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Ensuring Water Security in Indigenous Communities throughout Canada

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Abstract:

In Canada, Indigenous communities suffer disproportionately from the lack of access to safe drinking water. The government of Canada has committed significant investment into improving infrastructure aimed at ending long-term boil water advisories. This paper argues that the real issue lies in outdated and insufficient water resource management. Water resource management has become a fragmented issue between federal, provincial and municipal governments in Canada. The problem is worsened by age-old colonial governance models that have, and continue to, exclude Indigenous peoples from decision making and ignore the use of Indigenous Traditional knowledge in understanding water as an invaluable natural resource. Therefore, in order to create long-term solutions to water security in Indigenous communities, Canada needs to remodel how water resources are managed. Inclusive and equitable solutions will not only improve water security across Canada it will also aid in the pursuit of reconciliation.

Key Words:

Water Security, Drinking Water, Boil Water Advisories, Indigenous, Canada, Reconciliation

Introduction

Indigenous communities in Canada are disproportionately affected by issues of water governance. Inadequate water treatment facilities, a lack of policy commitment, and long-term boil water advisories (Arsenault et al, 2018) plague Indigenous communities throughout Canada. A report published by the Water Policy and Governance Group recognized that there are complex water challenges throughout Canada and that new and alternative approaches to water governance

are needed to solve complex water issues such as pollution, water shortages, quality and sanitation, and ecosystem degradation (Simms & de Loë, 2010). The report identifies the need to shift to a more collaborative approach to water governance that includes various stakeholders and knowledge and resource sharing (Simms & de Loë, 2010). Perhaps the most underappreciated stakeholder to be included in collaborative water governance in Canada are Indigenous communities. Indigenous communities are often viewed as needy and vulnerable, rather than important partners with valuable insight and legal rights. In addition, Canada's approach to water governance is focused on western science-based norms, which often view Indigenous traditional knowledge as an add-on or afterthought (Arsenault et al, 2018). Indigenous people have not always been viewed as powerful rights holders, however it is becoming increasingly understood that Indigenous people have unique legal rights (Simms & de Loë, 2010) and must be included in Canada's water management strategy. Indigenous perspectives on water management are beneficial to Indigenous communities as well as non-Indigenous communities throughout Canada.

It is impossible to speak for all Indigenous people in Canada; however, it is understood that many Indigenous communities disproportionately face water security issues compared to other communities. A survey done by EKOS Research associates found that 3 out of 10 First Nations people on reserve found their water to be safe, 3 out of 10 found their water to be unsafe, and 4 out of 10 found their water to be somewhat safe (White et al, 2012). This was compared with data collected that found that 98% of non-Indigenous people thought they had enough access to water and over 60% were satisfied with the quality (White et al, 2012). In most non-Indigenous communities, complaints about water quality are related to the taste of the water, a minuscule issue when compared to the water quality issues that some Indigenous people face in Canada. As of April 10, 2019, there are approximately 57 long-term drinking water advisories and 35 short-term

drinking water advisories in place on reserves in Canada (Government of Canada, April 10, 2019; Government of Canada, April 14, 2019). Drinking water advisories are public health messages that urge people to either boil their water before consumption or access water from elsewhere, often through purchasing bottled water. Drinking water advisories are issued when the water is deemed unsafe to consume due to chemicals, disease-causing bacteria, and sediment build up in the water (Anderson et al, 2013). Water advisories are unfortunately commonplace in various Indigenous communities throughout Canada.

Indigenous Inequalities in Canada: Colonial Legacy

It is disappointing that Canada, a country with one of the world's highest standards of living and 7% of the world's renewable water resources (Government of Canada, 2019), does not provide access to quality water to a proportion of its citizens. Access to clean water on reserve is an issue that dates to when Indigenous peoples were first displaced from their land and moved onto reserved land (White et al, 2012). Reserved lands were created through various measures; they were set up through treaty processes that allotted a certain amount of land for a certain family size, by local people and institutions to isolate Indigenous communities, and by government bodies (White et al, 2012). While not always the case, reserves were often set up in isolated areas with poor land quality while settlers secured the superior land (White et al, 2012). Canada's history of discrimination has proceeded to negatively affect water quality in Indigenous communities throughout Canada.

