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Determinants of Success: the Atlantic First Nations Water Authority

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ABSTRACT

Water security and access within First Nations communities entails a complex set of issues. However, this does not excuse government authorities' inadequacies to address the inequity among Indigenous and non-Indigenous peoples in Canada regarding access to safe water. The Human Rights Watch describes access to safe drinking water "as a fundamental human right easily enjoyed by most Canadians" (Human Rights Watch 2016), and one that is integral to health and wellbeing. Many Indigenous communities have long been lacking access to clean, potable water which has many socio-economic implications. In a 2012 article written by White et al., they articulate that "looking to the future… may lead to the development of an Indigenous water authority" (2012:17). Thus, just as White et al. predicted, the complexities of water access within Indigenous communities have propelled the Atlantic First Nations to establish their own Indigenous led, federally funded water authority to serve participating communities in their region of Canada in Nova Scotia, Newfoundland, New Brunswick, and Prince Edward Island. Through an inductive document analysis of publicly available information, a comparison of this innovative water authority to the OECD's Water Governance Indicator Framework will be conducted. This analysis will ascertain whether the Atlantic First Nations Water Authority will be successful in providing water security to their communities, as it relates to the OECD's recommendations.

CONTENTS

LIST OF FIGURES

INTRODUCTION

Many First Nations reserves in Canada lack access to clean water due to various barriers that are deeply rooted in a history of colonization and disregard of Indigenous rights. Although the 2016 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) sought to end this situation among Indigenous peoples globally, UNDRIP is not yet "enforceable in Canadian Domestic Law" (Institute for Investigative Journalism 2021) and so the issue of inequitable water access persists. For instance, although "water is integral to the cultural, social, and economic survival of First Nations peoples as it permeates every aspect of their lives" (von der Porten and de Loe 2010:8), as of July 2021, there are 52 long-term drinking water advisories in effect among Indigenous communities in Canada (Indigenous Services Canada 2021).

The Atlantic First Nations, located in four provinces on the east coast of Canada, are not among these 52 communities. Instead, they are exploring new governance structures to ensure that their communities are able to sustain long-term access to clean water. According to Nielsen, Daniels, Pickles, Cerkow, and Bolivar, "as of 2019, Atlantic First Nations have resolved outstanding water advisories which indicates that they are ready for a transfer of responsibilities from Canada to the AFNWA" (2021:17). A transfer of responsibility from the Government of Canada to the Atlantic First Nations Water Authority is essential to ending long-term water instability. The current water governance regime is too restrictive because it leaves "Chief and council with no legislated comprehensive powers related to water management" (von der Porten and de Loe 2010:5).

The intention of this paper is to evaluate the Atlantic First Nations Water Authority's governance framework by assessing it against the Organisation for Economic Co-operation and Development's (OECD) recommendations for effective water governance. It aims to explore how this First Nations-led authority might help solve water insecurity, which in turn might encourage other communities to adopt this framework. This paper begins by providing background information and discusses an overview of the barriers to water security in Indigenous communities in Canada. It will outline the framework of the Atlantic First Nations Water Authority and compare it to the OECD's guidelines. The business case referenced throughout this paper was prepared for, and in conjunction with the Atlantic First Nations Water Authority by Nielsen, Daniels, Pickles, Cerkow, and Bolivar, presented by Colliers International, a private business firm. As Tundisi and Tundisi state, "water quantity, water quality and proper water governance are the fundamental assets for water security" (2016:para 1).

BACKGROUND & BARRIERS

Indigenous communities in Canada disproportionately endure poorer water quality as compared to non-Indigenous communities (von der Porten and de Loe 2010). Patrick notes that the inequitable access to water among Indigenous peoples residing in Canada is multi-faceted, with communities lacking "reliable water supplies, advanced water treatment technologies, sufficient water operator knowledge, and access to land management decision-making" (2011:para 1). This inequity is largely due to colonization, as the systemic oppression that was established during colonization currently persists through means of incessant modern oppression. Mascarenhas terms this type of oppression "neoliberal racism" (2016:2). Wilson, Montoya, Arseneault, and

Curley affirm "the First Nation drinking water crisis is a direct result of Canada's fragmented and colonial water governance system, where federal, provincial and municipal governments claim different scales and kinds of authority over water" (2021:para 1). The exclusion of Indigenous communities from the water security that other demographic groups have is a contributing factor to this modern oppression. This can be understood as oppression through deprivation and social exclusion from basic resources such as potable water (van Wormer 2005).

Deprivation and social exclusion can take many forms. For instance, a study from 2005 found that Indigenous communities are not provided the same level of drinking water as compared to those "living off reserves because provincial legislation and regulations are not applied on reserves" (Nielsen et al. 2021:22). It took fifteen years after the publication of this study for the Atlantic First Nations Water Authority framework agreement to be signed, which speaks to the on-going negligence that authorities have shown towards the well-being of Indigenous peoples and communities in Canada. Colonization, both through historical events and current colonial structures, the absence of the regulation of water within Indigenous communities, and access to water and adequate funding, have all contributed to an inequity in Indigenous communities' access to water. Each of these barriers will be discussed in turn.

Colonization

Colonization refers to the oppression and imposition of European cultures and systems on Indigenous communities. Through colonization, a "dependency relationship" was formed due to "attempted forced assimilation of First Nations" (White, Murphy, and Spence 2012:11). Colonial structures have become normalized and dominant in society, which in turn creates significant adversity for Indigenous communities (Taylor, Longboat

and Grafton 2020), particularly in water accessibility. As Taylor et al. claim, "dominant water governance frameworks reproduce water colonialism, ignoring Indigenous peoples' water rights" (2020:para 1). Through means of oppression, dominant frameworks are upheld and perpetuated. An overt example of this process is through the exclusivity of water governance in Canada, as it is based upon colonial structures that exclude Indigenous cultures and practices. When water is governed in this manner, it results in "water colonialism [which] is the worldview, or policy, based on colonial imperialism that underpins the colonisation of water" (Taylor et al. 2020:para 2). This exclusive governance structure dictates, rather than integrates voices of those who may not benefit from an imperialistic framework. Although current water provision in Canada is a shared responsibility between the federal government and the Indigenous communities (Arsenault, Diver, McGregor, Witham, and Bourassa 2020), the communities lack authority over water quality and infrastructure.

To further illustrate the inequality between Indigenous communities and non-Indigenous communities in Canada, their distinct approaches to governance will be discussed. Non-Indigenous lands and their associated resources are governed by the province while the responsibility of water provision is usually transferred to the municipal level (von der Porten and de Loe 2010). However, Indigenous lands fall within the jurisdiction of the federal government (von der Porten and de Loe 2010), meaning that "provincial water regulations do not apply to Indigenous communities" (Bradford, Bharadwaj, Okpalauwaekwe, and Waldner 2016:para 6). Therefore, while non-Indigenous communities benefit from a functioning water system as provided by the municipality in which they are located (Bakker and Cook 2011), Indigenous communities

located on reserves have historically been hindered with regards to access (Bakker and Cook 2011). As the Auditor General asserts in a recent report, "we found that there was no regulatory regime to ensure access to safe drinking water in First Nations communities" (2020:16), and further, "this finding matters because until a regulatory regime is in place, First Nations communities will not have drinking water protections" (Office of the Auditor General of Canada 2020:16). Patrick suggests that the issue at hand is founded on colonization itself as "health disparities manifest from a long history of oppression and are inextricably linked to unequal access to resources" (2011:para 4).

Regulation & Governance

Governance of any type can have a variety of impacts on the people that are subject to the governing. Bakker and Morinville suggest that governance perpetuates vulnerabilities by exposing groups of people to risks and insecurities; these insecurities can be developed through a denial of rights (2013). Further, they argue that social power is central to water security "as insecurity arises not only through poor management decisions, suboptimal governance processes, insufficient science and evolving environmental pressures, but also through power relations" (Bakker and Morinville 2013:para 30), which is inclusive of ownership and control of water (Bakker and Morinville 2013).

