct identities within the region.

Regional planning is characterized by its "constitution." It alludes to integrating permanent rural areas, cities, and villages into the regional complex. Unlike metropolitan planning, which views the surrounding open country as eventually being eaten by human expansion, regional planning seeks to maintain a balance between the urban setting and the surrounding agricultural and natural environment. Regional planners recognize the value of easy access to the city for people living in rural areas and reasonable access to the countryside for the culture and education of city dwellers. Based on this idea, regional planning starts with a regional assessment. Instead of concentrating on the city as a whole, it seeks to maximize the utilization of all of its resources. This approach doesn't always require decentralization or homogeneous urban sprawl across the region. A portion of the population may be relocated from crowded metropolitan areas to more beneficial locations, nevertheless (Mumford, 1995).

This definition makes the Athabasca Oil Sand area, which includes the city of Fort McMurray, the community of Fort McKay, and the surrounding forest land rich in oil sands, a region in the northeastern part of the Canadian province of Alberta (Figure 1). In the late 1950s, the area was a wilderness outpost with only a few hundred people living there, mostly working as fur trappers and salt miners. However, the population of the Fort McMurray boomtown and the surrounding area, known as the Regional Municipality of Wood Buffalo, increased significantly to 37,222 by 1996. A 30,504-person "shadow population" who resided in work camps constructed by Oil Sand Companies was among the 106,059 residents as of 2021. The village made a great effort to house and serve the migrant workers, many of whom came from Eastern Canada, particularly Newfoundland. Fort McMurray became an urban service area of Wood Buffalo after losing its municipal status in 1995 (Regional Municipality of Wood Buffalo, 2021).

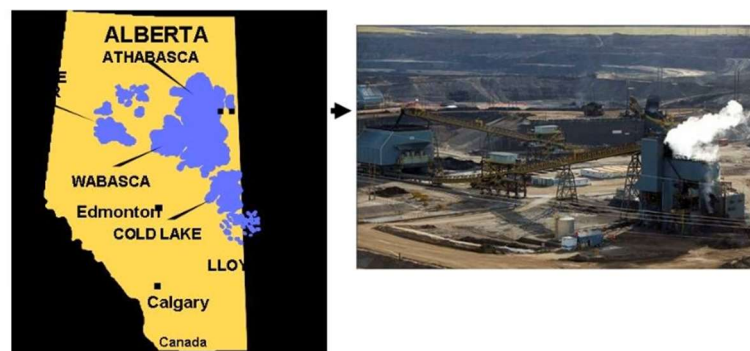


Figure 1. Athabasca Oil Sand area. Source: "Athabasca Oil Sands: Environmental and Societal Impacts," Eugene Dembicki, Canadian Heavy Oil Association, 2007.

## 1.2. Balanced Environment and Stable Life

The commitment of regional planning to preserving a stable way of life and a healthy environment is another essential component. Over the course of the last century's land development and urbanization, the ideas of stability and balance were overlooked. A strong focus on extracting coal and iron from the earth while optimizing returns for investors led to the development of coal agglomerations and financial metropolises. Unfortunately, keeping pure, picturesque landscapes was sacrificed in order to achieve these goals. These settlements produced unprecedented amounts of coal, textiles, pig iron, chemicals, and

money, but they also produced a startling quantity of filth, depravity, and human suffering, in contrast to claims of progress and enlightenment (Mumford, 1995). These disparities and adverse impacts are also present in the Athabasca Oil Sand Mining Region. For the First American villages of Athabasca, the oil sands industry is a major source of income. The movement of materials between Canada and the states across the world is increasing (Nikiforuk, 2010). Large tailings ponds are used to recycle tailings slurry at mining operations. The four strata of the slurry are topped and bottomed by sand and water (Figure 2) (Oil Sands Magazine, 2021). Super hazardous tailings will be banned for 150 years in the meantime. However, the Fort McKay First Nation region, which is encircled by mining operations, is the site of major disputes. In addition to causing an increase in pollution and health problems, the growth of tailings ponds between 1975 and 2020 also resulted in the destruction of lands and their traditional uses, including hunting, trapping, gathering, and studying (Figure 3). These activities were the foundations of Fort Mackay First Americans' culture and subsistence methods.



Figure 2. Tailings Ponds in Alberta, Canada. Source: National Geographic Photo of the Day, 2024.