Canada's Commitment to SDG 6

In September of 2015 several world leaders, including Canada, gathered at the United Nations General Assembly and agreed upon seventeen Sustainable Development Goals (SDGs) with a target to reach these goals by 2030 (Madeley, 2015). One of these goals, SDG 6, is to ensure

the availability and sustainable management of water and sanitation for all by 2030 (Sustainable Development Goals Report, 2018). Although Canada has promised to eradicate all drinking water advisories by 2021 through increased investment in infrastructure (Aiello, 2017), this approach is not enough to meet the targets outlined in SDG 6. In order to meet the goals of SDG 6 and ensure water security for Indigenous communities across the nation, Canada must remedy the governmental fragmentation that creates a fragmentation of responsibility over Indigenous water security, create a more integrated water management system, and support the inclusion of Indigenous traditional knowledge in water management.

Governmental Fragmentation

Canada is a large country with diverse physical landscapes, resulting in the distribution of governance to provincial and municipal governments that can deal with the characteristics of their regions most effectively (Bakker & Cook, 2011). For the management of water resources in Canada, this has created stress on which scale is most effective in dealing with water security issues. As authors Bakker and Cook point out, there is a tension between a Federal standardization of rules, laws, and norms, and the Provincial delegation of decision-making and policy implementation to the lowest appropriate scale (Bakker & Cook, 2011). Water governance in Canada is further complicated by the involvement of various stakeholders, organizations, and levels of government. There is a lack of coordination among the Federal, Provincial, Municipal, and First Nations' governments that creates governmental gaps, a fragmentation of responsibility (Walters et al, 2012), and problems of accountability. Fragmentation is defined as "the allocation of responsibility for water governance amongst multiple actors and/or agencies, with relatively little or no coordination" (Hill et al, 2008). This creates significant water security challenges for

Indigenous communities. The fragmentation of government must be remedied in order to successfully achieve the targets of SDG 6 and provide the maximum available resources to addressing water security problems in Indigenous communities.

In terms of water governance, at the Federal level the government has jurisdiction over fisheries, navigation, federal land, and international waters (Environment and Climate Change Canada, 2019), while at the provincial level the government has jurisdiction over water resources and supply (Bakker & Cook, 2011). In addition to Federal and Provincial governance over water, Indigenous and Northern Affairs Canada (INAC), Health Canada (HC), and some self-governing First Nations governments provide governance over water issues. Considering that issues of water quality and supply fall under Provincial jurisdiction while Indigenous affairs are dealt with at a Federal level, gaps in legislation exist as provincial water laws do not apply to First Nations on reserve. The issue of reserve land potentially being located in watershed management areas that fall under provincial or municipal water protection laws, with the reserve land being governed by federal law creates jurisdictional gaps that negatively affect Indigenous people. Authors Bakker and Cook argue that "water management (and environmental management more generally) in Canada are characterized by a lack of inter-governmental coordination, a duplication of efforts, poor data collection and sharing, and inadequate monitoring and enforcement" (Bakker & Cook, 2011).

This governmental fragmentation exacerbates water security issues; one negative consequence of jurisdictional fragmentation is the effect on source water protection. Source water protection is increasingly recognized as a logical way to protect water quality and health in Indigenous communities. Author Robert J. Patrick argues that major constraints on the implementation of source water protection comes from institutional fragmentation rather than

technical or scientific limitations (Patrick, 2011). In addition, jurisdictional fragmentation can result in competing mandates and competition for resources (Bakker & Cook, 2011). Some sectors of government may be responsible for preserving ecosystems and water resources, while other sectors may mandate more environmentally extractive practices in pursuance of economic development. Multiple actors and contradicting mandates can have a negative effect on the quality of water in Indigenous communities. The lack of clear guidelines and jurisdictional confusion on the protection of drinking water on First Nations reserve creates governmental negligence and oversight.

Failures of IWRM in Canada

Integrated Water Resource Management (IWRM) is an integral part to effective and inclusive water management and governance. IWRM can be defined as: "a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of all ecosystems" (UNESCO, 2009, p. 3). IWRM is also a key component of the SDGs as target 6.5 seeks to promote: "IWRM at all levels" (UN, 2019). Despite the global consensus on the effectiveness of IWRM in creating holistic water governance and management, Canada has arguably been slow to adopt IWRM. Using the above definition of IWRM, water management in Canada ought to be an organized and coordinated effort that seeks to balance all interests and recognize all parties as equal.