In terms of water governance, the power dynamic between the federal government and Indigenous communities suggests the latter have been quite vulnerable for some time. Water governance, as defined by Bakker and Morinville is "the range of political, organizational and administrative processes through which community interests are articulated, their input is incorporated, decisions are made and implemented" (2013:para 1). Thus, governance and governing bodies determine how

systems such as water and wastewater function and allocate resources to them. Since Indigenous communities are governed by federal authorities, this governance model tends to neglect Indigenous voices regarding water resources and creates a significant barrier (von der Porten and de Loe 2010). Regulation goes hand-in-hand with governance as regulations are authoritative rules and are enforced based on compliance (OECD Water Governance Indicator Framework 2018).

Canada's history of colonialism has created a situation where water governance in Canada has become a powerful barrier to equity in water access. In particular, the federal government has tended to promote water governance structures that privilege and apply non-Indigenous approaches to Indigenous communities. As current water governance in Canada is a shared responsibility between the federal government and the Indigenous band councils, this leaves space for negligence and oversight (Arsenault et al. 2020). Alcantara and Kalman affirm that the current governance structure utilized within Indigenous communities is in deep conflict with Indigenous ontologies (2018). They state that "many Indigenous communities view the world in unique ways that are not well captured or represented by non-Indigenous approaches" (2018:para 13). Further, proposals of structures to amend water inequities such as the *Safe Drinking Water for First Nations Act* adopted in 2013 (Indigenous Services Canada 2020) reproduce the issue of governance over Indigenous water. The *Safe Drinking Water for First Nations Act* "allows the Government of Canada and First Nations to develop federal regulations to ensure clean water" (Indigenous Services Canada 2017). Thus, the barrier of governance is perpetuated through the creation of a federal regulation which governs First Nations. Although this act was depicted in government

documentation as being created in conjunction with First Nations (Indigenous Services Canada 2017), Black and McBean state that it in fact lacked "adequate First Nations consultation, weak protection of Aboriginal rights, and failure to address the resource gap" (2017:4). Further, McGregor contends that this act "does not address historical trauma in water. This act may in fact cause more trauma to occur" (2015:73). These assertions are similar to what Wilson et al. argue, "on the one hand, the State works to limit Indigenous people's collective water rights while, on the other, expanding individual water access in limited and piecemeal ways" (2021:para 6), which is indicative of the current ineffective governance model.

Water Access & Funding

Another major barrier affecting Indigenous communities is a lack of adequate funding for water access (Bradford et al. 2016). One study, for instance, found that "financial resources are not equally distributed between First Nations and other Canadians" (Black and McBean 2017:para 29). It was found within the same study that the federal government acknowledges that funding for Indigenous communities for water-related issues was "one-third to one-half of what was actually needed" (Black and McBean 2017:para 29). White et al. state that from the funding provided "only 50% of the allocated operations and maintenance dollars ever reach the communities themselves" (2012:18), meaning that this funding is not being allocated appropriately. Furthermore, the process for a First Nations community to obtain funding for water-related purposes from the government is challenging (Black and McBean 2017). In short, "Canada lacks a cohesive strategy to address emerging issues and threats to water safety" (Black and McBean 2017:para 10), which is inclusive of a funding strategy. The current funding structure for Indigenous communities is quite complex as

"communities have to complete a lengthy process, and essentially compete with other communities to get access to government funding" (Black and McBean 2017:para 33). In order to request funding, Indigenous communities or band councils must access a form online through the Government of Canada, complete and return the form to the specified department every time they require funding (Indigenous Services Canada 2018). Additionally, from the report provided by the Auditor General, it was found that the funding formula for operations and maintenance requirements, is out of date (Office of the Auditor General of Canada 2020:14). The report asserts that "the formula, which dates back to 1987, was updated annually for inflation but did not keep pace with advances in technology or the actual costs of operating and maintaining infrastructure" (Office of the Auditor General of Canada 2020:14). Black and McBean further assert that "First Nations all need the money and should be included in deciding how money is spent and allocated" (2017:para 33). Even if adequate funding were available and easily accessible, communities "often lack the certified expertise to ensure water and wastewater assets are operating in a good condition and meeting regulatory standards" (Nielsen et al. 2021:3).

CONCEPTS FOR PROGRESS

In order to overcome these barriers to water security within Indigenous communities, self-determination and self-governance are essential (von der Porten and de Loe 2010). The fundamental concepts for a progression toward self-determination are to develop water governance structures around Indigenous knowledge systems, while integrating non-Indigenous approaches inclusive of technical and scientific expertise. While these barriers are difficult to overcome, Indigenous communities are

experimenting with various solutions to them. Each barrier that has been discussed has an associated concept to increase Indigenous self-determination and to amend the surrounding challenges. Each barrier and their concepts for progress will be discussed in turn.

To address colonization as a whole is an unimaginable undertaking. However, the implications in which colonization has negatively affected water in Indigenous communities can be addressed through mechanisms such as an Indigenous-led water authority. The implementation of an Indigenous-led water authority would allow for First Nations' knowledge systems and ideologies to be the foundation of the organization in ways that most water governance regimes in Canada are not. Proponents argue that such an authority is likely to succeed if the design is innately Indigenous and results in Indigenous communities having direct control over the management and governance, utilizing scientific and environmental awareness. Bakker and Morinville argue that this direct control is crucial to effective governance and water security (2013). In this alternative approach, the opportunity for vulnerability will decrease as the vulnerability factors will be managed by the very people which receive and need the service. As Taylor et al. state, "water justice cannot be achieved as long as Indigenous peoples' rights, responsibilities and their governance systems are made 'invisible' whilst settler frameworks… are the default" (2020:para 12). Thus, while other factors contribute to water access inequality, it is vital that the dominant vision for an Indigenous-led water authority is rooted in the traditions and practices of the Indigenous communities being served by it.

Beyond the foundation of an Indigenous-led water authority, it is critical to understand the importance of using an alternative mixed-methods model for a public health-related service. A mixed-methods model consists of using an Indigenous approach alongside a traditional scientific-based approach as Alcantara and Kalman discuss in their 2018 article. They suggest combining a Haudenosaunee and a social science approach to policy evaluation (Alcantara and Kalman 2018). Thus, a mixed-methods approach in relation to water governance would involve the water authority drawing upon Indigenous fundamental ontologies while being inclusive of the technical necessities regarding the health-related element of water governance. Black and McBean iterate that an Indigenous-led initiative

> does not mean and has not meant a total rejection of all theory or research or Western knowledge. Rather, it is about centering our concerns and world views and then coming to know and understand theory and research from our own perspectives and for our own purpose (2017:para 7).

A mixed-methods model could accommodate self-determination within a public service such as water provision.

With regard to water governance, Alcantara, Longboat and Vanhooren assert that an emphasis must be put on Indigenous notions of water rights (2020). Water governance, as described by the Organisation for Economic Cooperation and Development is, "[addressing] the role of institutions and relationships between organizations and social groups involved in water decision making, both horizontally across sectors and between urban and rural areas, and vertically from local to international levels" (OECD Water Governance Indicator Framework 2018:4). This

definition will be discussed in relation to creating a governance model and incorporating Indigenous notions into an Indigenous-led water authority framework. The objective of self-governance in this case is to engage Indigenous ideologies with authority and decision-making ability as it relates to water.

Although there are many Indigenous groups and cultures in Canada, a commonality between many Indigenous cultures is the reverence of water. Earlier, a distinction was made between Indigenous and dominant ideologies, as "an Indigenous approach also conceives of water as being something quite different from a manageable resource" (Alcantara et al. 2020:para 34). The Assembly of First Nations describes water as a fundamental source of life on earth that is integral not only to human life but is thought of as a metaphor for strength, among many other interpretations (Assembly of First Nations). Further, "First Nations recognize the sacredness of our water, the interconnectedness of all life and the importance of protecting our water from pollution, drought and waste" (Assembly of First Nations). This is only a summary of how water is generally regarded among Indigenous peoples, but it demonstrates the necessity of water provision for Indigenous communities that currently lack water and securing a reliable source for water in Indigenous communities.