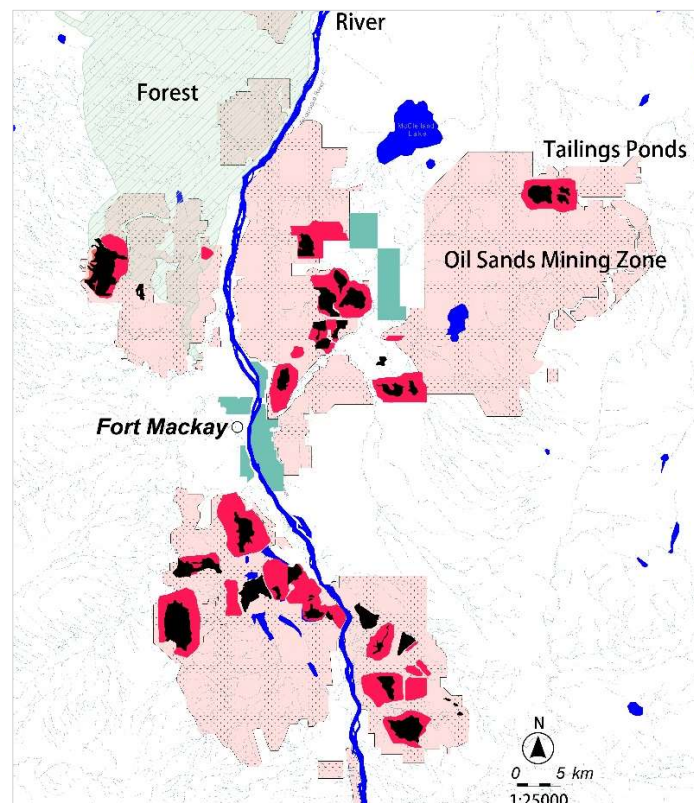


Figure 3. Map of Oil Sands Operations Indicating Surface Mines and Tailings Ponds Locations. Source: Author.

### 1.3. The Regional City: New Norms for Sustainable Development

The solution to the question, "What is the proper size of the city?" is the final point of regional planning. Lewis Mumford argues that the size of a city is tied to the institutions and services to be serviced rather than being clearly defined by its current or potential boundary lines or by a superficial area to be filled. The farms, marketplaces, and industries that support the city's existence, as well as the institutions that support the cultural and educational lives of its residents, define it. Civic institutions and population are closely related; more institutions are needed to meet the needs of increasing populations. Thanks to improvements in communication and transportation, cities may now concentrate on certain activities instead of trying to satisfy every possible requirement. There is no compelling reason for any city to attempt to meet every human need given the state of communication and transportation today. This suggests that the new regional model will be made up of interlinked municipalities that are united by a regional governing body to form joint ventures and are divided by permanent farmlands and green areas. Every city would have all the necessary local facilities to sustain its operational existence, including clubs, churches, theaters, auditoriums, schools, and local marketplaces. Additionally, each center would focus on a particular cultural or social institution, such a university in one, a radio broadcasting station in another, or a museum of natural history in a third. This new kind of city model is made possible by the simultaneous elimination of the necessity for ongoing urban sprawl. No city would strive to be the regional hub for everything, but each city might be able to act as a regional hub for at least one function (Mumford, 1995).

Three distinct centers—Fort McKay, Fort McMurray, and Fort Chipewyan—do not exhibit this model for the Athabasca Oil Sand Mining Region (Figure 4). There is an urgent need for a center that focuses on the social and cultural life of First Americans. More significantly, regional planners can assist in making this a reality. Lewis Mumford stated that the regional planner's goal is to "create a new pattern of regional and civic activities and to establish new norms of city growth." One of the main responsibilities of the regional planner is to identify these different norms, connect them to civic duties, and implement them in communities (Mumford, 1995). Thus, the following hypothesis is developed in order to improve this region's prospects through regional planning: Fort McKay First Nation is located in the middle of the region, encircled by many tailings ponds. There is a chance to empower the First American people and create a cultural center in the Athabasca Oil Sand Mining Region by reclaiming these tailings ponds and giving the land back to the community.

