From The Ocean Floor To The Mountain Top: Using The Renewable Energy Of Mother Earth To Grow Food

by

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ABSTRACT

FROM THE OCEAN FLOOR TO THE MOUNTAIN TOP: USING THE RENEWABLE ENERGY OF MOTHER EARTH TO GROW FOOD

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Traditional food systems are sustainable in nature but have been forcibly altered among Indigenous communities in Canada as a consequence of the colonization of Indigenous Peoples. Indigenous Food Sovereignty (IFS) has recently emerged as a method to counteract the dismantling of traditional food systems as well as the negative health impacts of environmental dispossession on Indigenous communities. Growing, harvesting and preparing traditional foods, have been suggested as a potential resolution to the health, social and environmental issues facing Indigenous communities. Through community-based participatory research, rooted in Indigenous methodologies, this research project explored community perspectives on IFS in T’Sou-ke First Nation. Through community collaboration, this project organized a sharing circle to explore community perspectives on Indigenous Food Sovereignty in T’Sou-ke First Nation. A thematic analysis of the sharing circle held with community members identified the influence of traditional knowledge on environmental concern, sustainable practices and a relationship with the land. Participants discussed memories, traditional foods, current sovereignty projects revealing concerns for their local ecosystem as well as a desire to preserve its natural state for generations to come. Further exploration of community perspectives in future research will generate a greater understanding of the impacts of IFS projects on community environmental concerns and the sharing of traditional knowledge.
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Chapter 1: Introduction and Objectives

1.1 Introduction

Indigenous Peoples\(^1\) have been deeply connected to the plentiful resources of the land since time immemorial (Royal Commission on Aboriginal Peoples, 1995). Indigenous Peoples were the sole residents of Territories within present-day Canada, prior to colonization (Elias, Busby & Martens, 2015; Kuhnlein & Receuver, 1996). The Canadian government’s intentional actions, from the late 19\(^{th}\) century and throughout most of the 20\(^{th}\) century, were aimed at assimilation (Silver, 2006). Policies that worked to undermine Indigenous cultures and suppress Indigenous identities destroyed families and societies and the effects of colonial efforts continue to be felt by Indigenous communities to this day (Royal Commission on Aboriginal Peoples, 1995). Indigenous Peoples across Canada continue to actively resist the negative impacts the legacy of colonization has had, and continues to have, on the health of communities (Vernon, 2015). Resistance efforts have focused on the struggle to preserve access to traditional lands due to a history of environmental dispossession, which stripped communities of their sovereignty and increased nutrition-related health disparities (Richmond & Ross, 2009; Tobias & Richmond, 2016; Vernon, 2015). Indigenous Peoples in Canada continue to experience health effects resulting from these colonial legacies because of the close relationships between the health of the land and the health of the people (Waziyatawin & Yellow Bird, 2005). Previous research has determined that the consumption of traditional foods is one of the most direct links between the health of

\(^1\) In Canada, the term “Indigenous Peoples” includes both status and non-status First Nations, Metis and Inuit people (Elias, Busby & Martens, 2015).
Indigenous communities and their physical environment (Richmond & Ross, 2009, Kuhnlein & Receveur, 1996). Indigenous communities have experienced environmental dispossession, the effects of colonization and the industrialization of the food industry which have forced a transition to an oversimplification of traditional food systems, moving away from diverse food resources, historically supported by healthy ecosystems (UNPFII, 2009).

1.2 Community Context: T’Sou-ke Nation

Historically, the Coast Salish communities, including T’Sou-ke Nation, had some of the highest population densities across North America due to the abundance of natural resources on the land and in the seas and rivers (Olson & Steager, 2015). Due to T’Sou-ke Nation’s location on the southern tip of Vancouver Island, T’Sou-ke was one of the first communities to have extensive contact with early settlers. In the 1840s, colonial settlement began despite T’Sou-ke not having ceded lands for settlement and on May 1 1850, under the Douglas Treaty, T’Sou-ke received fifty-two blankets, forty-eight pounds, six shillings and eight pence for all of their land, except for two sites (Olson & Steager, 2015). Those two sites comprise the current day reserve and total sixty-eight hectares. In addition to losing the majority of their land under the Douglas Treaty, the treaty also permitted settlers to hunt and fish on T’Sou-ke land freely (Olson & Steager, 2015). Through this treaty, not only did T’Sou-ke lose their land, they also lost the ability to rely on their traditional food sources. These events are examples of the direct effects of environmental dispossession experienced by T’Sou-ke First Nation. Forcible removal from traditional territories, without consent, limited T’Sou-ke Nation’s access to traditional food sources, ultimately disrupting their traditional food system.
In spite of their history of loss, T’Sou-ke Nation has been an inspiration of resilience in working towards sustainable programming and sovereignty in a number of areas. In 2008, T’Sou-ke conducted a Community Comprehension Planning program (CCP), which involved everyone in the community from children to elders; at this time, four main pillars of community visioning were identified – energy autonomy, food security, cultural renaissance and economic development (Moore, 2013). After establishing their community visions, T’Sou-ke raised funds from sixteen private and public sources and began working towards building a solar intensive community (Moore, 2013). T’Sou-ke’s move to solar energy has been so successful that all reserve energy meters are running backwards and energy is being sold back to British Columbia’s provincial utility (Moore, 2013). Through renewable energy development, the T’Sou-ke community overcame the challenge of energy autonomy and created prosperous opportunities for all residents (Moore, 2012). An observed decrease in energy costs, increase in energy autonomy, creation of jobs, and development of an eco-tourism industry have resulted from T’Sou-ke Nation’s transition to adopt solar energy (Moore, 2016). Further, T’Sou-ke Nation partnered with Colwood, a neighbouring community, to retrofit 1000 homes with solar energy systems, they have established themselves as an eco-tourism destination, and partnered with and supported the work of local organizations (Castleden, 2016). The national and international recognition received by the T’Sou-ke Nation can be attributed to their successes in the renewable energy field and reflects the power that Indigenous Knowledge continues to hold in the modern world. T’Sou-ke Nation’s tremendous success in the solar field presents a unique
opportunity to examine the influence of an intersectoral relationship within the renewable energy sphere.

While success has been strong with regard to the pillar of energy autonomy, food security has not been a primary focus in recent years. Currently, T’Sou-ke has both a community and commercial greenhouse that supports international sales of wasabi, and weekly meals for Elders (Ladybug Garden & Greenhouse, 2018). T’Sou-ke also has a variety of workshops and opportunities for residents to interact with traditional foods including blackberries, camas potatoes and seafood. Many T’Sou-ke residents cite reliance on berries to this day, often asking youth in the community to go harvest them from above the oyster beaches. Intensive clam harvesting and collecting oysters and mussels are practices still used today at T’Sou-ke (Olson & Steager, 2015). Vegetables from the community garden are used for a biweekly needs-based meal-on-wheels program, weekly community luncheons, Elder Wellness days and nature walks (Ladybug Garden & Greenhouse, 2018). The success of developing a sustainable energy system has highlighted the need to expand sustainable methods to all forms of energy in T’Sou-ke Nation, including food, the energy of life.

1.3 Research Context: A SHARED Future

The proposed research project with T’Sou-ke Nation, is part of a larger CIHR (Canadian Institutes for Health Research)-funded research program, entitled, A SHARED Future (Achieving Strength, Health and Autonomy through Renewable Energy). The overall goal of A SHARED Future is to examine the potential impact of Indigenous knowledge systems on the healing of our relationships with one another as well as with the land, air and water through renewable energy development (Castleden,
2016). The pathway to research for A SHARED Future is to bring forward stories of reconciliation between knowledge systems in intersectoral partnerships, under the umbrella of renewable energy. The research program aims to examine the impact of intersectoral approaches to population health through the mitigation of harmful environments, the promotion of healthful environments and the promotion of resilience to harmful environments (Castleden, 2016). T’Sou-ke Nation, was approached early on by A SHARED Future due to their experience and international recognition for their successes as a solar intensive community. T’Sou-ke Nation’s move to solar energy parallels A SHARED Future’s goal of reconciliation and healing, and for that reason, T’Sou-ke Nation has been chosen as the setting for this research project. This project aligns with A SHARED Future’s mandate by investigating the intersectoral relationships within T’Sou-ke Nation, through gathering perspectives from a variety of community members in different fields to obtain a complete picture of food sovereignty in the community (i.e. solar energy, culture and arts, etc). Further, the project aims to increase traditional food practices and consumption, which in turn promotes healthful environments, due to the intrinsic link between the land and Indigenous Peoples’ health. Finally, food sovereignty movements are often tied to acts of resilience, exploring how to support food sovereignty within T’Sou-ke Nation will hopefully help further programs and ultimately, promote resilience to harmful environments through the mitigation of western food consumption.