Across Canada, the general practice of water resource management has taken the shape of establishing watershed management agencies. Although this must be seen as a positive step towards better IWRM, recent studies have found that the current watershed management structure faces many challenges and limitations. A study on the effectiveness of watershed agencies in

promoting IWRM by Shrubsole, Walters, Veale, and Mitchell found that watershed management agencies across Canada face four main challengers (2017). The first of which being growing fragmentation between rural and urban landscapes and their respective water needs and responsibilities to protecting water sources (Shrubsole, Walters, Veale, & Mitchell, 2017). Secondly, watershed management agencies in Canada face the continued challenge of capacity, which includes, financial, human and political capacity (Shrubsole, Walters, Veale, & Mitchell, 2017). The third major challenge identified by Shrubsole, Walters, Veale, and Mitchell is that watershed management agencies in Canada lack any legislative authority (2017). As a result, watershed management agencies are largely at the mercy of the political agenda of the current elected provincial government (Shrubsole, Walters, Veale, & Mitchell, 2017). Finally, the fourth challenge in pursuing IWRM through watershed management agencies in Canada, is the lack of indigenous consultation and involvement in watershed management (Shrubsole, Walters, Veale, & Mitchell, 2017). Shrubsole, Walters, Veale, and Mitchell identify that indigenous actors are often excluded from watershed planning, and management (2017). Furthermore, indigenous actors often refuse to participate with watershed agencies as they recognize the limited authority that said agencies have in decision making (Shrubsole, Walters, Veale, & Mitchell, 2017). This study therefore illustrates the current limited state of IWRM in Canada, and it also clearly identifies that successful IWRM must include indigenous inclusiveness and authority. In addition to the challenges that watershed management agencies have in promoting IWRM, there is also a geographic limitation of Canada's current IWRM of facilitation via watershed agencies. For a large part, watershed management agencies exist solely in the more densely populated areas of Canada. Ontario for example has 36 watershed management authorities, however 31 of the 36 are in densely populated southern Ontario (Collins, McGregor, Allen, Murray, & Metcalfe, 2017). As a result,

most watersheds located outside southern Ontario do not have a specific management agency. This inhibits the ability to promote the goals of IWRM in northern and remote watersheds. Furthermore, despite these un-managed watersheds being in less dense regions of the province, it does not mean that there are not communities that depend on the water resources and industries that utilize the water resources. In fact, the neglect of water management in remote areas exemplifies how indigenous exclusion in hindering IWRM. Indigenous communities in Ontario are disproportionately excluded from watershed management in Ontario. 106 of the 133 First Nations in Ontario are located in watersheds that do not have management agencies and thus are not included in the provincial watershed framework (Collins, McGregor, Allen, Murray, & Metcalfe, 2017). Of the 27 First Nations that do fall within a watershed with an existing conservation agency, some choose not to participate as they view conservation agencies as neglectful of their traditional and treaty rights (Collins, McGregor, Allen, Murray, & Metcalfe, 2017). This example shows how the current approach to water management in Canada is limited and not conducive to fostering Indigenous participation. The lack of traditional knowledge in water management further illustrates the limited use of IWRM in Canada. A key element of IWRM is: "combined consideration of all water uses, including social, economic, and ecological dimensions" (Annika Kramer & Claudia Pahl-Wostl, 2014). Therefore, the exclusion of indigenous traditional knowledge in water governance and management results in a failure in considering all social, economic and ecological dimensions of water resources.

Both the article by Shrubsole, Walters, Veale, and Mitchell (2017) and the Ontario case study of watershed management (Collins, McGregor, Allen, Murray, & Metcalfe, 2017) exemplify how the lack of indigenous involvement in the governance of water resources hinders the effectiveness of IWRM in Canada. Furthermore, both studies identify that the lack of decision-

making power awarded to watershed management agencies limits the value of Indigenous participation and collaboration. In order to pursue better IWRM water governance and management must be afforded greater decision-making power whilst pursuing improved coordination between all actors. This is especially important considering the disproportionate amount of water security issues that Indigenous communities face. Furthermore, pursing IWRM that meets the needs of Indigenous and developed along with Indigenous decision makers is imperative in pursuing reconciliation.