Since access to water is not only a concern of health, but is sacred for many Indigenous cultures, "First Nations are seeking the recognition of their authorities over water and require resources to build capacity to advocate for our water rights and to protect the health of the water that Mother Earth gives" (Assembly of First Nations). Black and McBean state that,

Recently, research related to developing a decolonized framework for water and

wastewater management highlighted critical elements for improving Indigenous

involvement in water management, including recognition of Indigenous

knowledge, recognition of inherent rights, use of inclusive knowledge systems,

use of participatory approaches, and incorporation of holistic viewpoints

(2017:para 12).

As the relationship between Indigenous peoples and water is sacred due to its holism in

many facets of human existence, it is vital for an Indigenous-led water authority to

incorporate and base its foundation on traditional knowledge and beliefs. This would

support and strengthen self-determination to improve water security for First Nations

through self-governance. Thus, through self-governance, the discrepancy of non-

Indigenous governance methods being applied to Indigenous communities will be

alleviated.

Finally, in order for an Indigenous-led water authority to evolve and function while

promoting self-determination, the funding structure should be redefined. As it has been

discussed, funding for Indigenous communities for water-related necessities has been

insufficient and has not been allocated adequately White et al. assert (2012). If the

funding structure were to redirect adequate funding from the federal government

"directly to the water authority as opposed to being received by the First Nations

communities" (Nielsen et al. 2021:10), then this would mitigate the capacity for this

funding to be consumed elsewhere. An innovative approach as it pertains to obtaining

federal funding would be to organize a standing agreement, inclusive of a continual

funding transfer, mitigating the need for communities to constantly submit funding

applications. This shift in funding will restrict possibilities in which this money could be used which allows for a direct succession of this funding. This process would ensure that funding which is meant for the water authority and projects, or maintenance related to the authority, is allocated accordingly. Further, it would eliminate the opportunity for the funding to be allocated to other community needs. Although funding is necessary for many other types of programs and projects within communities, it is essential that the funding intended for water-related issues is allocated accordingly.

A functioning water management strategy could be the basis for a ripple effect in the communities involved. Successful water management will influence various elements within communities including the cultural, social, economic development, and the environment. Thus, through the introduction of the Atlantic First Nations Water Authority and the subsequent discussion regarding this Indigenous-led water authority, the concepts for progress will be illustrated within the authority's framework. This innovative water authority will be an opportunity for revitalization in the communities involved, due to the benefits associated with a secure water source (Nielsen et al. 2021). White et al. term this concept "adaptive sustainability" which is "a state where peoples themselves control their affairs, have sustainable development based on their evolved cultures, and reap the rewards of Canada's advanced development through economic development that serves them" (2012:13). As this opportunity will strengthen the Atlantic communities, the framework for the Atlantic First Nations Water Authority may inspire communities across the country to develop a plan of their own (Nielsen et al. 2021).

DEFINING WATER SECURITY & EFFECTIVE GOVERNANCE

Prior to delving further into water governance frameworks, it is essential to define what water security and effective governance mean. The United Nations identifies water security in an analytical brief, and while it is a working definition, it has been "developed from contributions made by the broad range of organization, agencies, programmes and institutions" (Water Security and the Global Water Agenda: UN-Water 2013:7). Their working definition is

> The capacity of a population to safeguard sustainability access to adequate quantities of and acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability (Water Security and the Global Water Agenda: UN-Water 2013:7).

This all-encompassing definition is exhaustive of many of the main concepts that have been discussed in this paper thus far. Therefore, defining success in accomplishing water security in the Atlantic First Nations Water Authority would be maintaining the following components. Among the participating communities, quantity and quality of water would be maintained so that pollution and disasters, such as boil-water advisories, are prevented. Through a functioning water authority and creating job opportunities, socio-economic development would prosper. Through the incorporation of Indigenous cultures, as well as First Nations' regard for the environment and water, the preservation of ecosystems will likely naturally transpire. Finally, through self-

governance and autonomy, an Indigenous-led water authority would have an opportunity in which no other Indigenous group has had, in North America.

As governance has been discussed regarding Indigenous methodologies and integrating these into a governance model for water, effective governance is essential in a functioning authority. It is generally agreed upon that effective governance should predominantly emphasize transparency and accountability (Tortajada 2010), which have evidently been neglected in themes of past and current water governance. As Alcantara et al. assert "good governance… likely requires First Nations elected officials to focus on developing general and broad parameters for effective water policy and management" (2020:28). In the case of an Indigenous-led water authority, both Tortadaja and Alcantara et al.'s assertions would indicate that these elements would be beneficial to be included within a water authority's framework. Furthermore, "the right governance model… is critical for ensuring that assets are properly built, managed, operated and renewed" (Alcantara et al. 2020:para 3). These components of governance will be discussed in reference to the Atlantic First Nations Water Authority and the Organisation for Economic Cooperation and Development's frameworks.

THE ATLANTIC FIRST NATIONS WATER AUTHORITY

The Atlantic First Nations Water Authority is multi-faceted and progressive in nature due to the scope of the authority and because it is unprecedented. The Colliers' business case identifies the principles driving this initiative and while the framework of this authority will subsequently be discussed, it is essential to outline the key variables that this organization is bound by. As this water authority was derived from and created by Indigenous peoples in the Atlantic region of Canada, the role of institutions and

relationships are critical in this type of initiative due to Canada's flawed history regarding Indigenous relations. The business case developed by Colliers states that "despite the ongoing struggle for Atlantic First Nations to deliver safe drinking water and wastewater services, the pursuit to deliver safe services has strengthened existing partnerships and led to the formation of new opportunities" (Nielsen et al. 2021:3). It is imperative for this water authority to be guided and run by Indigenous individuals for many reasons, but especially due to the locations that the water authority will be providing to, which will be First Nations reserves in the Atlantic region of Canada. Thus, the organization's mission is stated as "provision of safe, clean drinking water and wastewater in all participating First Nations communities in Atlantic Canada, delivered by a regional water authority owned and operated by First Nations" (Nielsen et al. 2021:30).

A primary focus in establishing this Indigenous-led water authority is to "reconcile quality, culture, and science" (Nielsen et al. 2021:31). This is inclusive of key elements outlined in this business case, relative to the connection between Indigenous cultures and water to ensure these values are ingrained within the water authority. These elements are inclusive of the following:

- Water is alive
- Water can take life and it can save lives
- Water is sacred
- Water and nature have rights
- First Nations believe in the shared ownership of land and water rather than individual ownership

- Atlantic First Nations have both formal and informal leadership (Nielsen et al. 2021:30)

Furthermore, Elders in the Atlantic First Nations communities identify guiding principles termed "Wise Practices" (Nielsen et al. 2021:31). These Wise Practices are integral in the foundation of the planning and execution of the Atlantic First Nations Water Authority. The Elders identify these guiding principles as:

- Identity and culture

- Leadership

- Strategic vision and planning

- Good governance and management

- Accountability and stewardship

- Performance evaluation and collaborations

- Partnerships and external relationships (Nielsen et al. 2021:31).

The outlined elements and principles are a driving force to the foundation of this water authority and in creating the organization's framework. Further, Two-Eyed Seeing is a traditional approach that embraces both the scientific and technical side of water management, while maintaining Indigenous cultures and tradition in the establishment and execution of the water authority (Nielsen et al. 2021). This approach will enable the authority to focus on public safety related to water provision, while establishing self-determination. Similar to the mixed-method concept discussed earlier, the Two-Eyed Seeing practice reflects Alcantara and Kalman's notion of integrating the two perspectives (traditional and scientific) to produce a well-rounded outcome. As it has been illustrated in the Colliers' business case, previous failed attempts in resolving

water and wastewater systems in Atlantic First Nations communities have been carried out using imperialistic methods resulting in the proposed solutions being ineffective and harmful in addressing water security (Nielsen et al. 2021). Therefore, "embedding culture through Two-Eyed Seeing will utilize the best of both approaches to help restore the relationship between communities and water" (Nielsen et al. 2021:31). In order for a water authority to be successful within a First Nations community, it must have the foundation of Indigenous knowledge systems as opposed to imperialist foundations of "outdated federal policies that have deprived many First Nations of clean drinking water" (Institute for Investigative Journalism 2021). Thus, this organization is focused on ensuring these principles and elements are engrained within the organization's structure, with the support of Elders' guidance and direction.