1.4 Rationale

Living within food sovereignty is not only an aspiration for Indigenous communities but it is a remembered reality that lives on through the intergenerational sharing of
Traditional Knowledge (TK) and food practices (Morrison, 2011). In response to the effects of colonization on Indigenous Peoples, both Elders and activists across Canada are creating opportunities for the sharing of TK, affirming the significance of Indigenous food systems (Muller, 2018). Numerous projects in British Columbia that have proven successful in providing space for the sharing of TK from Elders with communities (Bagelman, Deveraux & Hartley, 2016; Elliot et al., 2012, Morrison, 2006). Food sovereignty movements, focused on traditional foods, have been identified as a potential solution to food insecurity and diet-related illness within Indigenous communities (Bagelman, Deveraux & Hartley, 2016; Elliot et al., 2012), a platform to promote self-determination and cultural reclamation (Kamal et al., 2015), and are a helpful tool in restoring family and community relationships (Rudolph & McLachlan, 2013). For example, the Feasting for Change program brought together Elders from across Vancouver Island to feast on traditional foods and share stories about both the loss and revitalization of these foods. T’Sou-ke Nation was a key member in the Feasting for Change project (Bagelman, Deveraux & Hartley, 2016). The first gathering for Feasting for Change was prepared and hosted by T’Sou-ke Nation, with fresh produce from the Ladybug Garden & Greenhouse used for the feast; this meal provided the first of many opportunities for dialogue about traditional foods (Bagelman, Deveraux & Hartley, 2016). During the initial gathering held at T’Sou-ke Nation, it was apparent that participants had a desire for more opportunities to share and learn from one another (Bagelman, Deveraux & Hartley, 2016). Additionally, Elliot et al. (2012), engaged in a collaborative project assessing obstacles and resolutions to accessing traditional foods in Vancouver. Participants of this project identified increased access to
sea and land, food-related community programs, increased traditional food practices and valued cultural traditions as potential methods to increase access to traditional foods (Elliot et al., 2012). Through the establishment of a community-based food program, Kamal et al. (2015), identified the engagement of youth and Elders in traditional land-based activities as central to the resurgence of cultural values and practices. The harvesting and preparation of traditional foods and the cultural protocols surrounding these customs have been identified as a remedy to the health, social and environmental matters facing Indigenous peoples living in British Columbia (Davis & Twidle, 2011; Kamal et al., 2015). The aforementioned research projects were successful in bringing communities and people together to share knowledge and skills through meaningful experiences, however the literature does not address community needs for the sustainability of food sovereignty efforts and sharing of TK within communities, outside of these research programs.

In 2008, the T’Sou-ke Nation identified food security as one of four pillars of importance to the community (Moore, 2013). Currently, the community is lacking consistent financial and physical support to maintain the garden, relying on annual funding applications to support their work (C. George, personal communication, March 12, 2019). T’Sou-ke Nation has demonstrated a strong willingness to participate in food sovereignty movements, as demonstrated by their involvement in programs like Feasting for Change, however a disconnect exists between participation in these events and established systems within the community. Upkeep of the greenhouse and garden is a low priority for the community maintenance crew and staffing has dropped from four full time employees in previous years, to one currently (D. Ruthier, personal
communication, May 15, 2019). Efforts to re-establish the consumption of traditional and sustainable food practices are central to restoring Indigenous identity due to the intrinsic link between the health of the land and the health of Indigenous Peoples (Kuhnlein, 2014). Therefore, the proposed research seeks to further knowledge about current food sovereignty practices amongst T’Sou-ke Nation, while investigating what supports the community needs to secure the infrastructure of their food sovereignty efforts.

1.5 Study Goals and Objectives

Due to the widespread impacts of environmental dispossession and colonization on the consumption of traditional foods and ultimately, on Indigenous Peoples’ health in Canada, there is need for research to examine the influence of member consultation for sustained food sovereignty efforts in Indigenous communities (Elliot et al., 2012; Richmond & Ross, 2009). A qualitative investigation was designed to explore community perspectives and experiences of food sovereignty efforts amongst T’Sou-ke Nation members. Additionally, the research proposed to investigate the concept of food and energy sovereignty through an Indigenous lens and help identify ways forward to further promote a healthful environment. Recognizing T’Sou-ke Nation as a leader in the solar energy realm, and the significance of the relationship with the land in Indigenous identity, the overall goal of the research was to understand the current energy and food sovereignty efforts in T’Sou-ke and help to establish goals that community members would like to work towards. Specific objectives of the project included: to formalize community food sovereignty goals; to identify traditional food practices and barriers to incorporating these practices in everyday life; to determine what supports are required
for sustained infrastructure within the community; and, to explore the concept of food as a renewable energy source through an Indigenous lens.

1.6 Thesis Outline

The body of this thesis is separated into a number of chapters and appendices. A more in-depth presentation of the literature as relevant background to this research project is outlined in Chapter Two of this thesis. Chapter Two starts by defining terms, including, environmental dispossession, traditional food, food sovereignty, Indigenous food sovereignty, sustainability and renewable energy. Followed by a discussion of current IFS efforts as well as threats to these projects. Both the research design and methodology utilized for this project are discussed in Chapter Three, along with the research process and guiding methodologies and frameworks. A discussion of the experience of utilizing CBPR for a Masters’ thesis is presented in Chapter Four. Chapter Five provides the results from the sharing circle. Finally, Chapter Six includes an overall conclusion of the study findings, a discussion of study strengths and limitations and recommendations for the community.
Chapter 2: Literature Review

2.1 Introduction

The literature review is organized by first outlining definitions pertinent to the area of study. Definitions are key to understanding the literature and how the results are situated within the field. Definitions include environmental dispossession, traditional food, traditional food systems, food sovereignty, Indigenous food sovereignty (IFS), sustainability, and renewable energy. The following sections will review studies of food security in Canada as well as explore the current discourse of IFS in Canada. The chapter will end with a discussion of identified threats to successful IFS movements in communities.

2.2 Definitions

2.2.1 Environmental Dispossession

Richmond and Ross (2009) define environmental dispossession as the processes by which Indigenous People’s access to lands and traditional resources are decreased, thereby severing individuals’ physical, emotional and spiritual relationships with their traditional lands and with each other. There are both direct and indirect forms of environmental dispossession; examples of direct forms include the physical removal of individuals from their local communities and environment, while indirect forms often result from regulations and developments put forward with the intent to diminish Indigenous Peoples’ relationships with the land and their TK, such as Residential Schools (Big-Canoe & Richmond, 2013; Richmond & Ross, 2009). Not only does environmental dispossession often physically displace Indigenous Peoples from traditional lands, it also negatively affects the community’s well-being, due to the
fundamental role land plays in Indigenous culture (Big-Canoe & Richmond, 2013). Indigenous identity is so strongly tied to the land that the health of the land and the health of the community are thought of as one; as such, loss of land is arguably one of the largest contributors of a loss of cultural knowledge and increased prevalence of negative health outcomes within Indigenous communities (Bartlett, 2003; Brightman, 1993).

2.2.2 Traditional Foods

Traditional foods include food sources from the natural environment that are culturally accepted by Indigenous Peoples (Kuhnlein & Receveur, 1996). Traditional foods provide a fundamental source of essential nutrients as well as social and cultural benefits associated with food practices to both families and communities. Traditional foods and food practices have been identified as key elements in successful food sovereignty movements (Kuhnlein & Turner, 1991; Richmond & Ross, 2009). Further, one of the most direct links identified between the health of Indigenous Peoples and their environments is the consumption of traditional foods (Richmond & Ross, 2009, Kuhnlein & Receveur, 1996). Bell-Sheeter (2004) identified traditional foods as healthier alternatives to store-bought foods with the ability to decrease diet-related diseases.

2.2.3 Traditional Food Systems

Traditional food systems recognize all food available from local resources that are culturally accepted by a community, as well as the sociocultural associations, acquisition techniques, composition and nutritional subsistence associated with foods (Kuhnlein & Receveur, 1996). Traditional food systems are complex and cyclic networks, rooted in social and economic circumstances, that encourage biodiversity and
touch the full spectrum of life in ways that modern food systems often fail to (Kuhnlein, Erasmus & Spigelski, 2009). Additionally, traditional food systems are tied to elements of nature and culture that contribute to both individual and community health on physical, emotional, mental and spiritual levels, providing both healing and protection from disease (Kuhnlein, Erasmus & Spigelski, 2009). Furthermore, traditional food systems are assumed to be sustainable if a community has occupied an area for a period of time in harmony with its surrounding ecosystem (Kuhnlein, 2012). For a culture to have survived throughout history, the diet and food system utilized by individuals must be able to provide complete nutrition (Kuhnlein, 2012).