Lack of Inclusion of Traditional Knowledge

The Canadian government has historically excluded Indigenous people from the governance and decision-making processes regarding drinking water management. Despite the growing attention towards the inclusion of indigenous peoples in environmental resource management on the international stage, Canada has yet to meaningfully apply this initiative into practice (Simms et al., 2016). The Ontario and Canadian governments have been developing policies to address water-related concerns in Indigenous communities within their jurisdictions (McGregor, 2012) but have had limited impact on the improvement of water quality within many of these communities (Arsenault et al., 2018). Despite political concerns, there has been little progress made on the inclusion of TK in policies (McGregor, 2012) that could have the potential to improve the understanding of the environmental threats to water and provide innovative responses to address these threats from source to tap. Although policies are acknowledging the need and importance of addressing the water crisis in Indigenous communities, there continues to be very little meaningful inclusion of traditional methods (Arsenault et al., 2018).

The Government of Canada's main tactic to addressing drinking water concerns has typically been providing funding to support the construction and improvement of infrastructure.

In 2008, $330 million was committed over two years to addressing issues in drinking water quality and again an additional $330 million was committed in 2011 (White et al., 2012). Then in 2016, $1.8 billion over five years was allocated to on-reserve water and wastewater infrastructure (Aiello, 2017). While there is urgent need for the improvement of infrastructure, it is acknowledged by many that these investments alone will not be enough to improve the quality of water in Indigenous communities (White et al., 2012; Millar & Rae, 2018). By attempting to solve the problem with more investments ignores several underlying issues that contribute to a lack of safe drinking water. At the center of the Canadian Indigenous water crisis is a continuous power struggle First Nations are involved in to have indigenous voices respected in the decision-making process that greatly impact their lives, lands, and waters (McGregor, 2012). This includes the lack of respect of water as a valuable resource and the inclusion of Indigenous input into the treatment of their drinking water (McGregor, 2014). There continues to be systemic and equality issues unaddressed, which have severely limited the ability to solve the holistic problem of unsafe drinking water in Indigenous communities.

Unilateral action by the Canadian government has proven unsuccessful in solving the water crisis in Indigenous communities. In 2005, an expert panel was assembled by the federal government to address the poor water quality in Indigenous communities (White et al., 2012). Consultations were conducted with Indigenous, organizations, and individuals, concluding that a federal statute establishing a water standard would be the most effective and feasible approach (White et al., 2012). This legislative approach to resolving water issues has failed to address such issues from an Indigenous perspective (McGregor, 2012) which not only ignores fundamental concerns from the Indigenous community but fails to consider a viable cultural solution to addressing water as an essential resource.

It is not to say that these approaches by the federal and provincial governments are wrong but rather misguided in their approach to a holistic solution. The customary approach of the colonial government has typically been driven by science and been forced onto Indigenous people (McGregor, 2014). This is not a productive approach and has been faced with repeated backlash from indigenous communities (Palmater, 2019). Indigenous peoples perceive Western water management as a limited approach because it utilizes science and technology alone and is therefore inadequate to address the needs on a global, regional, and local scale (McGregor, 2012). Indigenous communities have been highly vocal about their desires for a government-to-government decision-making process that recognizes First Nations authority and jurisdiction over their daily lives (McGregor, 2012). Incorporating the TK of the environment that has been accumulated and passed down for generations may provide a more thorough and holistic response to the management of drinking water.

Recommendations and Proposals for Policy Development

In the year 2000 the city of Walkerton experienced an e-coli breakout that contaminated the water and led to the death of seven and the sickening of over 2300 people (Morrison et al, 2015). This resulted in national reports discussing the importance of source water protection, extensive media coverage, investigation into the cause of the outbreak, and concern over the governmental gaps that may have contributed to the tragedy (Morrison et al, 2015). Drinking water contamination is a reality that many Indigenous people face every day, with some communities living with boil water advisories for years, even decades, and receiving very little inquiry into the root problems and potential solutions. Canada must address various aspects of water governance in order to provide water security to Indigenous communities.