The premise of the Atlantic First Nations Water Authority was to ensure water security for their participating communities by implementing their own water authority since, as it has been previously mentioned, "First Nations communities did not have a regulatory regime to govern drinking water" (Nielsen et al. 2021:22). It is intended to construct and maintain improved water infrastructure, standardize, and regulate the water quality among First Nations communities, while maintaining transparency and accountability. The water infrastructure is to be owned by the Atlantic First Nations (Nielsen et al. 2021) and is set to be funded by the Government of Canada through Indigenous Services Canada pertaining to the "operation and maintenance costs commencing in the 2020/21 fiscal year" (Nielsen et al. 2021:10). The Government of Canada's website states that this framework agreement delineates the respective responsibilities between the federal government and the Atlantic First Nations

(Indigenous Services Canada 2020). It further outlines the "transfer of responsibility" of the water authority once it is in operation (Indigenous Services Canada 2020). In simple terms, the Atlantic First Nations stated their monetary requirements for this initiative, and the Government of Canada agreed to provide necessary funding (Nielsen et al. 2021). It was agreed upon that the Indigenous group would then assume responsibility and management (Nielsen et al. 2021), meaning that the federal government would surrender its authority over this policy area to the group.

Transferring the responsibility of the water authority from the Government of Canada to the Atlantic First Nations Water Authority will address a list of considerations, while the initiation of self-governance will conceivably address existing issues. Nielsen et al., identifies six considerations in which the Atlantic First Nations', as a self-determining body, will have the capacity to address, as opposed to being governed by the federal government. The Colliers' business case names these considerations as:

- Support long-term self-governance goals

- Build capacity in water and wastewater operations

- Achieve financial independence

- Deliver the required level of service

- Address risk management requirements

- Integrate culture and tradition considerations and aspirations to achieve self-determination and governance (Nielsen et al. 2021:4)

This list has been established specifically for the Atlantic First Nations Water Authority, but evidently comprises requisites for self-governance, which could be applied to other contexts.

The Atlantic First Nations Water Authority will be owned by the participating First Nations communities, and the Board of Directors who govern the authority, are elected by the ownership Chiefs (About Us 2021). The Chiefs of the participating communities select the Board of Directors, which is generally composed of First Nations Chiefs. The Board of Directors will each have an opportunity to serve a four-year term (About Us 2021). This water authority "will be 100% owned by Atlantic First Nations and governed by… a Board of Directors" (Nielsen et al. 2021:6), and "will consist of up to 15 members with 12 representatives from First Nation communities and 3 technical experts" (Nielsen et al. 2021:6). The Colliers' business case acknowledges the unconventional number of directors on this board, but states that it is necessary due to the complexity in the geographic range of this organization (Nielsen et al. 2021), which will be discussed below. Governed by this Board of Directors will be four departments, and each department will be led by a manager. These departments consist of corporate services, communications and outreach, operations, and engineering (Nielsen et al. 2021). Corporate services will handle administrative operations within the organization, while communications and outreach will communicate with and provide stakeholders and other relevant groups with necessary information (Nielsen et al. 2021). The operations department will oversee daily functions of the water authority and ensure compliance with water regulations (Nielsen et al. 2021). Similarly, engineering will oversee the asset management and will ensure that equipment and infrastructure are maintained appropriately (Nielsen et al. 2021). In maintaining the cultural aspect, the Board of Directors will consult with "a permanent Elders Advisory Committee" (Nielsen et al. 2021:6).

As of July 2021, 15 Atlantic First Nations communities have affiliated themselves with the Atlantic First Nations Water Authority (Nielsen et al. 2021). This engagement with the water authority was indicated through Band Council Resolutions, signed by each community (Nielsen et al. 2021). While this organization has been set up to accommodate more than the stated 15 communities, as it will be subsequently discussed, the populations of the current communities range from 338-4624 (Nielsen et al. 2021). Two participating communities are located in Prince Edward Island, four are located in New Brunswick, and the remaining nine are located in Nova Scotia (Nielsen et al. 2021). Newfoundland is the only Atlantic province that does not have a participating community, however, as the authority has been widely extended to all communities in this region, prospective communities in Newfoundland or otherwise, may show interest in the future. Six other communities in New Brunswick, and one community in Nova Scotia have shown interest in participating but have yet to be confirmed as members (Nielsen et al. 2021). As the Atlantic First Nations Water Authority states on their website, those communities that wish to pursue engaging in this organization are welcome at any time (Communities 2021).

The structure of this water authority, namely, a full-service decentralized structure, was one of the four frameworks proposed. The full-service decentralized structure "has been identified as being the most aligned to their cultural and spiritual considerations and having the potential to provide the highest level of service and direct benefits to the communities served" (Nielsen et al. 2021:5). This structure disperses the functions of a water authority, in this case, to allow for proximity to the communities that they serve (Nielsen et al. 2021). Through decentralizing the functions and departments

of this organization, each "hub" will be placed within reach to the participating

communities (Nielsen et al. 2021). The locations of these hubs have been identified as

"Cape Breton, Nova Scotia East, Nova Scotia West, Prince Edward Island, New

Brunswick West and New Brunswick East" (Nielsen et al. 2021:55), which will support

the participating communities within proximity. Thus, this structure is beneficial in

"meet[ing] the needs of the customers in the different geographic regions" (Nielsen et al.

2021:37). Each hub will cater to and be scaled to the communities that they administer

to in terms of personnel and infrastructure requirements (Nielsen et al. 2021).

Furthermore, this structure is beneficial in a multi-community organization to "allow for

more direct interaction with customers and foster relationships within the communities"

(Nielsen et al. 2021:37). The entire operation will be overseen by the headquarters,

which will be located between Halifax and Moncton (Nielsen et al. 2021).

     The alternative structures in consideration were full-service centralized, full

outsource and technical services support (Nielsen et al. 2021) all of which were

inadequate in fulfilling the goals of this organization. In determining the suitability of the

structures, the following were taken into consideration, "support long-term self-

governance goals, build capacity in water and wastewater operations, achieve financial

independence, deliver the required level of service, address risk management

requirements, integrate culture and tradition considerations and aspirations to achieve

self-determination and governance" (Nielsen et al. 2021:36). Therefore, the full-service

decentralized structure was the most pragmatic approach in allowing integration of the

community's cultures in the progression of the organization.

COMPARING THE OECD PRINCIPLES TO THE ATLANTIC FIRST NATIONS WATER AUTHORITY

A comparison between figure a and the Atlantic First Nations Water Authority will be conducted to assess whether Atlantic First Nations Water Authority is likely to satisfy the requirements as laid out by the Organisation for Economic Co-operation and Development (OECD). The OECD is an internationally recognized organization with many subscribing countries throughout the world and aims to set internationally agreed upon standards for countries and organizations to be guided by (OECD Water Governance Indicator Framework 2018). Therefore, in attempts to substantiate the Atlantic First Nations Water Authority's framework to demonstrate their feasibility, the OECD's framework will be utilized. Figure a depicts a *Water Governance Indicator Framework* as provided by the OECD. This framework is inclusive of three main indicators along with sub-indicators or principles. As the OECD states, "the principles provide 12 must-haves for efficient, effective and inclusive water governance" (OECD Water Governance Indicator Framework 2018:5).

Source: OECD (2015), *OECD Principles on Water Governance*, www.oecd.org/governance/oecd-principles-on-water-governance.htm.