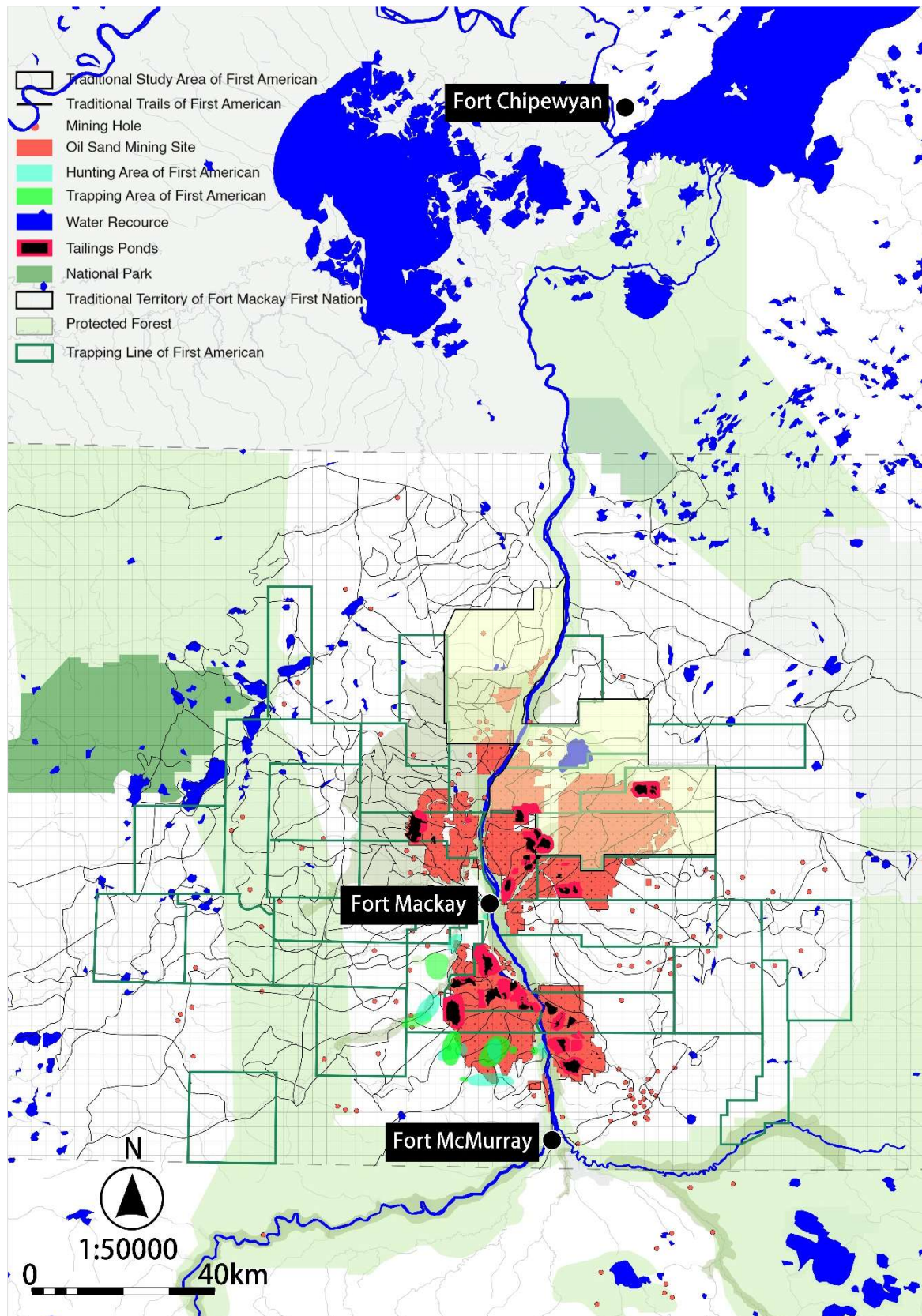


Figure 4. Community of Fort McKay, Fort McMurray, and Fort Chipewyan in Athabasca Oil Sand Mining Region. Source: Author.

#### 1.4. Respect for New and Emergent Elements in Our Civilization

Regional planning sets itself apart from metropolitan planning by acknowledging new and emerging societal elements. The advent of modern utilities such as the radio, moving pictures, airplanes, telephones, electric power, and automobiles have increased the potential benefits of the region as a whole compared to the congested metropolis. These instruments have removed the unique advantage of densely populated areas, and their benefits are now distributed equally. This reason supports the regional planner's interest in small-scale communities, as they offer greater flexibility, ease of adaptation to new situations, and faster utilization of the latest technological advancements. However, this is only feasible if there is intelligent leadership in place to take command (Mumford, 1968).

Back to the Athabasca Oil Sand Mining Region, the cold weather, vast forests, and mobile populations make it easy for new technologies to be used in regional planning. Besides cars, airplanes are the most used transportation in this area. Different oil sand companies often have small airfields within their fields to make commuting easier for employees within the region. At the same time, First Americans could take these planes to remote forests, like Moose Lake and Buffalo Lake, for hunting, fishing, and other cultural practices. Thus, “fly in, fly out” becomes a promising transportation mode for short journeys within the region. Imagine a future where Fort McKay's oil sands are recycled, but each small airport is retained as transportation infrastructure for this cultural center — First Americans from across the region can easily reach and practice their culture here (Dorow and Jean, 2022).