Integration of Institutions and a Pan-Canadian Framework for Water Governance

Canada's challenge of governmental fragmentation creates negative opportunities for jurisdictional gaps and a fragmentation of responsibility when dealing with water security issues in Indigenous communities. In response to this challenge, more governmental integration is needed to increase collaboration of institutions, especially when dealing with the management of water on First Nation reserves. A more holistic and integrated water resource management strategy is needed. In addition, scholars have suggested that applying provincial laws on reserve or adopting provincial water laws in federal regulation (White et al, 2012) would allow for greater water security on reserve and off-reserve across Canada. At the federal level Canada lacks a clear and consistent mandate to create harmonization for drinking water regulations and watershed governance (Hill et al, 2008), calling for a renewed role of the federal government in Canada's water governance strategy (Bakker & Cook, 2011). There must be a harmonization of goals and the creation of a pan-Canadian framework (Bakker & Cook, 2011) for drinking water quality that will work to protect Indigenous communities from the water security issues they face today. The Canadian Council of Ministers of the Environment (CCME) is an important Pan-Canadian water governance mechanism as it outlines national guidelines for drinking water standards, however they are voluntary guidelines (Bakker & Cook, 2011). There must be more mechanisms at the federal level to ensure quality drinking water. In a country as large as Canada it is logical that federalism is employed to deal with issues on a local and regional level, however a more central framework must exist to clearly outline water quality challenges and ways forward in order to promote coordination among institutions and work to produce real change. As authors Hill et al state, “variation may be appropriate, fragmentation is not” (Hill et al, 2008). Calling for more

integrated water resource management will not be successful unless there is a common goal for drinking water security among institutions.

Progressing IWRM in Canada

Given Canada's inability to adopt adequate IWRM, it is important to identify how IWRM in Canada can be improved in order to achieve greater water security for indigenous communities. This raises the question; how can natural resource governance, in particular water governance, change in Canada to better incorporate indigenous people, thus contributing to improved IWRM? First, water governance and management must be re-imagined in Canada. There needs to be a shift in how decisions are made and who makes the decisions. Natural resource governance in Canada has systematically excluded indigenous people from the decision-making process: "indigenous peoples in Canada have historically been – and largely continue to be – excluded from colonial government's decision-making and management frameworks for fresh water" (Simms, Harris, Joe, & Bakker, 2016 p. 6). The decolonization of decision making must be done in conjunction with the decolonization of water resource knowledge and research. In order to advance equality in water resource governance and management decisions need to be made based on a combination of traditional knowledge with modern science (Arsenault, Diver, McGregor, Witham, & Bourassa, 2018). Furthermore, it is recognized that in order to advance IWRM stakeholders need to be made decision makers as: "Mere inclusion of relevant stakeholders, however, is not enough to increase legitimacy [of IWRM]; stakeholders also must have equal or at least fair opportunities to patriciate [in decision making]" (Annika Kramer & Claudia Pahl-Wostl, 2014). Canada therefore needs to put an end to colonial government style natural resource governance. Water resource governance in Canada ought to be re-structured from the current state where indigenous communities are

simply consulted to a structure that provides legitimate decision-making power and leadership to indigenous communities.

An example of progressive and inclusive water resource management is the Cowichan Watershed Board (CWB). The CWB was established as: "a local entity to oversee the health of the [Cowichan River] watershed" (Cowichan Watershed Board, 2018). The CWB is comprised of representatives from both First Nation communities as well as representatives from the Cowichan Valley Regional District. (Cowichan Watershed Board, 2018). The board utilizes their vision of whole-watershed thinking to: "promote wise water management practices through monitoring and advocating for watershed health, guiding implementation of the CBWMP [Cowichan Basin Water Management Plan] and advising all levels of government" (Cowichan Watershed Board, 2018). The partnership model of the CWB has not only aided in the developing of a comprehensive water management strategy but it has also been instrumental in progressing reconciliation as: "co-governance gives the partners equal weight in consensus-driven decision making; considers traditional knowledge as well as new data and recognizes both regional and First Nation governments…" (Cowichan Watershed Board, 2018). The CWB therefore illustrates what the decolonization of natural resource management looks like. Greater adoption of partnership models, such as the one seen in the CWB, must occur in water resource management in order to pursue long term solutions to water security. There needs to be greater support for Indigenous communities to be proactive in establishing a CWB style partnerships. Furthermore, provincial governments must be open to overhauling current watershed management programs in order to facilitate greater partnerships and allow for Indigenous communities to have equal power in water governance. Only then, when Indigenous people in Canada have equal power in local water resource management will IWRM meet its true potential in ensuring water security in Canada.