Figure a

The compilation of these indicators may predict the potential for success or failure when it comes to water governance. The three main indicators of water governance as the OECD suggest are effectiveness, efficiency, and trust and engagement (OECD Water Governance Indicator Framework 2018). These three indicators are thought to be the basis for an effective water authority or water governance. Although these concrete indicators are beneficial in comparing water authority frameworks, these again, are predicated on a non-Indigenous, Eurocentric approach. Therefore, it is critical to acknowledge that the OECD Principles do not support Indigenous peoples and their rights or responsibilities, as Indigenous peoples are often under-represented (Taylor et al. 2020). However, the Atlantic First Nations Water Authority is the first of its kind, therefore, comparative frameworks will be exclusively Eurocentric in nature. Thus, the

comparison will be focused on the indicators, while acknowledging the cultural divergence among the water authorities.

Indicator: Effectiveness

Effectiveness, regarding water governance as described by the OECD "relates to the contribution of governance to defining clear sustainable water policy goals and targets at different levels of government, to implement those policy goals, and to meet expected objectives or targets" (OECD Water Governance Indicator Framework 2018:5). Thus, the *effectiveness* indicator is inclusive of four components, namely, capacity, policy coherence, appropriate scales within basin systems, clear roles and responsibilities (OECD Water Governance Indicator Framework 2018). This indicator is critical in the Atlantic First Nations Water Authority, particularly in relation to roles and responsibilities. As the federal government will be funding this initiative, it is imperative to clarify the roles and responsibilities between the entities. The Atlantic First Nations Water Authority's framework is written in a way that delineates roles and responsibilities in order to illustrate what is being requested of the government, as well as delineating the Atlantic First Nations' responsibilities. The framework also notes that although the Atlantic First Nations Water Authority will not be regulated by the government, it must follow regulatory water quality standards as set out by the Government of Canada (Nielsen et al. 2021). As it relates to the Atlantic First Nations Water Authority, the role of the government is outlined as such:

- Indigenous Services Canada provides funding inclusive of capital, upgrades, operating and maintenance costs
- Health Canada establishes Canadian Drinking Water Quality Guidelines

- Indigenous Services Canada, First Nations and Inuit Health Branch
  ensures the delivery of drinking water monitoring programs
- Environment and Climate Change Canada is involved in source water
  protection (Nielsen et al. 2021:27)

Whereas, with the support of the above organizations, the Atlantic First Nations Water Authority will be responsible for the "operation, maintenance and capital upgrades of all water and wastewater assets in participating First Nations" (About Us 2021). These responsibilities will be approached "based on social, economic and environmental outcomes" (About Us 2021). The division of responsibilities is not unlike the delineations made for any other water authority. The main difference is the fact that various departments within the federal government are named as bearing responsibility. Whereas in most water governance structures in Canada, the provincial and municipal governments are responsible for water security (Bakker and Cook 2011), meaning that the federal government is not usually involved.

Furthermore, prior to the operation of this organization, the Atlantic First Nations Water Authority will determine clear roles and responsibilities of their management and operational staff, specified by their specific function (Nielsen et al. 2021). This organization plans to establish the roles and responsibility expectations prior to recruitment (Nielsen et al. 2021), in order for expectations to be explicit upon operationalization. The intention for this water authority is for a continual collaboration with the "Atlantic Policy Congress, ISC and Health Canada" (Nielsen et al. 2021:67), in which roles and responsibilities must also be delineated. The collaboration between

these four organizations will involve this delineation through a working agreement. The tasks to be accomplished among these organizations are

- establishment of principles for provision of water and sewer services including representation in governance and communication with municipal (in the case of MTAs), provincial and federal partners

- establishment of design standards for infrastructure and in particular for water treatment distribution along with levels of service which meet the agreed principles

- establishment of working agreements which meet the agreed principles,

- establishment of metrics to be used to report community members, governance partners and Federal funders on success meeting principles, guidelines, and levels of service (Nielsen et al. 2021:67)

The principle of capacity included within the effectiveness indicator is described as assessing the "level of implementation to assure the presence of competent staff [are] able to deal with technical and non-technical water-related issues" (OECD Water Governance Indicator Framework 2018:21). Although the Atlantic First Nations Water Authority has not completed the recruitment process, they have set out their staffing expectations, depending on the number of participating communities (Nielsen et al. 2021). Provided that the current number of participating communities is 15, the Atlantic First Nations Water Authority anticipates hiring two employees for the CEO office, eight employees within the corporate services department, two communications personnel, 20 operators, and five engineers (Nielsen et al. 2021). Through the decentralized structure, if the authority increases in community uptake, the number of staff members

will adjust in line with demands. In order to ensure the technical departments are qualified, the water authority will promote professional training through the First Nations Water and Wastewater Action Plan (Nielsen et al. 2021). This action plan "provide[s] funding for treatment facility construction and renovation, operation and maintenance of facilities, training of operators and related public health activities on-reserve" (Nielsen et al. 2021:22) and is funded by the federal government (Nielsen et al. 2021). As the OECD states in their list of principles, capacity is inclusive of identifying gaps in water resources management (OECD Water Governance Indicator Framework 2018). This is indicated in the business case due to the varying sizes in communities and the support available to the professionals in the area (Nielsen et al. 2021). Through the provision of training courses and certifications, proficiency should pose less of an obstacle. This in turn, would lead to a more reliable service among the communities. The promotion of training for professionals working in the field is noted in the business report as part of the water authority's operational funding phase (Nielsen et al. 2021).

In relation to capacity, the OECD states that water and wastewater frameworks should be appropriate to the basin systems, highlighting long-term necessities and using an integrative approach in terms of stakeholders and levels of government (OECD Water Governance Indicator Framework 2018). The Atlantic First Nations Water Authority engages in this component in various ways, namely in the federal government's support of this authority. Through this principle, the OECD suggests an evaluation be done on the "integrated policies and strategies from sub-basin to upper levels to capture and distribute freshwater and to release wastewater and return flows, with a circular economy perspective" (OECD Water Governance Indicator Framework

2018:19). Although the Atlantic First Nations Water Authority does not indicate any integration with sub-basins, the organization briefly discusses their water cycle. The water cycle, as described on the organization's website, includes water from the treatment plant will flow through pipes and reservoirs to be supplied to the communities' residents and businesses, to then be returned to the treatment plant (Water Cycle 2021). This system is portrayed on the Atlantic First Nations Water Authority's website *Water Cycle* page and is shown in Figure b.
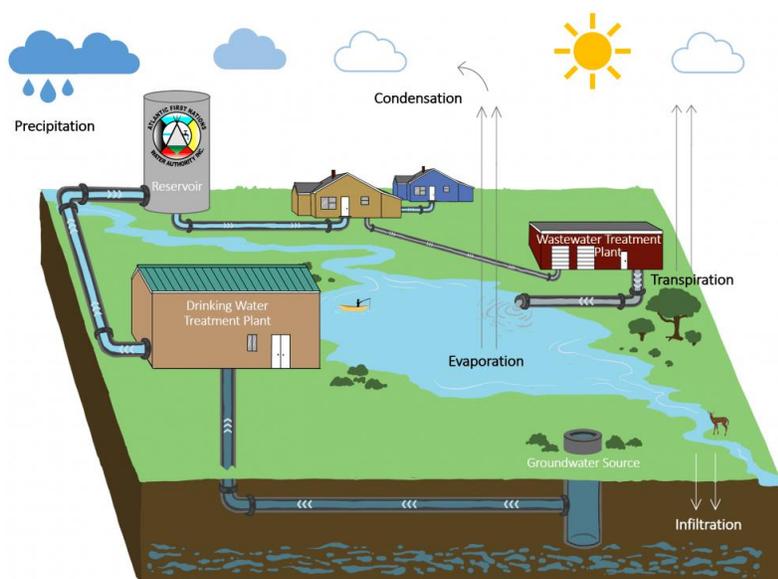
Source: Atlantic First Nations Water Authority Inc. 2021. "Water Cycle*".* https://www.afnwa.ca/water/the-water-cycle/

Figure b

Furthermore, the OECD indicates that one of the components of this principle is to "respond to long-term, environmental, economic and social objectives with a view of making the best use of water resources" (OECD Water Governance Indicator Framework 2018:17). This component is illustrated in the Colliers' case as it states, "Environment and Climate Change Canada is involved in source water protection through its powers to regulate wastewater discharge into federal waters" (Nielsen et al.