2.2.4 Food Security

According to the Food and Agricultural Organization of the United Nations (FAO), food security occurs when, “all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (Food and Agriculture Organization, 1996). From this definition, the following four pillars of food security were established by the FAO concerned with ensuring the stability, accessibility, availability and utilization of culturally appropriate food sources (FAO, 2008). Further, the concepts of food acceptability, agency and adequacy have been proposed in addition to the FAO pillars as central pieces to food security (Myers, Duhaime, & Powell, 2004). Alternatively, food insecurity occurs when a food system is overburdened, making food either unaffordable, inaccessible, and/or of inadequate quality (Ford, 2009). However, food insecurity has been identified as limited in scope, often overlooking strides that communities make in regaining control over their food system (Cidro & Martens, 2015).
The term “food and nutrition security” was presented by the Committee on World Food Security in 2012 to specifically address dietary requirements in terms of food security. Food and nutrition security ensures that all people are consuming accessible foods in high enough quality and quantity to meet daily dietary needs (Committee on World Food Security, 2012). This concept has not entered the literature on food security and sovereignty within Indigenous peoples in Canada yet. Similarly, community food security, as defined by Hamm and Bellows (2003), is a, “situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice.” Community food security aims to connect food production and consumption by incorporating community members from all aspects of food planning to economic development in decision making (Allen, 1999). Community food security better understands what is needed to make meaningful change in communities but is also absent from the body of Indigenous literature. The lack of incorporation of these terms in Indigenous research means that researchers need to widen the scope of research to include more holistic approaches that better understand the whole picture of food in a community. Efforts to reconnect people with their food systems will provide another angle of incorporation in food security research. While many studies have examined how food security is measured within Indigenous communities, the necessary resources and support needed to ensure food security is still unclear.

2.2.5 Food Sovereignty

The term food sovereignty originated in 1996 and was created by a group of Latin American land-based farmers, peasants and Indigenous Peoples, referred to
collectively as La Via Campesina, in protest to the globalization of their local food systems (Wittman et al. 2010). Food sovereignty is defined as the increased autonomy or control of a food system and is often used to increase food security through ecologically sustainable methods (Cidro et al., 2015; Kepkiewicz & Dale, 2018). Food sovereignty has emerged recently in the literature as a mechanism to address food-related issues common in many disadvantaged communities (Martens, 2015; Wittman, Desmarais & Wiebe, 2011). Food sovereignty efforts help improve community independence by allowing individuals to define their own food systems (Socha et al., 2012). The vagueness of food sovereignty principles mirrors the need for local solutions to local problems, meaning that food sovereignty looks different for every community. While food sovereignty advocates for new relationships between individuals and their land, it also honours existing relationships (Wittman et al., 2010). Land-based ethics that incorporate justice, respect for life and democracy guide the food sovereignty movement; calling for special attention to ecologically sound food production (Nyéléni, 2007). The Forum for Food Sovereignty in 2007 refined six principles of food sovereignty that focuses on the role people play in food systems, including: (1) food is for people and is not a commodity; (2) respect for the rights and values of food providers is needed; (3) food systems are localized; (4) control and access to food remains local; (5) support of local knowledge and skills; (6) food systems require cooperation with natural systems (Nyéléni, 2007).

2.2.6 Indigenous Food Sovereignty

As both a framework and a movement, Indigenous Food Sovereignty (IFS) goes beyond the pillars of food security and aims to reconnect Indigenous peoples with their
food systems through four principles: the recognition that food is sacred; community participation in food systems; self-determination and supportive policy (Morrison, 2011; Kepkiewicz & Dale, 2018). Matties (2016) states that IFS recognizes the ongoing effects of colonialism, offering an alternative to food security based on human rights, land reform and self-determination. Participating in harvesting and hunting practices associated with traditional foods and traditional food systems fosters the transmission of cultural values, skills and spiritual practices that align more so with aspects of community well-being, rather than individualized health or nutritional status (Power, 2008). The lack of universal definition for IFS demonstrates the realities of various Indigenous communities (Morrison, 2011), local determination of IFS is key to the success of these efforts (Socha et al., 2012). Through generating an understanding of strategies that facilitate Indigenous traditional food practices, IFS works to describe rather than define the processes that support TK (Morrison, 2011). These strategies include hunting, gathering, fishing, growing, harvesting, smoking and preserving; a revitalization of these cultural food practices supports local control over community health and culture (Grey & Patel, 2014). The complex nature of traditional food systems is part of the reason that IFS falls into its own category in comparison to traditional food sovereignty. IFS efforts require a food system revitalization as well as a, “more general Indigenous cultural, social and political resurgence” (Grey & Patel, 2014). Therefore, within any discussion of IFS, these layered dimensions require additional attention. Many researchers agree that community input is necessary to revitalize any traditional food system due to specific cultural needs (Bell-Sheeter, 2011; Cidro & Martens, 2014; Socha et al., 2012).
2.2.7 Sustainability

Sustainable human development as defined by the Human Development Report (HDR) is, “the expansion of the substantive freedoms of people today while making reasonable efforts to avoid seriously compromising those of future generations” (United Nations Development Programme, 2011). An Indigenous understanding of sustainability is much more complex than the HDR definition because it requires honouring one’s relationship with the land, by upholding the responsibilities of a reciprocal relationship, rather than just residing on one’s homeland (Corntassel & Bryce, 2012). For many Indigenous Peoples, sustainability means sustaining their traditional relationship with the physical environment around them (Corntassel & Bryce, 2012). Additionally, teaching future generations the knowledge and cultural practices required to maintain this relationship is a method of ensuring the longevity of sustainable living in the community (Corntassel & Bryce, 2012). Continued engagement in traditional practices is essential in honouring both the spiritual and sustainable relationship with the land held by Indigenous Peoples (Corntassel & Bryce, 2012). The survival of Indigenous communities and cultural has been reliant on a subsistence lifestyle for many generations (Corntassel & Bryce, 2012; Kuhnlein & Receveur, 1996). Living in this way means that everyday interactions are grounded in relationships that sustain communities and practices focus on giving back more to the land than one takes (Corntassel & Bryce, 2012; Kuhnlein & Receveur, 1996).

Sustainable diets are those with low environmental impact that contribute to food security, ensuring a healthy life for both present and future generations (Kuhnlein, 2014). Sustainable diets stem from sustainable food systems and ecosystems; for
Indigenous Peoples to have survived for thousands of years in an ecosystem their diet is by definition sustainable (Kuhnlein, 2014). Sustainable diets are protective of the biodiversity in the surrounding ecosystem and are culturally acceptable and accessible. These diets are also affordable for individuals and nutritionally adequate, while focusing on the optimization of natural and human resources (Kuhnlein, 2014).

2.2.8 Energy Sovereignty

Discussions of energy sovereignty in the literature are sparse, however a couple of projects involving rural, northern Indigenous communities discuss this concept in reference to an individual's ability to make decisions about energy planning (Broto, 2017; Brewer, Vandever, & Johnson, 2017). Energy sovereignty, in comparison with energy security, emphasizes both the equalities and inequalities of energy services experienced in peoples’ everyday life (Broto, 2017; Brewer, Vandever, & Johnson, 2017). Energy security is a term that refers to the planning of energy availability at the national level, while energy sovereignty focuses on local control of energy systems (Broto, 2017). Renewable energies provide an opportunity for Indigenous communities to regain some control over energy systems while mitigating some of the negative effects of climate change (Centre for Indigenous Environmental Resources, 2011). Renewable energy is obtained from natural sources that replenish at a rate equal to or faster than the rate of consumption (Natural Resources Canada, 2019). Further, the utilization of renewable energies aligns with the inherent relationship between the land and the health of Indigenous Peoples and supports sustainable development.
2.3 Food Security Studies in Canada

Elliot and colleagues (2012) identified that 41% of Indigenous households on reserves are food insecure. In Canada, the strong connection between poverty, health problems and food insecurity has been established (Ford, 2009). Indigenous populations in Canada experience a disproportionately lower level of food security than the average Canadian household (Health Canada, 2007). In 2004, the Canadian Community Health Survey (CCHS) determined that 33% of Indigenous households and 8.8% of non-Indigenous households experience food insecurity (Health Canada, 2007). Additionally, Tarasuk, Mitchell and Dachner (2013) identified levels of food insecurity in Indigenous households as more than double levels in non-Indigenous households. Further, the Regional Health Survey (RHS) in 2008/2010 was the first Canadian measure of income-related household food security on Indigenous reserves (First Nations Information Governance Centre, 2012). During this survey, over half of First Nation homes (54.2%) communicated moderate to severe food insecurity (First Nations Information Governance Centre, 2012). Specifically, when looking at British Columbia, 37.7% of First Nations households identified as moderately food insecure and 18.8% identified as severely food insecure (First Nations Information Governance Centre, 2012). However, both the CCHS and First Nations Information Governance Centre (FNIGC) utilized food security measures that did not include traditional foods (FNIGC, 2012; Health Canada, 2007; Thompson et al., 2011). Considering that food security cannot be met without the inclusion of traditional foods, for many Indigenous communities, it is important that these factors are included in future research projects (Power, 2008).
One explanation for the disproportionate impact of food insecurity is the increased experience of low income among Indigenous households (Power, 2005; Socha et al., 2012). 62% of participants from Lardeau et al’s 2011 study associated food insecurity levels with income-related problems. Additionally, Rosol (2009) identified that having children in the household correlated with higher levels of food insecurity as there are more people to feed. While geography-related issues are distinct to communities in Northern Canada, similar rates of food insecurity exist among southern Indigenous communities, with unique challenges facing urban Indigenous populations (Cidro et al., 2014). Many of these studies focused on questions of food security levels; however, traditional food practices and community perspectives are often overlooked as valuable insight to understanding food issues in communities. Further research focused on community engagement and TK is necessary to generate a more in-depth understanding of food security. Due to the focus on the supply side, Rudolph and McLachlan (2013) suggest that food security alone will not solve the food crisis facing many Indigenous communities; solutions must focus on food sovereignty efforts that support community members.