## 2. Indigenous Culture and Environmental Sustainability

### 2.1. Forest-Based Culture and Traditional Land Use

Understanding the forest-based traditions that form the Fort McKay First Nation's cultural foundation is essential to building a cultural center in AOSMR. The urban, political, and ecological consequences that are concurrently produced at other scales by the same processes—all of which are closely related to human agency—are invariably overlooked by Lewis Mumford's argument, even if it has solidified a specific vision of the urban outside around the scale of “region.” Another question that must be addressed in order to create a culture center in the Athabasca Oil Sand Mining Region is: What is the culture of Fort McKay? To respond to this topic, one must comprehend the First American's natural home, the forest, from which they have historically farmed their means of subsistence as well as shaped a modern political ecology practice.



Figure 5. Fort McKay Cultural Model. Source: The Human Environment Group in Canada, 2009.

The idea of "Cultural Keystone Species" (CKS) sheds light on Fort McKay First Nation's forest-based culture (Garibaldi, 2009). Certain plants and animals at Fort McKay are essential for sustenance and cultural identity, influencing storytelling, spiritual rituals, and social norms, much like salmon is for the Northwest Coast peoples and bison is for the Plains tribes (Figure 5) (Human Environment Group, 2009). By integrating themselves into everyday life and cultural narratives, these animals have an impact on environmental philosophy and resource management. Moose, caribou, beaver, and birch can be found in the coniferous and deciduous forests and muskegs of Fort McKay's boreal forest. These grounds are essential to Fort McKay's history because they provide food, medicine, supplies, and water. However, these landscapes are undergoing substantial change due to the industrial push for oil sands extraction, which has an impact on both Indigenous land use patterns established since the growth of the fur trade in the 17th century and ecological integrity (Garibaldi, 2009).

An excellent resource for Fort McKay is Jose R. Oliver's *The Archaeology of Forest Foraging and Agricultural Production in Amazonia*, which provides an illustration of how to comprehend the agricultural habitat and associated cosmology in the prehistoric Amazon Forest. The article defines a "agricultural plot" as a micro-habitat that has been systematically altered and tended by humans. The "natural habitat" is nevertheless greatly impacted by non-human elements such soil chemistry, creatures, microorganisms, and climate. Depending on the area and time, the extent of human-induced disruption can vary widely, from biotic circumstances that may be hard to notice by Western standards to nearly undetectable changes. To comprehend the development of Indigenous agricultural knowledge and farming technology, it is essential to compare the natural habitat with the manipulated and modified agricultural ecosystem (Oliver, 2008).

As the author pointed out, "'agricultural potential' is not something inherent in nature when we consider human agency." The word "culture" is part of the notion. According to Oliver (2008), "the tropical forest is not a homogeneous entity but rather a complex ecological mosaic offering significantly different potential for its inhabitants." It alludes to the fact that different agroeconomic systems based on indigenous peoples of the Amazonian rainforest have evolved in distinct macro-habitats. All upland rainforest communities have a mutually beneficial connection with plants, animals, and resources that follow sustainable ecological principles, despite variations in their dietary tactics. They see themselves as an integral part of the ecosystem rather than as being above the natural order. The forest-based cultural heritage of Fort McKay, which is firmly anchored in the rootedness, rhythm of nature, and reverence of the forest land, is equally subject to such reasoning and ideals. Therefore, it is possible to view the Fort McKay First American

community's traditional land usage and various harvesting practices as a depiction of their traditional culture.

## 2.2. Community Capitalism: Economic Models Rooted in Indigenous Practices

Bottom-up Community Capitalism is another aspect of Amazon that can be used as a guide for Fort McKay. Indigenous communities' economies range from micro and community levels to the oil extraction sites in Amazonia. In communes like Añangu, which have effectively established their environmental tourism and related land management, labor organization, and infrastructure building without sacrificing their cultural and ecological legacy, local and worldwide market circuits are integrated. A comparatively optimal stage of community capitalism is the trans-scalar economic ecosystem created in the agglomeration process of Amazonia villages, which links the regional and the global (Durán Calisto, 2018).