2021:27). Through this guidance and regulation, the business case states that this authority will have the ability to "provide consistent high-quality water and wastewater services for their residents, manage funding and revenues, support public health, economic development, and protection of the environment" (Nielsen et al. 2021:19).

The Atlantic First Nations Water Authority was largely the product of "First Nations Clean Water Initiative- Atlantic Region (FNCWI-AR)" (Nielsen et al. 2021:23), which was developed by the Atlantic Policy Congress of First Nations Chiefs Secretariat (APC)" (Nielsen et al. 2021:23). Evidently, through policy development, "the APC in partnership with Dalhousie University developed a regulatory framework for First Nations water and wastewater operations in Atlantic Canada based on the 16 elements defined by the Expert Panel on Safe Drinking Water for First Nations" (Nielsen et al. 2021). Evidently, policy is one of the driving factors in the creation of the Atlantic First Nations Water Authority, and what this organization aims to address from the issues that have been identified by expert panels and scholarly undertakings. The policy coherence principle, as indicated by the OECD, considers points such as encouraging co-ordination between related organizations, coordinating protection of water resources and risk prevention, identifying, and addressing barriers of regulatory policy practices, and attempting to mitigate issues among organizations that may collaborate on water-related initiatives using policy (OECD Water Governance Indicator Framework).

In addition, it is suggested in the business case that the Atlantic First Nations Water Authority engage with a Quality Environmental Maintenance System (QEMS). This type of system will ensure that the quality of the water being distributed by the Atlantic First Nations Water Authority is consistent in health-related components as well

as environmental sensitivity (Nielsen et al. 2021). As the OECD indicates, the policy

mechanism is inclusive of ensuring coherence between water and the "environment,

health, energy, agriculture, industry, spatial planning and land use" (OECD Water

Governance Indicator Framework 2018:19). Thus, if a QEMS is utilized within the

Atlantic First Nations Water Authority, it will potentially accommodate the components

listed by the OECD. However, at this time, there is no indication of the Atlantic First

Nations Water Authority implementing this strategy.

Indicator: Efficiency

The second indicator, *efficiency,* "relates to the contribution of governance to

maximizing the benefits for sustainable water management and welfare at the least cost

to society" (OECD Water Governance Indicator Framework 2018:5). This indicator is

inclusive of data and information, financing, regulatory frameworks, and innovation

(OECD Water Governance Indicator Framework 2018). Information related to these

components can be found throughout the business case for the Atlantic First Nations

Water Authority. Currently, Dalhousie University is supporting the Atlantic First Nations

Water Authority in operating strategies and has supported the organization in the

composition of the framework (Nielsen et al. 2021). Subsequent data and information

will be captured through "Supervisory Control and Data Acquisition (SCADA)" (Nielsen

et al. 2021:17), when the authority is operative. Through this method, the data

acquisition will allow information collection to be culturally accountable. As this

component of the efficiency indicator focuses on the acquisition of data as well as the

distribution of information found within the data to the organization, the full-service

decentralized model is an effective way to do so. While the method of communication

and strategies related to information dissemination are in the works, a plan has been set out in the business case to create a strategy of communication with the three levels of government, to establish agreements with partners, and to develop a strategy for how information will be communicated to stakeholders and communities involved (Nielsen et al. 2021).

As it has been previously mentioned, the Atlantic First Nations Water Authority will initially be funded by the Federal Government of Canada in support of operation and maintenance costs (Nielsen et al. 2021). According to the Colliers' business case, the Atlantic First Nations Water Authority's one-time startup cost will be $1.5 million, annual operating costs are expected to be $10,988,741 (not inclusive of inflation considerations), and the annual asset renewal is projected to be $59,269,745 (Nielsen et al. 2021). These budgetary projections have been expressed through a 10-year capital and operating plan to ensure that the organization is meeting regulatory standards in terms of infrastructure and staffing requirements (Nielsen et al. 2021). As the business case and the Atlantic First Nations Water Authority's website simply states, this funding will be provided long-term, yet neither source has indicated an exact time frame for this funding (Nielsen et al. 2021). However, in alignment with self-determination, the Atlantic First Nations Water Authority "will proactively manage the needs of all participating communities, maxim[ize] the investment within their systems, and lead the communities from a yearly funding request, to a longer-term approach for sustainability" (Nielsen et al. 2021:20). In order to increase independence within the organization, it is indicated that the Atlantic First Nations Water Authority will consider alternate or additional means of funding. Some of these potential alternative funding

opportunities will be through affiliated municipalities entering into a funding agreement with the Atlantic First Nations Water Authority, long bond yields through the federal government, community funding such as businesses through reallocated business taxes, or philanthropic endeavors (Nielsen et al. 2021). Through the recruitment of additional communities, and the implementation of a proactive investment approach, the organization will be able to expand to benefit their communities, while maintaining their status of a not-for-profit organization (Nielsen et al. 2021). This opportunity will allow the organization to "implement a dedicated, and sustainable funding model" (Nielsen et al. 2021:50). Opportunities will develop as the authority is established; however, it is notable at this time that the primary funding to initiate the Atlantic First Nations Water Authority is secured. As the business case states, "once this initial tranche of funding has been invested, AFNWA will be positioned to proactively operate, invest, and deliver services [with] a greater level of independence" (Nielsen et al. 2021:20). Thus, at the operative phase, the authority is designed to be able to be self-sustaining, allowing the Atlantic First Nations to be self-determining.

The OECD articulates that a regulatory framework should be utilized in a water authority in order for it to be successful (OECD Water Governance Framework 2018). In acknowledging that regulatory frameworks typically neglect cultural aspects, it is highlighted in the business case that the Atlantic First Nations Water Authority will utilize a regulatory framework, while basing their establishment from an Indigenous perspective (Nielsen et al. 2021). A regulatory framework, as defined by Law Insider "means the regulations, decisions, directives, regulatory policies, guidelines, recommendations and procedures made by the Authority from time to time including

any revisions or amendments made to them" (Law Insider). This definition provides a

clear understanding of the many responsibilities which fall under the Atlantic First

Nations Water Authority's oversight. As it was previously discussed, the foundation of

the Atlantic First Nations Water Authority is based on the bilateral notions of traditional

beliefs and technology. Within the regulatory framework suggestions, the OECD

discusses the need for a legal framework (OECD Water Governance Indicator

Framework 2018), which is discussed in the business case regarding license

agreements. These agreements are set between the Atlantic First Nations Water

Authority and the participating communities when the community passes Band Council

Resolutions (Nielsen et al. 2021). As these agreements are signed and communities

engage with the water authority, the organization will begin negotiations and

agreements with the communities for the establishment and maintenance of the water

infrastructure (Nielsen et al. 2021). The collaboration between the Atlantic First Nations

Water Authority, Atlantic Policy Congress, Indigenous Services Canada, and Health

Canada will aim to "implement a regulatory governance structure" (Nielsen et al.

2021:28). Thus, while a regulatory framework had been developed by the APC and

Dalhousie University, "the challenge in the context of the AFNWA will be finding the

appropriate body to enforce those regulations" (Nielsen et al. 2021:18). In this case, the

Atlantic First Nations Water Authority was developed to become the appropriate body to

enforce these regulations. The Colliers' business case states that this component

"requires further development and may increase program costs" (Nielsen et al.

2021:13), as identified by the Ontario Clean Water Agency's review of the Atlantic First

Nations Water Authority's framework (Nielsen et al. 2021). Finally, it is briefly stated that

once a permanent CEO is hired for the water authority, the long-term plans regarding by-laws, business operations, standard operating procedures, and further planning will commence (Nielsen et al. 2021).