2.4 Indigenous Food Sovereignty Movements within Canada

The notion of Indigenous Food Sovereignty (IFS) was a living reality in all communities for thousands of years prior to the disruption of traditional food systems as a result of colonization (Morrison, 2011). However, due to colonial impacts and landscape changes, traditional and local food supplies have become threatened, resulting in increased food insecurity in Indigenous communities and the need to reconnect individuals to their food systems (Cidro & Martens, 2015; Morrison, 2011). In
Canada, one of the first written accounts of IFS was in the Indigenous Food Sovereignty Discussion paper, which acknowledged the necessity for Indigenous insight in order to ensure success from IFS efforts (People’s Food Policy Project, 2011). Recommendations from this paper include a return to treaty agreements, recognition of Indigenous understandings of harmony with nature, targeting of socioeconomic factors that affect Indigenous communities and efforts of reconciliation and rebuilding of relationships (People’s Food Policy Project, 2011). IFS acknowledges the sacredness of food and the necessity of sustainable harvesting and production practices (People’s Food Policy Project, 2011). IFS understands the strong connection between people and the land, placing it at the heart of all efforts, as explained by Morrison (2011), “Indigenous food sovereignty is ultimately achieved by upholding our long-standing sacred responsibilities to nurture healthy, interdependent relationships with the land, plants, and animals that provide us with our food” (p. 100).

Numerous Indigenous food sovereignty movements exist across Canada. In Manitoba, research conducted by Rudolph and McLachlan (2013) stressed the need for an evaluation of political situations in order attain IFS. In 2012, Rudolph used a knowledge exchange program to expand the use and consumption of land-based foods amongst community members. Participants in Cidro and Martens (2015) urban research project identified the consumption and preparation of traditional foods as essential in reclaiming one’s cultural identity and as a mechanism for social connections. While efforts to increase access to traditional foods are less common in the literature than efforts to identify the barriers to traditional foods, participants from Elliot et al (2012) asserted that discussions around practical solutions rather than challenges were more
effective in engaging community members. The success of Kamal and Thompson’s (2013) country food program reiterated the positive impact of food-based action on Indigenous relations with the land. Cidro et al. (2015) as well as Receveur et al. (1998) both identified the consumption of traditional foods as facilitating cultural values including sharing and responsibility.

A number of projects in British Columbia have proven successful in providing space for the sharing of TK from Elders with communities (Bagelman, Deveraux & Hartley, 2016; Elliot et al., 2012, Morrison, 2006). For example, the Feasting for Change program brought together Elders from across Vancouver Island to remember stories and share in a traditional feast together at T’Sou-ke Nation (Bagelman, Deveraux & Hartley, 2016). Additionally, Elliot et al. (2012), collaborated with participants to identify both the obstacles and solutions to accessing traditional foods. Moreover, through the establishment of a community-based food program, Kamal et al. (2015), identified the engagement of youth and Elders in traditional land-based activities as central to the resurgence of cultural values and practices. These research projects were successful in bringing communities and people together to share knowledge and skills, but the literature does not address how the community can uphold food sovereignty movements outside of research programs. In collaboration with community members, the BC Food Systems Network Working Group on IFS identified IFS efforts as the most intimate way in which Indigenous Peoples can connect with their environment and maintain their relationship through active participation in land and food practices (Morrison, 2008).

2.5 Threats to Indigenous Food Sovereignty
Results from the first Interior BC Indigenous Food Sovereignty Conference identified the colonial movement as disruptive to the intergenerational transference of food knowledge (Morrison, 2006). This in conjunction with the erosion of Indigenous environments including land, forests, water and air has destructed Indigenous food systems and traditional practice (Morrison, 2006). Colonial forces have forced the diets of Indigenous communities and their relationships with foods to change (Luppens, 2009). While the Douglas Treaties intended to allow traditional food practices on Indigenous territories, including T’Sou-ke First Nation, this was never employed in practice (Corntassel & Bryce, 2012). Other governmental forces, such as the Indian Act prevented community members from leaving reserves, dictated what communities could grow on reserve and what they could harvest off reserve (Corntassel & Bryce, 2012). The smothering of the once competitive Indigenous farming industry by the government, through limits of on reserve farming, further eroded the central relationship of Indigenous peoples with their food (Ladner, 2009). Pollution of reserve water and soil, as well as the presence of heavy contaminants has created another barrier to traditional harvesting for many Indigenous communities (McLachlan 2014). Climate change impacts traditional migration routes Indigenous communities rely on for hunting and changes in temperature affect growing seasons and therefore, harvesting schedules (Olson & Steager, 2015). Additionally, costs related with traditional practices and required equipment restrict individual’s participation in traditional food systems (McLachlan 2014). Many communities do not have sufficient hunting, gathering or fishing equipment to supply food for their nation (Furgal & Seguin, 2006). Costs associated with greenhouse operations and controlled temperature, light and
precipitation are expensive and often not a viable choice for Indigenous communities (Furgal & Seguin, 2006).

In addition to a plethora of challenges facing the continued practice of traditional ways of living, Indigenous communities are also faced with a loss of TK and language that supports traditional practices (Turner & Turner, 2008). A loss of social, economic and political independence due to forced assimilation and colonization has had a tremendous impact on the modern Indigenous food system in Canada (Rudolph & McLachlan, 2013). The influence of residential schools on loss of language, culture and family, due to the absence of intergenerational relationships, has been destructive to traditional ways of living (Socha et al., 2012). Isolation of reserves, lack of traditional food sources and increased commercial food prices have negative impacts on the food sovereignty of nations across the country, especially in the north (Grey & Patel, 2014). All of these barriers to nutritious and traditional foods are also barriers to community and individual health. While Indigenous food sovereignty recognizes the ongoing impacts of colonization in communities, food security focuses on the impacts of hunger in a community, and due to strong relationships with their environment, hunger is not the only impact a shift in food systems has for Indigenous communities (Grey & Patel, 2014). Relationships between Indigenous peoples and their food are complex, more research is needed to gain insight to better understand the processes which can support food sovereignty and the people involved in food systems within Indigenous communities in Canada. Highlighting the voices of community members and supporting work which empowers communities to take action for sustained change is needed to be
able to better understand the complexities of the traditional relationships that exist for Indigenous Peoples in Canada.
Chapter 3: Methodology

3.1 Introduction

A qualitative approach was used for this research project. Qualitative research explores concepts in-depth through the analysis of words rather than numbers, as in quantitative research. Qualitative research does not assume that there is one correct understanding of reality (Clarke & Braun, 2013). Silverman (2000) identified that qualitative methods often more closely parallel real life experiences in comparison to experimental methods. Qualitative methods are useful in under-researched or complex topics where participants are part of the research design due to the open-ended and flexible nature of the methodology to develop to the needs of the study (Clarke & Braun, 2013). Qualitative methodologies allowed for the development of a project to explore community members’ perspectives on food sovereignty in T’Sou-ke First Nation. Due to the alignment with project objectives to understand current food and energy sovereignty efforts in T’Sou-ke First Nation, a qualitative approach was used in conjunction with thematic analysis to help community members establish goals.

This chapter describes the theoretical frameworks considered in this project, including Indigenous research methodologies, Community Based Participatory Action (CBPR), positionality, research frameworks, ethics and research setting. A discussion of recruitment, participants, research design and data analysis follows.

3.2 Indigenous Research Methodologies

Indigenous methodologies are fluid and dynamic processes that emphasize cyclical perspectives and alternative approaches to the research process (Louis, 2007). The primary focus of Indigenous methodologies is to ensure research is conducted in a
sympathetic, ethical and respectful manner (Louis, 2007). Through the utilization of convergence Indigenous methodologies, this research project aimed to engage comprehensive understandings that exist within TK systems in conjunction with Western research methods (Ray, 2012). Convergence Indigenous research methodologies are stimulated by decolonization efforts and reconciliation aspirations, through the inclusion of TK in tailoring Western methods to a community’s needs (Ray, 2012). By utilizing these methodologies, researchers are encouraged to approach their work as a learner, which is critical in creating sensitive, open-minded researchers that aim to abstain from misrepresentation, misinterpretation and exploitation (Nakarmura, 2010).