Community capitalism has become a tactic in Fort McKay to deal with the significant cultural and environmental effects of the oil sands sector (Flanagan, 2018). The approach taken by Fort McKay has focused on developing business relationships with oil corporations, in contrast to Añangu's ecotourism model in Amazonia, which balances economic activity with ecological preservation. Through the Fort McKay Group of Companies, which supports oil sands operations logistically and operationally, the community has established an economic base since 1986. In addition to creating jobs locally and abroad and bringing in a sizable amount of tax money for the Canadian government, these endeavors strengthen the local economy. Due to the presence of 13 major operations within a 50-kilometer radius, oil sands mining, which started in the Fort McKay area in 1964 with Suncor Energy's development, has brought about considerable landscape changes, economic gains, and cultural issues. Areas used for hunting, fishing, and collecting have changed, affecting traditional customs and raising health issues. Because of the environmental damage and industrial operations occurring on or close to holy and historically significant locations, the community has greater incidence of respiratory problems, stress, and a sense of cultural alienation from their land. Residents of Fort McKay face a difficult balancing act as a result of this type of community capitalism, as many struggle to maintain their traditional way of life while also finding full-time work (Westman et al., 2019). The issue highlights the necessity for reclamation initiatives to preserve culturally significant species and respect Indigenous ties to the land, as it represents a complex trade-off between economic survival and the preservation of Fort McKay's cultural heritage (Garibaldi, 2009).

## 3. Transforming Toxic Landscapes: Toward a Cultural Ground for Reclamation

### 3.1. The Aesthetic of Toxic Sublime and Ethical Dilemmas

The "Toxic Sublime" concept, which depicts industrial landscapes that are both aesthetically stunning and fundamentally damaging (Figure 6), captures the complex moral and aesthetic dilemmas raised by the environmental impact of the oil sands industry near Fort McKay (Peeples, 2011). As per this hypothesis, even if these landscapes endure a lot of pain, their bare, almost majestic aspect is revealed from overhead views that emphasize their grandeur and intricate features. These powerful images, however, often hide the continuous destruction inflicted on neighboring towns. According to Indigenous Climate Action (2024), these distant, dehumanizing images do not adequately depict the severe health, environmental, and cultural impacts that the toxicity directly affects vulnerable groups, especially Indigenous communities.



**Figure 6. Tails Pond #2, Wesselton Diamond Mine, Kimberley, Northern Cape, South Africa. Source: Edward Burtynsky, 2018.**

While recognizing the environmental implications of these landscapes, the initiative suggests that such "toxic" sites might be converted into places of cultural significance, reestablishing Fort McKay First Nation's connection to its history and the environment. Seeing these places' beauty and peril via the "Toxic Sublime" lens encourages a new approach to regional planning that transforms contaminated landscapes into cultural spaces that respect Indigenous heritage. Here, industrial trash is not only hidden but also incorporated into landscapes that hold cultural significance, making a strong statement about adaptability and resilience (Garibaldi, 2009).

The ethical dilemma of striking a balance between acknowledging the harm done and respecting cultural values arises when a cultural center is built among these altered environments (Roncken, 2018). While businesses may take pride in the aesthetic impact of their industrial sites as representations of their manufacturing prowess, an assessment of these sites' aesthetic value must also take into account the suffering that the impacted populace face. A dedication to maintaining Indigenous ties to the land in the face of continuous industrial impacts is strengthened by converting these polluted sites into places that honor cultural history and serve as a reminder of environmental sacrifices.

This situation also relates to Lewis Mumford's assertion that regional planning is an issue in the Regional Framework of Civilization. The environment was neither lively, instructive, or recreational. He said, "We created an environment that in part—its inefficiencies were so great that one must stress this phrase—in part was good for machines and money-making: but it was not good for men." He continued after the lumber cutter had decimated the Appalachian forests, the pioneer had stripped the soil, and the miner had exhausted his mine. Mumford (1995) asserted that "all these social types left rack and ruin behind them." The regional planner should be aware that a society cannot endure as an unstable and itinerant one. An established way of life focused on the constant resupply and care of the environment is necessary for a sustainable lifestyle. Regional planning, which involves a balanced social life and resource usage, facilitates the settlement of an area. It is impossible to achieve such equilibrium in an unbalanced environment.

### 3.2. The Toxic as Habitat: Creating a Non-Stop Tailings Pond

Thus, from a regional planning scope, the project, viewing "toxic as cure," seeks to use the environmental impacts of the oil sands industry as a foundation for ecological and cultural restoration. The severe ecological damage caused by oil sand extraction has enriched global markets but devastated local ecosystems and Indigenous ways of life. Reclaiming these sites as cultural grounds, the proposal aims to reconnect Fort McKay First Nation with its heritage and ecology, bridging industrial recovery and Indigenous cultural values.