The final component of the efficiency indicator is innovative governance, while it is indicated as *innovation* in the figure (OECD Water Governance Indicator Framework 2018). Being innovative, by definition, is "being or producing something like nothing done or experienced or created before" (Power Thesaurus). Thus, innovative governance would entail that governance of an organization such as a water authority, be unprecedented. Under this principle, the initial point is "encouraging experimentation and pilot testing on water governance, drawing lessons from successes and failures, and scaling up replicable practices" (OECD Water Governance Indicator Framework 2018:27). This statement is consistent with the Atlantic First Nations Water Authority as an organization. This water authority could be described as a pilot test due to it being the first of its kind, which "will provide an important precedent for First Nations communities across Canada as they consider self-governance and self-determination" (Nielsen et al. 2021:22). Furthermore, the governance structure, particularly, the Board of Directors being primarily composed of Indigenous band Chiefs, has never been explored within a water authority (Nielsen et al. 2021). The Atlantic First Nations Water Authority is innovative in their composition, relationship-building opportunities, and in the relationship reformation between the federal government and this group of Indigenous peoples.

Another point of consideration within the innovative governance principle is "promoting innovative ways to co-operate, pool resources and capacity" (OECD Water

Governance Indicator Framework 2018:27), which is reflective of the full-service

decentralized structure of this organization. Through the structure of the Atlantic First

Nations Water Authority, the resources will be pooled and utilized occasionally

throughout multiple communities. Instead of a water authority governing a region, the

Atlantic First Nations Water Authority will govern locations within various regions, and

potentially with a considerable distance between the locations. As the Colliers' business

case states, "utilizing a hub model provides a centralized, integrated logistics system

designed to keep costs down. Hub and spoke utilities centers receive resources (i.e.

expertise, products) from many different origins, consolidate the products, and send

them directly to destinations" (Nielsen et al. 2021:32). This statement is indicative of the

expectations surrounding the sharing of resources and co-operation between

communities. Thus, this furthers the argument that the Atlantic First Nations Water

Authority will become a model of innovative governance.

Indicator: Trust & Engagement

Finally, "trust and engagement in water governance relate to the contribution of

governance to building public confidence and ensuring inclusiveness of stakeholders

through democratic legitimacy and fairness for society at large" (OECD Water

Governance Indicator Framework 2018:5). The *trust and engagement* indicator is

inclusive of monitoring and evaluation, trade-offs across users (rural and urban areas

and generations), stakeholder engagement, and integrity and transparency (OECD

Water Governance Indicator Framework 2018). The Atlantic First Nations Water

Authority has been vigilant in incorporating and describing these principles in the

Colliers' business case, as it is indicated through a monitoring and evaluation program.

This organization will have an opportunity to engage with the Water Monitors program

(Nielsen et al. 2021), which is provided by the federal government through Indigenous

Services (Indigenous Services Canada 2021). As stated on the Government of

Canada's website, through this program Indigenous Services Canada may offer support

in

> regularly monitoring all drinking water systems where the public has access,
>
> providing residence, upon request and free of charge, bacteriological testing
>
> services of their well water, and reviewing plans and providing advice from a
>
> public health perspective for new and upgraded water treatment systems
>
> (Indigenous Services Canada 2021).

This program offers a community-based program which "provide[s] funds to chiefs and

councils for bacteriological drinking water monitoring, training community-based drinking

water for potential bacteriological contamination as a final check of the drinking water at

tap" (Indigenous Services Canada 2021). Within the Atlantic First Nations Water

Authority, this type of program would be supported through their operations department

but would be conducted by the service provided by ISC (Nielsen et al. 2021). Further,

the Colliers' business case states that due to the public nature of a water authority, it is

imperative that the quality of water is overseen, and it is suggested that a "federal

regulatory body" is involved in quality assurance (Nielsen et al. 2021). To clarify, this

regulatory body will not be seen as or have authority over the Atlantic First Nations

Water Authority but will simply be implemented to provide support in unfamiliar matters.

Lastly, asset management will be integrated into this organization's monitoring and

evaluation. This type of management system will identify and prioritize required

investments (Nielsen et al. 2021), which will include monitoring infrastructure and planning for maintenance or replacement as it is seen fit (Nielsen et al. 2021). The asset management plan is set to be one of the first endeavors that the Atlantic First Nations Water Authority will venture into, prior to operation (Nielsen et al. 2021).

Within the trade-offs principle, the OECD indicates that a promotion of participation among vulnerable groups living in remote areas (OECD Water Governance Indicator Framework 2018) is a key element. As this water authority aims to incorporate and provide services to Atlantic First Nations and is open to broadening its geographical service domain within remote areas, the organization in itself is promoting participation among vulnerable groups living in remote areas. This is further illustrated by the ownership of this authority being the participating communities, which requires consistent participation of the individuals living within the communities. As this principle states, an objective is to "empower local authorities and users to identify and address barriers to access quality water services" (OECD Water Governance Indicator Framework 2018:32). Further, one of the goals of this principle is to identify barriers to water service quality (OECD Water Governance Indicator Framework 2018), which again, is a cornerstone in the foundation of the Atlantic First Nations Water Authority, as has been discussed. Similar to the statements made for future funding intentions, the Atlantic First Nations Water Authority will engage in trade-offs in the building of relationships with other organizations. In particular, Dalhousie University and Halifax Water have been vital players in the planning and preparation of this authority (Nielsen et al. 2021), which has fostered positive relationships between the entities and will be maintained through support as needed. The OECD asserts that "this indicator seeks to

appraise the existence and functioning of provisions and frameworks fostering equity across users" (OECD Water Governance Indicator Framework 2018:16), and further, "equity can be understood in terms of outcomes (to ensure costs and benefits are distributed fairly)" (OECD Water Governance Indicator Framework 2018:32). As the Colliers' business case suggests, one of the fundamental issues with how water in Indigenous communities is governed is "the inability to provide a uniform level and equity among communities" (Nielsen et al. 2021:19), among others. Therefore, this authority's framework strives to amend this issue and create coordination and consistency across communities through self-governance (Nielsen et al. 2021). The notion of equity is one of the core facets of this water authority, as water provision and quality has lacked equity within Canada.

Stakeholder engagement is of utmost importance in water governance that is administered to vulnerable groups. The OECD indicates that stakeholder engagement is valuable for "informed and outcome-oriented contributions to water policy design and implementation" (OECD Water Governance Indicator Framework 2021:30). The Colliers' business case states that communication and outreach is integrated within the Atlantic First Nations Water Authority's governance model (Nielsen et al. 2021). In particular, the organization's *Preliminary Evaluation Criteria,* which are fundamental in the evolution of the Atlantic First Nations Water Authority, were established primarily through stakeholder consultations (Nielsen et al. 2021). Six drivers of this water authority were identified as "Safe Drinking Water & Wastewater Treatment, Self-Governance, Cultural and Spiritual, Financial Independence, Economic Development, and Model for First Nations" (Nielsen et al. 2021:34). Through this outreach, "the

success of this stakeholder engagement and notional support from ISC, the AFNWA was officially incorporated 18 July 2018 under the Canada Not-for-profit Corporations Act" (Nielsen et al. 2021:3). The effectiveness of this engagement is indicative of the Atlantic First Nations Water Authority's current state and progress. Ongoing engagement will be intentional as it is believed that it "will ensure the long-term success of the AFNWA by building trust and relationships with the communities being services" (Nielsen et al. 2021:70). The organization's strategy is inclusive of a "change management strategy" (Nielsen et al. 2021:66), which will communicate vital information concerning future changes to stakeholders (Nielsen et al. 2021). Similar to the trade-offs principle, this OECD indicator discusses attentiveness to under-represented groups (OECD Water Governance Indicator Framework), which is the goal of this water authority, as the stakeholders will largely belong to this group. As it has been briefly mentioned, an Elders Advisory Committee will be developed to guide decision making processes (Nielsen et al. 2021). This committee is illustrative of a major stakeholder engagement method. The integration of Elders is of significance because within many Indigenous cultures, "Elders play crucial roles in Indigenous communities" (About Us 2021). Through this wisdom, Elders "help ensure that First Nations culture, values and traditions are embedded in the AFNWA" (Nielsen et al. 2021:54). As illustrated, stakeholder engagement is one of the building blocks to this organization, and will continue through the Elders Advisory Committee, the communities' ownership of the water authority, and through ensuring that under-represented voices are heard.