This research program utilized the theory of two-eyed seeing in all aspects of project development, implementation and dissemination. Two-eyed seeing is an approach to Indigenous methodologies that employs Western research methods while incorporating traditional beliefs (LaVeaux & Christopher, 2009). The concept of two-eyed seeing was first introduced to research by Mi’kmaw Elders in Cape Breton, Nova Scotia; it is an important guiding principle that asserts that both Western and Indigenous ways of knowing are critical to Indigenous communities (Martin, 2012). Utilizing this concept helps appreciate diverse perspectives of understanding the world, while enabling research teams to draw on what is helpful to grow existing knowledge. Two-eyed seeing aims to, “see from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together” (Bartlett, Marshall & Marshall, 2012, p.335). Co-learning is a necessary component of conducting research with Indigenous communities (LaVeaux & Christopher, 2009). The utilization of sharing circles, similar to the Western
methodology of focus groups and the Indigenous tradition of sharing circles, is a direct example of how this project employed two-eyed seeing.

Further, previous work conducted on Vancouver Island regarding food sovereignty has been successful in using “solidaristic” (unity) techniques to encourage cohesion between research teams and Indigenous community members (Bagelman, Deveraux & Hartley, 2016). Similar to Convergence Indigenous methodologies, these techniques, as employed by the Feasting for Change project, encourage leadership from First Nations and unity between all members involved. Through the elimination of the titles of “researcher” and “participant” and power differentials, this program acknowledges all parties involved as valuable contributors to the work, directly challenging colonial research practices (Bagelman, Deveraux & Hartley, 2016). As a non-Indigenous researcher, it is critical that I acknowledge the epistemological confines to understanding TK; my personal building blocks of comprehension are fundamentally different than residents of the T’Sou-ke Nation. However, by employing the tactics outlined above, it is possible to create room for TK to emerge.

3.3 Community Based Participatory Research (CBPR)

This research project with T’Sou-ke Nation employed CBPR as its theoretical framework. CBPR focuses on developing research goals collaboratively with communities, based on a shared vision that helps remind all participating contributors of the potential benefits for the community (Kyoon-Achan et al., 2018). In accordance with the Canadian National Centre for Truth and Reconciliation Calls to Action (2015), the research project with the T’Sou-ke Nation was constructed with consultation from the community, through CBPR, in order to establish food sovereignty goals and identify
ways to create sustainable infrastructure within the community. CBPR shifts the decision-making power and ownership of research from the researcher to all contributors involved in the project (Castleden, Morgan & Lamb, 2012). The bi-directional nature of CBPR research ensures that research is conducted in a mutually beneficial manner, providing a supportive environment for knowledge sharing and co-creation (Castleden, Morgan & Lamb, 2012). CBPR has been identified as a catalyst for transformation because it defies the colonial tendencies of research to exclusively give power to the researchers (Kyoon-Achan et al., 2018). Conversely, CBPR puts the power in the hands of the participants; this practice has been shown to strengthen Indigenous participation in research because it promotes ownership of the research process (Kyoon-Achan et al., 2018). Further, shared decision making between all parties involved in the research, from design to dissemination helps produce co-learning, dialogue and knowledge to action that provides benefits to all partners (Castleden, 2016). Previous work conducted using CBPR in Indigenous contexts in Canada has been successful in helping to identify previously overlooked community needs (Kyoon-Achan et al., 2018). By using a CBPR framework, the research team conducted research in a decolonizing and reconciliatory manner that empowered members of the T’Sou-ke Nation through the promotion of an ongoing, positive relationship with traditional foods.

3.4 Positionality

Acknowledging that my experiences and beliefs have heavily influenced my life journey, it is important to self-situate and critically reflect on what has brought me to pursuing a Master’s degree in the field of nutrition and Indigenous studies. Personal
reflexivity is the process of a research situating themselves in their research, including identifying who the researcher is and how this will affect the research and their interpretation of the findings (Braun & Clarke, 2013).

I am a non-Indigenous Master’s student in the field of Applied Human Nutrition within the Family Relations and Applied Nutrition department at the University of Guelph. In April 2017, I completed my undergraduate degree at Queen’s University in Health Studies. I have always been passionate about community involvement and health promotion, and my passions were united during my fourth-year placement with a local organization, Kingston Gets Active (KGA). This position allowed me to work with community members and local businesses in the Kingston downtown core to promote healthy living and activity through the utilization of online resources developed by KGA. Specifically, my interests in the health field have always been centered around food and nutrition. My mother raised me to be a very conscious, whole eater with an appreciation for the value of fresh produce; from an early age I was very interested in the impacts various foods have on individual and community health. During my time at Queen’s, there were only a couple of nutrition-focused courses, and for that reason, I wanted to further my knowledge in the nutrition sphere upon graduation. I researched various programs and settled on returning home to Guelph to pursue a Master’s of Science in Applied Human Nutrition.

When I first met with Dr. Hannah Tait Neufeld at the University of Guelph, my knowledge of Indigenous studies was very basic. I was very intrigued by her research, which focused on Indigenous health inequalities, community participation and environmental factors that influence health and Indigenous food systems. The more
time that I spent learning about Indigenous health and foods in Canada, the more respect and astonishment I gained for these communities. I increasingly felt that my personal values aligned with the traditional values of Indigenous Peoples in Canada and I knew that I wanted to further my knowledge in this field, so I began my Master’s at the University of Guelph in September 2017.

While there are some shared life experiences that I may be able to relate to with the research participants, there are many differences between me and my participants. In the traditional role of a researcher, I have knowledge and power over my participants, creating an imbalance in my relationship with the participants. Acknowledging this difference prior to the start of my research project enabled me to design a project that tried to diminish these differences as much as possible through the utilization of CBPR and Indigenous convergence methodologies, which highlight the importance and value of community contributions and control over the research process. Additionally, I am part of the white Canadian majority, making me even more of an outsider within the Indigenous community I worked with, forcing me to acknowledge the historic and ongoing impacts of colonization on Indigenous health. These obstacles to meaningful research highlighted the need for me to practice reflexivity throughout the research process.

3.5 Research Framework

A SHARED Future’s cyclic conceptual and methodological framework highlights the core principles for all projects within the grant (see Appendix A). The focus of collaboration between Indigenous and Western Knowledge systems within this framework is recognized as necessary for health, environment and communities; the
incorporation of two-eyed seeing and conversational interview methods align with this pillar. Additionally, the framework includes eight guiding principles that are reflected through this project’s use of CBPR as the methodological framework. The sustainable practices outlined in this proposal aim at honouring the four entities of Grandfather Sun, Father Sky, Mother Earth and Grandmother Moon, as identified in the framework. Further, the model identifies four types of energy including: energy in the sky, air, water and land. T’Sou-ke Nation’s solar success highlights the value of energy in the sky, and working towards sustainable food practices touches on energy in the land and in the water. Finally, at the centre of the framework, as with this research project, is reconciliation and healing of our relationships with one another and the land.

3.6 Ethics

Due to a history of poorly conducted research amongst Indigenous communities, it is especially important to consider ethical factors when working with Indigenous Peoples in Canada. Utilizing CBPR and two-eyed seeing methodologies ensured that the project was community driven, relevant and reflective of Indigenous values. Additionally, reviewing the Tri-Council Policy statement on ethical research, especially chapter nine which focuses on research involving Indigenous Peoples in Canada, reiterated which ethical considerations adversely affect these communities. The importance of building relationships within the community I was working with was a central goal of the project that was accomplished by extensive volunteering in the community. Additionally, the participants were invited to give feedback on the probing questions for the sharing circle as well as the thematic analysis of the data collected. Ethical considerations guided the direction of the research project and assured that the
research was meaningful to the community. Ethical approval for this research project was obtained prior to data collection, from the University of Guelph’s Research Ethics Board, REB# 18-08-001 (see Appendix B & C). The sharing circle was conducted only once informed consent was obtained from all participants (see Appendix D).

3.7 Study Setting

T’Sou-ke Nation is a community of approximately 120 residents, located near Vancouver Island’s southern coast, and an emerging leader in the solar energy realm (Moore, 2013). Currently, T’Sou-ke has a locally managed solar energy system; all administrative buildings use net zero energy and half of the homes on reserve are using solar hot water systems (Moore, 2013). T’Sou-ke First Nation has a community garden, where produce is grown for community consumption and distribution (Ladybug Garden & Greenhouse, 2018).

3.8 Participants & Recruitment

The target population was community members from T’Sou-ke First Nation. A total of three T’Sou-ke First Nation community members participated in this research project. This research project utilized purposive sampling to identify participants in the community. Purposive sampling is a type of non-probability sampling and is applied by using knowledge of the population to choose a non-random sample based on elements that represent a cross-section within a population (Lavrakas, 2008). After consultation with community members who work with food projects in the community, it was decided that this initial phase of research should solely consult people directly involved in food. Next steps of the larger project will consult a variety of community members to gain insights on how food sovereignty efforts impact the lives of the community as a whole.
Recruitment was through word of mouth, followed by an email invitation and an in-person invitation directly to those who identified as being interested in participation (See Appendix E).