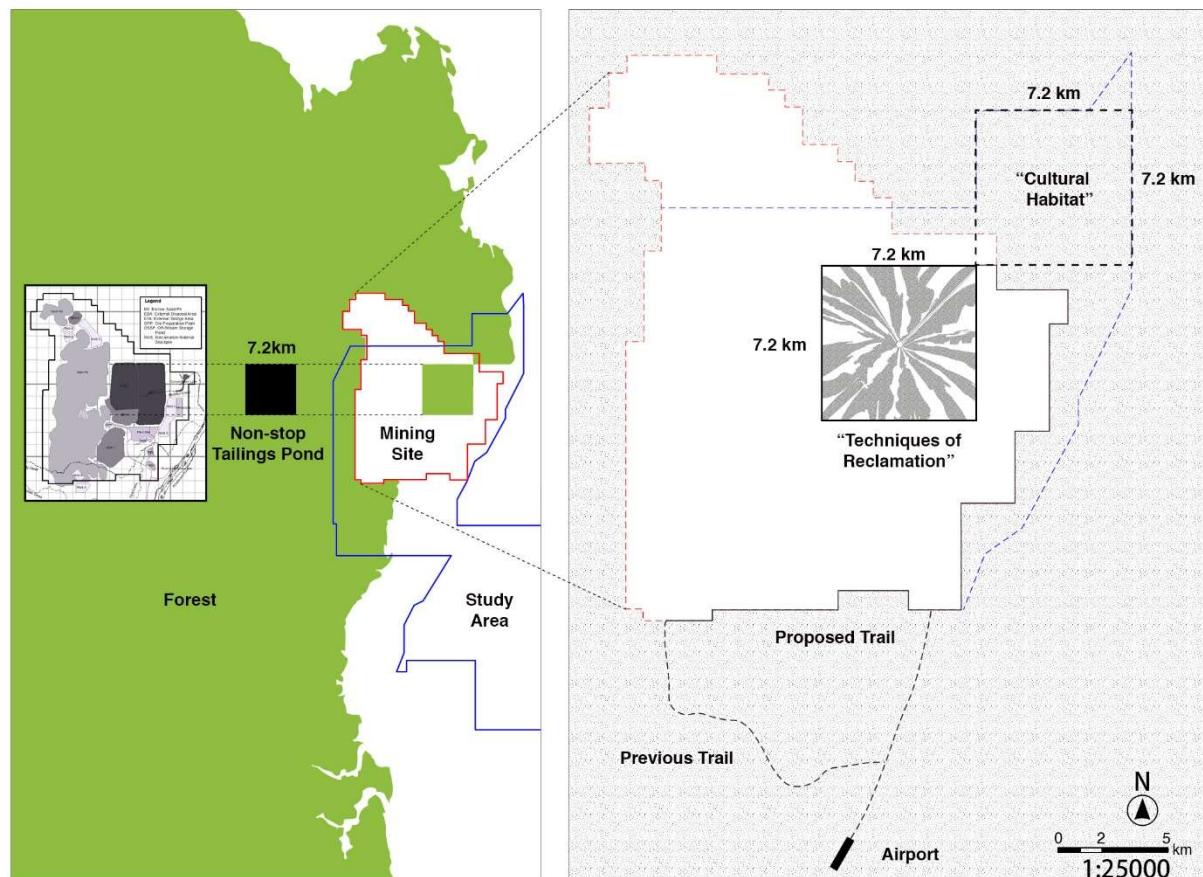


Figure 7. Area plan. Source: Author.

The main tactic is around a "non-stop tailings pond," which is a continuous reclamation method that combines ecological restoration, cultural reoccupation, and mining operations. This idea aims to create a dual-use landscape that supports ecological recovery and functions as a cultural place by transforming a 7.2-square-kilometer tailings pond in the northern forest close to Fort McKay (Government of Alberta, 2018). To reclaim the tailings pond area, vegetation would be transplanted from a "twin landscape" in the forest, resulting in a coordinated, ongoing restoration process (Figure 7).

In order to create a cultural center that balances Indigenous and industrial temporal cycles, the proposal makes use of the common idea of circular time. Reclamation for the oil sands sector occurs 50 years after closure, but traditional cultural processes for First Nations are guided by seasonal cycles (Figure 8). These rhythms are combined in the "non-stop tailings pond," which permits mining, reclamation, and cultural pursuits to coexist inside a common "time circle" (Sobkowicz, 2013).