Including Traditional Knowledge into Canadian Water Governance

The inclusion of traditional knowledge (TK) in the governance of water resource management would create an avenue for Indigenous communities to improve their living conditions in a way that reflects their cultural identity and has the potential to improve the resilience of water management. In addition, Canada's position to meet SDG 6, specifically targets 6.1 and 6.2, will be improved as these communities will be involved in the solution towards providing access to communities where access to clean water has been neglected.

Traditional stories related to water vary among First Nations but commonly imply the individual responsibility to care for Mother Earth (McGregor, 2012). Traditional perspectives do not see water as a commodity but rather as an element that should be respected as a living spiritual force (McGregor, 2012). Adopting this perspective into Canadian water policy could greatly improve the response to and prevention of boil water advisories. TK may have the ability to elevate the value and perception of water as more than a resource but rather a part of a living system that is a necessity for human well-being and should be treated as such.

Indigenous peoples are in the difficult position of whether to fight for the inclusion of TK into environmental governance but are typically afraid to do so for fear that it will be misused, misappropriated or exploited (McGregor, 2014). However, despite these concerns, indigenous peoples continue to advocate that TK play a larger role in the decision-making process (McGregor, 2014). The unique perspectives and values that Indigenous peoples hold in relation to water could be of great value to non-indigenous Canadian society. Many feel as if the current mainstream approach to water governance is misguided, limited, and too reliant on science and technology to be a long-term solution to the lack of current water protection (McGregor, 2012). Many Elders and other knowledge holders in Indigenous communities can share TK that has been passed on for

generations and have been used to assess new information that can address contemporary issues (McGregor, 2012). Taking care of water has been a central component of some First Nation's histories (McGregor, 2012), therefore a vast amount of knowledge is being underutilized which has the potential to strengthen the power of local communities and alter Canadian policy to improve the approach to water resource management. However, it should be noted that not all TK is appropriate for sharing as some contains sensitive information (Arsenault et al., 2018) and governments should be aware and respectful of these limitations.

Canada would benefit greatly from Indigenous TK. It has the potential to change the perception of water as it relates and connects with the Earth as a system. Some Elders feel that current government approaches to water are limited and short-sighted and should be altered to consider all water and all that supports water (McGregor, 2012). How Canadians perceive water will directly benefit how the next generation will perceive and treat water in the future. Indigenous peoples recognize the importance of present actions to benefit the future. In Indigenous communities, it is believed that decision-makers should plan for at least seven generations in the future (McGregor, 2012). This philosophy demonstrates the conscious effort to incorporate sustainable development into the decision-making process. Canada would greatly benefit from this perspective in its formal processes and by doing so would also empower local Indigenous communities. The dominant approach to water governance has proven ineffective at addressing the water crisis in Indigenous communities, therefore it may be time for Canada to consider alternative, more traditional perspectives that reflect and meet the needs of Indigenous communities.

Conclusion

Despite Canada having with one of the highest standards of living in the world, entire communities struggle with issues of clean drinking water access. The communities who most often lack safe drinking water access are Indigenous communities, who since first contact have been systematically marginalized, excluded from decision making and subjected to unthinkable abuses. In recent years, the Government of Canada has begun to pursue reconciliation, however many inequities remain. The country wide struggle for safe drinking water access in Indigenous communities' points towards systematic problems. In addition to a moral obligation to provide safe drinking water and reconciliation, Canada has also signed on to the SDGs, in which they have committed to ensuring the availability and sustainable management of water and sanitation for all by 2030 (Sustainable Development Goals Report, 2018). For Canada to pursue reconciliation, increase safe drinking water access, and succeed in their commitments to the SDGs, there are some fundamental problems with the governance and management water resources in the country that must be reconciled. Government authorities at all levels across Canada must to become less fragmented and harmonization between stakeholders must be achieved in order to accomplish a common goal. There also must be an overhaul of how Indigenous people and communities are included in the governance and management of water resources in Canada. Indigenous people must be recognized as equals in natural resource decision making and there needs to be greater acknowledgement for indigenous traditional knowledge. A departure from a sole reliance on mainstream science and knowledge will lead down a path towards a more equitable future and the empowerment of indigenous people. Improving long-term safe drinking water access in indigenous communities in Canada can be done, however it will require governments to recognize the need to change natural resource management from the status-quo.

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