3.9 Research Design

This project utilized CBPR as a methodological framework with community input guiding the direction of the research project. The original intent of the project was to establish a community advisory group that would help determine community participation and recruitment, data collection methods, as well as specific research questions. In action, the research team consulted with individuals who had stake in the community garden and food projects in the community to determine what would be most helpful to support their work. This project is the first step of a larger research piece that will continue to build on what was established during this initial data collection. Potentially, the three participants from this stage of the research will become the official advisory committee and will help guide the subsequent interviews and community work within T’Sou-ke First Nation. The original proposal cited interviews as the data collection to be used for this research project but holding a sharing circle to discuss current food projects and hopes for the community was identified as more desirable for the participants at this point in time.

A sharing circle was chosen as the main method for gaining insight into current food and energy sovereignty efforts in T’Sou-ke First Nation. By providing an open environment for participants to contribute their thoughts and knowledge with one another, sharing circles reflect the values of Indigenous epistemology and CBPR practices (Ray, 2012). Sharing circles allow increased engagement with participants, in
comparison to interviews, because individuals are not restricted to answering questions but are also able to ask their own questions to further the discussion (KyoRon-Achan et al., 2018). Traditionally, the knowledge holder determines what information they would like to share; by using sharing circles, participants are in control of their knowledge (Ray, 2012). Further, the social aspect of sharing circles can contribute to a collective discussion of a topic and tends to more accurately mimic real life when participants are talking to each other, rather than directly to the researcher (Braun & Clarke, 2013). Conversational methods are significant in Indigenous methodologies because data is gathered orally, similar to traditional storytelling, consistent with an Indigenous paradigm (Kovach, 2010). Further, providing an open environment for participants to contribute their thoughts and knowledge reflects the values of Indigenous epistemology and CBPR practices (Ray, 2012). A draft sharing circle guide for this project was developed with conversational, open-ended questions to help promote storytelling and participant control over the conversation. This sharing circle guide was shared and refined with participant input prior to the sharing circle. At the beginning of the sharing circle, I led the introductions and began asking probing questions. Over the course of our time together, participants began asking questions as they were provided with a list of probing questions and the sharing circle became participant-driven (see Appendix F).

3.10 Data Analysis

In terms of data analysis, the sharing circle was audio recorded in the field and electronically downloaded and transcribed by the research team. NVivo software was utilized to complete thematic analysis of the sharing circle including identifying, analyzing and interpreting themes and meanings within the dataset. Thematic analysis
provides attainable and structured procedures for generating codes and themes from a dataset (Clarke & Braun, 2016). Further, thematic analysis has been identified as useful in identifying patterns both within and across the data in relation to participants lived experiences and personal beliefs. Thematic analysis can be used for inductive investigation, to capture both direct and underlying meanings within the data, with the ultimate goal of identifying key features rather than summarizing the content (Clarke & Braun, 2016). Once themes were identified from the sharing circle, a general short report was prepared for T'Sou-ke Nation and shared with participants during a trip to T'Sou-ke Nation in October 2019. At this time, feedback on the initial analysis of the content was generated by community members and revisions made accordingly.

The six phases of thematic analysis as described by Braun & Clarke (2013) were utilized to complete data analysis of this study. The first phase was to familiarize myself with the data set, as the transcriber and the moderator of the sharing circle, I had spent a lot of time studying the conversation that was had but I spent additional time re-reading and making notes on my initial impressions after transcription was completed. The dataset was initially analyzed in an active way through looking for underlying meaning and making notes while reading (Braun & Clarke, 2013). The second phase consisted of generating codes based on the dataset (Braun & Clarke, 2013). Due to the relatively small amount of data generated from the sharing circle, I worked through the entire transcript, line by line, to identify interesting and repetitive patterns. Potential codes of similar meaning were organized into NVIVO as nodes; for example, harvesting and gathering were grouped together as traditional food practices due to the variation of word use by participants. The next step of analysis was to search for themes (Braun &
Clarke, 2013). Potential themes were generated by looking beyond the transcription for similarities in the meaning behind participants’ discussions. Themes were also created based on relevance to research goals and question. Codes similar in nature were grouped together in NVIVO as potential themes. The fourth phase was to review the potential themes (Braun & Clarke, 2013). Initially, I reviewed the coded extracts of each theme and ensured that the data had been coded appropriately and supported the appointed theme. I then reviewed the relevance of the themes to the research questions and ensured that a coherent pattern existed across the theme; if the theme was not coherent or relevant, the coded extracts were re-coded to another theme, a new theme was created or the theme was discarded altogether. Next, I reviewed the entire dataset to ensure that all of the data was coded and included in the thematic analysis and to review how the themes fit into the larger research objectives. At this point, a thematic map was developed to reflect the relationship between the different themes. The fifth phase required me to name and define the themes (Braun & Clarke, 2013). Themes were defined in relation to the research question and to reflect the opinions of participants. Sub-themes were identified at this point, where necessary. Coherent, concise and defined themes were the output of this phase. The final phase was the production of the final report (Braun & Clarke, 2013). Examples from the dataset were used to support the identified themes, and the themes were presented in a logical sequence that reflected the story told across the entire sharing circle.
Chapter 4: Navigating Relationships: Theorizing and Implementing Community-Based Participatory Research as a Graduate Student

These results are presented in manuscript format in accordance with the *Journal of Qualitative Research* submission guidelines.

4.1 Abstract

Traditional research methodologies have historically misrepresented and appropriated Indigenous ways of knowing due to their intrinsic link to colonial values. The role of universities in the creation and acceptance of what is ‘true’ knowledge has enormous influence on cultural norms and ideals; this power has often been used to further acts of assimilation and colonialism in Canada. Community based participatory research (CBPR) has emerged as a theoretical framework to restructure traditional power dynamics between researchers and participants. Promoting community engagement from the conception of a project to the dissemination of results helps ensure cultural competency and relevance of research to communities. This paper examines the experience of a non-Indigenous researcher engaging in CBPR and Indigenous methodologies. A discussion of the research project timeline and experience prompts an exploration of both the facilitators and barriers to engaging in community-based work with Indigenous Peoples in Canada. Further exploration of researcher experiences will help generate a greater understanding of the impacts of CBPR in ensuring community ownership, control, access and possession over Indigenous ways of knowing.
4.2 Keywords
Community Based Participatory Research; CBPR; Indigenous Methodologies; Masters research; Indigenous Food Sovereignty; Sharing Circle

4.3 Introduction

As part of my Master’s thesis research, I utilized a community-based participatory research (CBPR) methodology to engage in a research project in collaboration with an Indigenous community located on Vancouver Island’s southern coast. The project began with the overall aim to develop food training for an internship program supported by the community and a local NGO, utilizing sharing circles and photovoice as the methodology. The goal of the original project was to evaluate this food training component and determine how to support interns during their time away from home to make healthy food choices and how this training could be modified to promote healthy eating to the wider community. In practice, this project transformed to focus on the concept of IFS as understood and employed by community members. Originally, this phase of the project aimed to conduct 6-8 semi-structured interviews, but through consultation with key community members, they identified that it would be more beneficial to solely involve individuals who directly work with food in the community as the first research step in supporting IFS efforts. Through collaboration with three community members involved in ongoing food projects, we conducted a sharing circle discussing the facilitators and barriers to IFS projects.

This paper reflects my first-hand experiences engaging with the community, given the strict confines of a Masters’ degree in combination with the intricate nature of

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2 In Canada, the term “Indigenous Peoples” includes both status and non-status First Nations, Metis and Inuit people (Elias, Busby & Martens, 2015).
community-based research. This article aims to provide insight into the key processes of community-engaged research that furthered my studies. I fully acknowledge that there is not one direct approach for successful CBPR as the diversity amongst both researchers and communities accounts for only some of the complexities surrounding this approach. By detailing my experiences, my intent is to share some of the facilitators and barriers experienced by a non-Indigenous researcher engaging in CBPR. The purpose of this paper is to shed light on some of the challenges associated with community engaged scholarship, specifically within the Indigenous context in Canada, given the colonial history of academia as well as institutional pressures of timelines and publications, and to discuss potential ways forward to ensure meaningful work with communities is possible for researchers of all levels. Through a review of the history of academia, a discussion of CBPR as a process, and a critical reflection of my experience working in partnership with an Indigenous community, this paper will explore the pathway CBPR creates for documenting alternative ways of knowing and the institutional challenges in accepting this knowledge as equal to academic sources framed by euro-centric understandings.