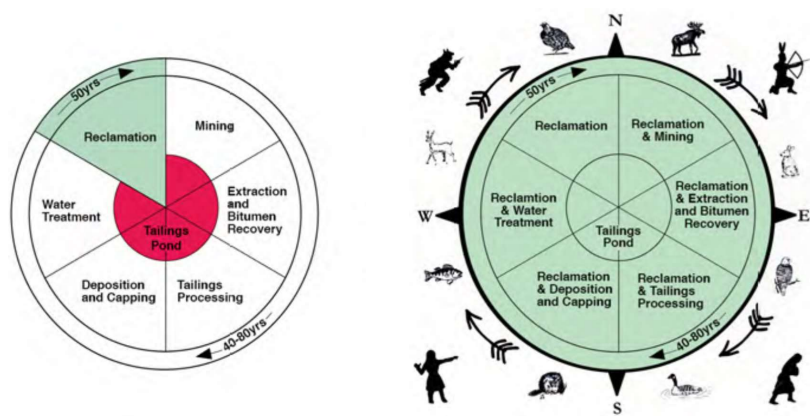


Figure 8. Time circle of the “Non-stop tailings pond”. Source: Author.

3.3. Twin Landscapes: Reclaiming and Revitalizing Cultural and Ecological Spaces

A twin landscape will be developed in neighboring forests to aid reclamation. It has the ultimate goal of becoming a cultural center for Fort McKay First Nation. Only the community will have access to these areas, which will be reachable by planes that oil corporations offer. Locals would follow paths, spending time on customary activities like hunting and trapping before heading back home. This strategy offers a place for Fort McKay to resume customary practices in a restored ecosystem while honoring ecological and cultural elements.

Reclamation is a technical undertaking that combines ecological and cultural elements. The plan is to use reclamation methods that cover the contaminated areas as much as possible. In order to create an ecotone grid that adjusts to the territories of different species, trees will be moved from the twin forest to the tailings pond. The tailings ponds can be reclaimed in a circular fashion thanks to this synchronous process, and branching logging pathways produce different biological zones and a diverse cultural environment (Figure 9) (Sobkowicz et al., 2013).

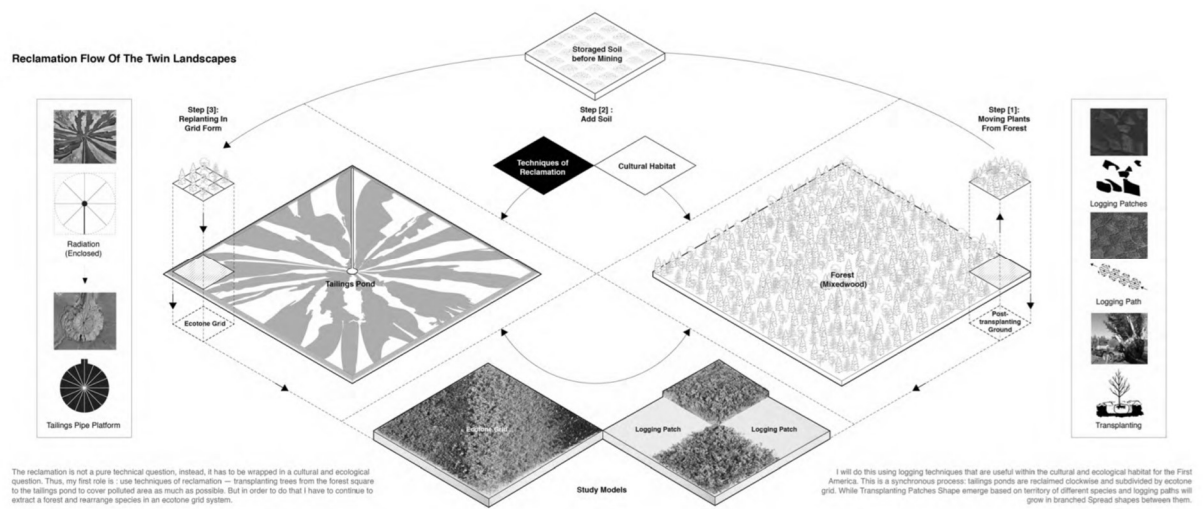


Figure 9. Reclamation techniques. Source: Author.