Further to the point of engaging stakeholders, the Colliers' business case sets out the Atlantic First Nations Water Authority's key stakeholders with their primary goals

in a table (Nielsen et al. 2021). The key stakeholders, as presented in this table are

Atlantic First Nations Communities, as discussed, Atlantic First Nation Leadership,

inclusive of Formal Elected Councils, Chiefs, Elders and the Atlantic Policy Congress

(APC), the Government of Canada, specifically the Department of Indigenous Services

Canada, Regulatory Organizations, inclusive of Health Canada and Environment

Canada, the Atlantic First Nations Water Authority Board, Staff, and System Operators,

and finally, the Regional/ Neighbouring Water and Wastewater Services/ Authorities

(Nielsen et al. 2021). While each of the named stakeholders have a list of goals, as

indicated by the Atlantic First Nations Water Authority, this table discusses how the

Atlantic First Nations Water Authority will support each stakeholder in attaining this goal

(Nielsen et al. 2021). This display is comprehensible and is a great resource for

stakeholders in this organization.

Finally, integrity and transparency is one of the principles under the *Trust and

Engagement* indicator (OECD Water Governance Indicator Framework 2018). The

OECD affirms that integrity and transparency is inclusive of "establishing clear

accountability and control mechanisms for transparent water policy making and

implementation" (OECD Water Governance Indicator Framework 2018:28). As

previously mentioned, Tortadaja concurs that one of the "pillars to good governance is

transparency" (2010:para 33). Thus, through the continual communication with

stakeholders, and ensuring that board meetings occur on a public platform (Nielsen et

al. 2021), when it is appropriate, this principle will be complied with.

The Atlantic First Nations Water Authority asserts their *Objectives for

Governance and Accountability* on their website, which are conducive to the OECD's

guidelines. The website expresses the organization's intentions of governance and accountability

- To ensure that the Board of the AFNWA is truly representative of the Owners

- To ensure that the values of engagement, openness and transparency are reflected in the governance and accountability of the AFNWA

- To ensure that the personal qualities and business experience of Directors is consistent with those required to oversee the AFNWA's mission, vision and business strategy

- To ensure that Directors are qualified and suited to deal with the opportunities and risks facing the AFNWA, its proposed strategies and its ongoing needs and circumstances

- To apply First Nations traditional knowledge and culture, including environmental stewardship, the spiritual aspects of water and Two-Eyed Seeing (About Us 2021).

These statements are illustrative of the cultural aspect as it has been discussed and aligns with the OECD's guidelines not only regarding transparency in communication, but in several ways. Stakeholder engagement is addressed, as well as ensuring the employees, specifically in director roles, are qualified, similar to the roles and responsibilities principle. This principle is illustrated in a table provided by the Colliers' business case as it shows the dollar amounts associated with each of the 15 communities, with a revised amount indicating additional costs if the groundwater is found to have risks associated with the surface-level water (Nielsen et al. 2021). Although this table is referring to the dollar amount of a very technical water-related

treatment, the dollar amounts are clearly displayed to indicate the cost of this treatment, based on information obtained from Halifax Water (Nielsen et al. 2021). This example transparently communicates potential risks to each community, creating awareness for the communities involved. This is a theme throughout the Atlantic First Nations Water Authority's documents as risks and obscurities relating to water and health-related services are essential to communicate. The OECD indicates that part of this principle is to adopt a multi-stakeholder approach (OECD Water Governance Indicator Framework 2018), which has been discussed in relation to the previous principle. This approach will allow for greater transparency to the public when more than two entities are involved.

Through comparing the Atlantic First Nations Water Authority's framework to the OECD Water Governance Indicator Framework, it has illustrated this water authority's full compliance with every indicator and principle specified by the OECD. In acknowledging the arguments made by Taylor et al., the OECD does not incorporate Indigenous knowledge systems, nor does it acknowledge the underrepresentation of Indigenous cultures. Nevertheless, it is remarkable that the Atlantic First Nations Water Authority has been able to satisfy the standards as presented by the OECD. This comparison, theoretically, would suggest that the Atlantic First Nations Water Authority will be successful in providing water security to the participating communities through the stated policies and framework plans.

CONCLUSION

The intention of this paper was to analyze and compare the framework of the Atlantic First Nations Water Authority to an internationally organized and agreed-upon framework for water governance, namely, the OECD Water Governance Indicator

Framework. In this, a foundation and understanding of the key barriers to safe drinking water for First Nations was discussed in order to discuss the feasibility of an Indigenous-led water authority to address and improve such barriers. The identified key barriers to safe drinking water were colonization and modern colonial structures, governance and access to water, and funding challenges. Although the Atlantic First Nations Water Authority is a promising advancement as compared to the current state of water governance for First Nations communities, a few additional considerations have been identified.

Through the analysis of the Atlantic First Nations Water Authority, it was unmistakable that this Indigenous-led organization was still framed like a non-Indigenous organization. Despite the intentions to incorporate Indigenous cultures and knowledge into this organization, it fell short of detaching itself from a Westernized structure. The OECD's framework is a Western-based approach to a standardized understanding of an acceptable framework of a water authority. Therefore, being able to compare an Indigenous-led water authority to this framework seamlessly demonstrates that the Atlantic First Nations Water Authority in fact mirrors a Westernized structure. As this water authority strives to disconnect from a colonial/ Westernized type of model, engaging in structures such as the full-service decentralized and regulatory frameworks fail to accomplish this goal. On the other hand, in order for this water authority to be approved and supported by various institutions, it is likely that these types of structures are mandatory, and thus, created complex circumstances for this organization. However, the extent to which this organization incorporates Indigenous knowledge and structures is, at this time, ambivalent. Additionally, while Elders are briefly mentioned

and integrated into this framework, the Atlantic First Nations Water Authority fails to deeply incorporate Elders and the role of women into their organization. Both Elders and women play significant roles in many Indigenous cultures, specifically in a woman's connection to water (McGregor 2015:74). For this reason, it was found that a woman's deep connection to water and an all-encompassing approach to Elder's guidance is lacking within their structure. Thus, the colonial structures which have been quite harmful to Indigenous peoples seem to be entrenched within this organization.

Furthermore, neither the Atlantic First Nations Water Authority, nor the federal government acknowledge the anticipated duration of governmental funding, which is key in determining an agreement between the entities. Since the duration of the funding provided by the federal government is not documented, the reliability of this funding comes into question. Similarly, although the Atlantic First Nations Water Authority assert their desire to find alternate funding methods, there is no mention of user fees. The Colliers' business case mentions an increase of cost per household within each participating community as the water authority is initiated (Nielsen et al. 2021:9), however, this is discussed in terms of costs that the community will be responsible for. User fees are utilized by other organizations in order to supplement other forms of funding, which is an option for the Atlantic First Nations, although there is no indication of exploring this option.

Ultimately, as these concerns have been articulated, the Atlantic First Nations Water Authority is significant in the context of Canada's history. While the barriers were not entirely addressed through this framework, the Atlantic First Nations Water Authority demonstrates the advancement of policy structures relating to water and initiates a new

discussion on alternative methods to providing safe water to Indigenous communities. In the future, this water authority may be viewed as a building block to other revolutionary and wholly Indigenous organizations. However, this water authority addresses a key component in allowing for such a revolutionary organization by establishing this new-age agreement, and more importantly, asserting self-determination through self-governance. Through this view, the Atlantic First Nations Water Authority will presumably be successful in achieving self-governance and water security for its participating communities. An on-going challenge for this organization will be to achieve longevity due to the concerns raised regarding expiration of funding, user fees, and utilizing non-Indigenous governance structure.

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