4.31 Colonialism and Academia

Historically, research pertaining to Indigenous Peoples has been conducted by non-Indigenous scholars, with little-to-no community consultation or cultural considerations, resulting in extremely disruptive and harmful impacts for Indigenous communities in Canada (Kilian et al., 2019, Biermann, 2011; Castleden, Morgan & Lamb, 2012; Smith, 2012; Kovach, 2009). The traditional positioning of non-Indigenous academics as ‘experts’ in research relationships has been “damaging, insensitive,
intrusive and exploitive” to Indigenous communities (Dunbar & Scrimgeour, 2006). Smith’s influential work, Decolonizing Methodologies (2012), details the collective memory of colonialism for Canadian Indigenous Peoples, as influenced through the unethical collection, classification, and representation of Indigenous data in research. In response to the historic trauma felt by communities due to research practices, Dunbar & Scrimgeour (2006) have called for a reform of Indigenous Peoples’ role in research from the traditional positioning of ‘subjects’ to engaged participants and contributors. Barrerra (1979, p.193) defines colonialism as a “structured relationship of domination and subordination,” which creates racialized hierarchies that validate, benefit and normalize the matters of the dominant population (Biermann, 2011; p.388). The historic relationship between colonialism and academia is rooted in a mutually dependent relationship that created and perpetuated knowledge which regulated Indigenous Peoples as ‘others’, based on a foundation of, and perpetuated by, existing European frameworks (Biermann, 2011). Through the generation, validation and dissemination of knowledge, universities create the dominant standards of what is ‘true’ and control what constitutes a valuable life (Biermann, 2011). This power was utilized throughout colonization to support ideological and discriminatory ways of knowing that subordinated Indigenous cultures and TK (Kovach, 2009, p. 77). Not only did the relationship between colonialism and academia establish their own bodies of knowledge, it also reshaped existing knowledge systems (Biermann, 2011). A foundational difference in academic knowledge and Indigenous ways of knowing is the consideration of both the physical (outer) and metaphysical (inner) understandings of the world in TK (Kovach, 2009). The academically accepted scientific paradigm has
negative impacts when employed in Indigenous research because it contradicts the fundamental philosophical understandings of TK; in the scientific world there is no place for spirituality, humans are considered all-knowing and all questions, answerable (Kovach, 2009).

Due to the legacy of colonialism on Indigenous Peoples, reinforced by colonial research methods through the appropriation of TK and the use of data without consent, research outcomes have perpetuated negative stereotypes and neglected intellectual property rights (Castleden, Morgan & Lamb, 2012). A decolonizing agenda that highlights the Indigenous voice is necessary when engaging in Indigenous research because of the persistent influence of colonialism throughout academia (Kovach, 2009). While Indigenous scholars have created some anti-colonial epistemological and methodological alternatives to western approaches, the vast majority of academia continues to be neo-colonial in nature and rooted in Western values (Biermann, 2011). Thus, the need for interdisciplinary anti-colonial work that diminishes traditional power relations is evident. Further, research conducted in collaboration with Indigenous communities still tends to focus on the negative inequities and disparities of Indigenous Peoples rather than exploring and focusing on sustainable solutions (Dunbar & Scrimgeour, 2006). Recent literature highlights the desire of communities to focus on strengths rather than on disparities that further the narrative of challenges experienced by Indigenous Peoples in Canada (Elliot et al., 2012; Wood, Kamper & Swanson, 2018). As articulated by Smith (2012), Indigenous research must resist the dominant understandings of the academy and create room for TK to emerge by utilizing methodologies rooted in anti-colonial values. Any research that truly hopes to be
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decolonizing needs to acknowledge the impact of colonization, empower Indigenous Peoples and understand the centrality of Indigenous TK to culture (Kilian et al., 2019).

4.4 Research and Community Context

Prior to the commencement of my Masters’ program, my advisor became a member of a research team funded by the Canadian Institute for Health Research (CIHR), entitled A SHARED Future (Achieving Strength, Health and Autonomy through Renewable Energy). The overall goal of A SHARED Future is to examine the potential impact of Indigenous knowledge systems on the healing of our relationships with one another as well as with the land, air and water through renewable energy development (Castleden, 2016). The pathway to research for A SHARED Future is to bring forward stories of reconciliation between knowledge systems in intersectoral partnerships, under the theme of renewable energies. The research program aims to examine the impact of intersectoral approaches to population health through the mitigation of harmful environments, the promotion of healthful environments and the promotion of resilience to harmful environments (Castleden, 2016). T’Sou-ke Nation was approached early on by the research team due to their experience and international recognition for their successes as a solar-intensive community.

T’Sou-ke First Nation is a community of approximately 120 residents, located near Vancouver Island’s southern coast. In 2008, T’Sou-ke conducted a Community Comprehension Planning program (CCP), which involved everyone in the community from children to Elders; at this time, four main pillars of community visioning were identified – energy autonomy, food security, cultural renaissance and economic development (Moore, 2013). The community’s shift to solar was a result of this planning
process; while success has been strong with regard to the pillar of energy autonomy, food security has not been a primary focus in recent years. Currently, T'Sou-ke has a community garden that is supported through annual grant applications (Ladybug Garden & Greenhouse, 2018). Vegetables from the community garden are used for a biweekly needs-based meal-on-wheels program, weekly community luncheons, Elder Wellness days and nature walks (Ladybug Garden & Greenhouse, 2018). The success of developing a sustainable energy system has highlighted the need to expand sustainable methods to all forms of energy in T'Sou-ke Nation, including food, the energy of life.

4.5 Methodological Perspectives

4.51 Indigenous Frameworks for Research

Indigenous methodologies are fluid and dynamic processes that emphasize cyclical perspectives and alternative approaches to the research process (Louis, 2007). The primary focus of Indigenous methodologies is to ensure research is conducted in a sympathetic, ethical and respectful manner (Louis, 2007). Meeting community expectations requires incorporating Indigenous values and ways of knowing into projects that facilitate respectful collaboration and result in relational research (Wilson, 2001). A clear distinction between Western and Indigenous research practices is the Western purpose of creating knowledge in comparison to the Indigenous practice of revealing knowledge (Brewer et al., 2014). Research with an Indigenous community requires an examination of the entire process: the choice of methods, how they are employed and how results are analyzed (Kovach, 2010). Through the utilization of convergence Indigenous methodologies, this research project aimed to engage
comprehensive understandings that exist within TK systems in conjunction with Western research methods (Ray, 2012). In action, this framework allowed me to be flexible and understanding throughout the research process as plans and objectives evolved with community perspective and input. Indigenous research methodologies are stimulated by decolonization efforts and reconciliation aspirations, through the inclusion of TK in tailoring Western research methods to a community’s needs (Ray, 2012). In order to understand what is truly useful and relevant to a community requires establishing meaningful relationships with community members (Kovach, 2010). The development of relationships within the community has been widely recognized as necessary to ensuring research will be meaningful and relevant to those involved (Lavallée, 2009; Kilian et al., 2019; Kovach, 2010). By utilizing these methodologies, researchers are encouraged to approach their work as a learner, which is critical in creating sensitive, open-minded researchers that aim to abstain from misrepresentation, misinterpretation and exploitation (Nakamura, 2010).

This research project utilized the theory of two-eyed seeing in all aspects of project development, implementation and dissemination. Two-eyed seeing is an approach to Indigenous methodologies that employs Western research methods while incorporating traditional beliefs (Bartlett, Marshall & Marshall, 2012). The concept of two-eyed seeing was first introduced to academic by Mi’kmaw Elders in Cape Breton, Nova Scotia through the work of Cheryl Bartlett (Bartlett, Marshall & Marshall, 2012); it is an important guiding principle that asserts that both Western and Indigenous ways of knowing are critical to Indigenous communities (Martin, 2012). Utilizing this concept helps appreciate diverse perspectives of understanding the world, while enabling
research teams to draw on what is helpful to grow existing knowledge. Two-eyed seeing aims to, “see from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together” (Bartlett, Marshall & Marshall, 2012, p.335). Co-learning is a necessary component of conducting research with Indigenous communities (LaVeaux & Christopher, 2009). The utilization of sharing circles, similar to the Western methodology of focus groups and the Indigenous tradition of sharing circles, is a direct example of how this project employed two-eyed seeing.

Due to a history of poorly conducted research amongst Indigenous communities, it is especially important to consider ethical factors when working with Indigenous Peoples in Canada. Conducting research in line with TCPS2 ethical principles, which promote research that is grounded in relationships and congruent with community priorities, is a requirement for all government funded research, including this project (Government of Canada, 2018; Kilian et al., 2019). The TCPS2 articles also call for research that builds capacity in communities through hiring local community members, consulting with participants during data analysis to ensure cultural relevance and recognizing contribution to results (Government of Canada, 2018). Ethical considerations guided the direction of the research project and assured that the research was meaningful to the community.