According to the "Strategic Plan of Twin Landscapes," the forest and tailings pond will change dynamically over a 45-year period. These two landscapes would be established by initial reclamation and cultural reconstruction, and the ecological and cultural loop would be gradually altered by the return of animals. With a center circle platform that transforms from an industrial slurry pipe to a meeting place for Fort

McKay inhabitants, the Ecotone Grid offers a habitat for the tailings pond that is home to a variety of species and hues. Grid boundaries are blurred in the restoration phase, signifying the gradual reclaiming of nature while maintaining historical memories of previous pollution (Figure 10).

The project establishes cultural ecosystems in the forest that give priority to Indigenous people and wildlife while restricting access for outsiders. Using carefully thought-out logging methods, the habitat will be developed to facilitate moose and bison hunting and trapping based on community input. Three primary elements are involved in this process: first, traditional logging patterns must be followed to allow light to reach the forest floor; second, crops and bushes must be planted along the margins to draw animals; and third, routes must be blocked with vegetation to prevent non-residents from accessing the area. By doing these actions, Fort McKay's cultural heritage is preserved through a sustainable cycle of extraction, replanting, and track maintenance (Oil Sands Monitoring Program, 2019).

The idea of "tree islands," which are tiny, 10- to 100-meter-wide clumps of trees left in the middle of each forest area, is crucial to this process. In addition to providing people of Fort McKay with a way to track the decline of biodiversity, these modular "islands" draw wildlife and improve the habitat for animals like bison and moose.

The Fort McKay First Nation can modify this strategic plan in accordance with their extensive knowledge of the forest and customs, as it is a flexible framework rather than a strict master plan. By giving the community the ability to actively manage and shape the landscape, it promotes a cooperative reclamation strategy that honors Indigenous agency, cultural history, and ecological resilience.

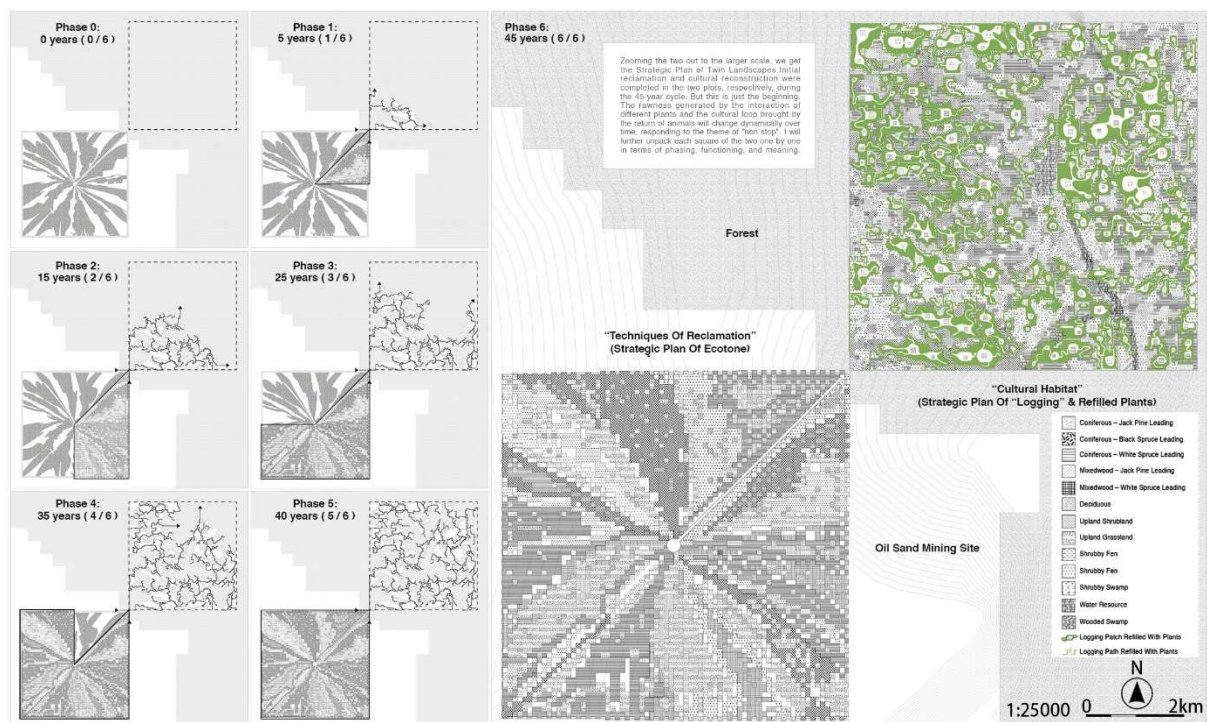


Figure 10. Strategic Plan of Twin Landscapes. Source: Author.

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