4.52 Positionality

Understanding the importance of utilizing Indigenous methodologies to conduct effective and meaningful research, forced a recognition and reflection of my role as a non-Indigenous researcher working within an Indigenous community in Canada. As a
non-Indigenous researcher, it is critical that I acknowledge the epistemological confines to understanding TK; my personal building blocks of comprehension are fundamentally different than residents of T’Sou-ke Nation. However, by employing the tactics outlined above, it is possible to create room for TK to emerge and establish mutually beneficial research partnerships. By practicing reflexivity throughout the research process and questioning my motives, my responsibilities, my role in the community and the potential impact of the research project both for the community and on the relationships I had established, I was able to recognize my role as an ally (Aveling, 2013; Graeme, 2013). This process, referred to as autoethnography, requires non-Indigenous researchers to acknowledge the academic paradigms of knowledge creation, the privilege and the context held by researcher (Graeme, 2013). Acknowledging my role as an ally to the community was central to becoming comfortable as a non-Indigenous researcher pursuing CBPR in an Indigenous community. The position of an ally requires individuals to be uncomfortable and open to making mistakes in a role that requires the researcher to not take priority or centre stage when working with Indigenous communities (Aveling, 2013; Graeme, 2013; Hyett, Marierrison & Gabel, 2018). As an ally, researchers have an active role focused on reducing inequalities that allies may benefit from or extending these benefits to community members (Hyett, Marierrison & Gabel, 2018). There are various differences in the philosophical orientations of non-Indigenous and Indigenous ways of knowing (Kovach, 2010; Graeme, 2013). As a non-Indigenous researcher, being open to making mistakes and challenging established Western knowledge systems can help transform approaches to Indigenous methodologies (Graeme, 2013).

4.53 Community Based Participatory Research
This research project with T’Sou-ke Nation employed CBPR as its theoretical framework. CBPR focuses on developing research goals collaboratively with communities, based on a shared vision that helps remind all participating contributors of the potential benefits for the community such as planning and goal development aimed at meaningful change (Kyoon-Achan et al., 2018). In accordance with the Canadian National Centre for Truth and Reconciliation Calls to Action (2015), the research project with the T’Sou-ke Nation was constructed with consultation from the community, through CBPR, in order to establish food sovereignty goals and identify ways to create sustainable infrastructure within the community. CBPR shifts the decision-making power and ownership of research from the researcher to all contributors involved in the project (Castleden, Morgan & Lamb, 2012). The bi-directional nature of CBPR research ensures that research is conducted in a mutually beneficial manner, providing a supportive environment for knowledge sharing and co-creation (Castleden, Morgan & Lamb, 2012). CBPR has been identified as a catalyst for transformation because it defies the colonial tendencies of research to exclusively give power to the researchers (Kyoon-Achan et al., 2018). Conversely, CBPR puts the power in the hands of the participants; this practice has been shown to strengthen Indigenous participation in research because it promotes ownership of the research process (Kyoon-Achan et al., 2018). Community engagement has been identified as a catalyst for Indigenous research due to its ability to restructure traditional power relations between researchers and participants (Castleden, Morgan & Lamb, 2012). Engagement with individuals and organizations within the community enable the development of effective and ethical research projects (Dunbar, Scrimgeour, 2006). Navigating individual interests and
community values is complex and necessitates local aid (Dunbar & Scrimgeour, 2006; Biermann, 2011). Further, shared decision-making between all parties involved in the research, from design to dissemination, helps produce co-learning, dialogue and knowledge to action that provides benefits to all partners (Castleden, 2016). Previous work conducted using CBPR in Indigenous contexts in Canada has been successful in helping to identify previously overlooked community needs (Kyoon-Achan et al., 2018). Utilizing CBPR and two-eyed seeing methodologies ensured that the project was community driven, relevant and reflective of community values. This framework helped the research team conduct the project in a decolonizing and reconciliatory manner that empowered members of the T’Sou-ke Nation through the promotion of an ongoing, positive relationship with traditional foods.

4.6 Research Process and Perspectives

In the months leading up to my first visit to T’Sou-ke Nation, I read all the literature I could obtain about the community including newspaper articles, community resources and peer-reviewed articles focused on Indigenous work and sovereignty efforts on Vancouver Island. The first opportunity I had to visit T’Sou-ke First Nation came towards the end of my coursework in April 2018. My advisor and I travelled to British Columbia and met with the community’s Chief, the principle investigator of the A SHARED Future grant, community representatives and individuals from an NGO that worked extensively in the community. At this time, the community identified that support was needed for the NGO programming that is based in the community and focuses on international youth internships. Over the next eight months, we worked closely with the director of the NGO and her staff via in-person meetings, skype calls, and emails to
develop a proposal that supported work in the community, the Indigenous youth interns, and the work of the NGO. During the proposal review process of the team grant, editors expressed concerns that the proposal was more heavily supporting the NGO rather than the original project partner, T’Sou-ke First Nation. After attempting to revise the proposal to shift the focus from the NGO to the community, grant advisors still identified problems with the proposal and we decided to return to the drawing board.

Juggling the distance from the community, timeline expectations of my degree and the intricacies of community-engaged research, I knew I had to make some changes to ensure successful and meaningful work. At this point, I knew that relying on technology to communicate with community members was not effective and a project reliant on technology would not have any positive or tangible benefits to the community. I suggested relocating to Victoria to my support team at the University of Guelph and everyone agreed that it would provide greater community context and drastically enhance the impact and cultural relevance of the project. At this point, I had visited the community on a few occasions and was beginning to know some familiar faces in the band hall and community garden. Having previously worked on an urban farm, I volunteered to help in the community garden. The importance of building relationships within the community I was working with was a central goal of the project that I accomplished by extensively volunteering in the community, three times a week for about four months. I began receiving invitations to community luncheons, culture night dinners, berry harvest walks and various celebrations in the community as the summer progressed and community relationships strengthened.
Knowing I had to complete a research project of some kind during my time in Victoria, I began talking with the organizer of the community garden and some other people with vested interest in T’Sou-ke’s food security and sovereignty. Realizing that little research had been pursued in understanding and documenting the current strategies and values employed by the community, the development of probing questions to explore the current climate of Indigenous Food Sovereignty (IFS) in the community began. Community members shared with me previous interviews that had been concerned with the operations of the garden to give me a more in-depth understanding of their opinions. Originally, these open-ended and conversational questions were intended for semi-structured interviews of key community members from varying community departments with the goal of generating a holistic understanding of IFS in T’Sou-ke First Nation. However, with my time in Victoria running out due to funding and prescribed academic timelines, I consulted with community members and we decided to host one sharing circle with 3 individuals directly involved with food projects in T’Sou-ke.

4.61 Sharing Circle

A sharing circle was chosen as the main method for gaining insight into current food and energy sovereignty efforts in T’Sou-ke First Nation. By providing an open environment for participants to contribute their thoughts and knowledge with one another, sharing circles reflect the values of Indigenous epistemology and CBPR practices (Ray, 2012). Sharing circles allow increased engagement with participants, in comparison to interviews, because individuals are not restricted to answering questions but are also able to ask their own questions to further the discussion (Kyoon-Achan et
al., 2018). Traditionally, the knowledge holder determines what information they would like to share; by using sharing circles, participants are in control of their knowledge and how it is shared (Ray, 2012). The social aspect of sharing circles can contribute to a collective discussion of a topic and tends to more accurately mimic real life when participants are talking to each other, rather than directly to the researcher (Braun & Clarke, 2013). Conversational methods are significant in Indigenous methodologies because data is gathered orally, similar to traditional storytelling and knowledge transfer, consistent with an Indigenous paradigm (Kovach, 2010). Providing an open environment for participants to contribute their thoughts and knowledge reflects the values of Indigenous epistemology and CBPR practices (Ray, 2012). A draft sharing circle guide for this project was developed with conversational, open-ended questions to help promote storytelling and participant control over the conversation. This sharing circle guide was shared and refined with participant input prior to the sharing circle. At the beginning of the sharing circle, I led the introductions and began asking probing questions. Over the course of our discussions, participants began asking questions as they were provided with a list of probing questions and had previously reviewed the questions; as such, the sharing circle became participant-driven.

4.62 Data Analysis and Dissemination

Upon returning to Guelph, I began transcribing and analyzing the sharing circle that had been audio recorded, with continuous consultation from community members via email. NVivo software was utilized to complete thematic analysis of the sharing circle including identifying, analyzing and interpreting themes and meanings within the dataset. Thematic analysis provides attainable and structured procedures for generating
codes and themes from a dataset (Clarke & Braun, 2016). Thematic analysis has been identified as useful in identifying patterns both within and across the data in relation to participants lived experiences and personal beliefs (Clarke & Braun, 2016). Representing community perspectives as part of a larger understanding reflected the value of Indigenous methodologies to honour the contextual value of stories (Kovach, 2010). While thematic analysis can decontextualize data and present pieces of a larger holistic meaning (Kovach, 2010), during this analysis I focused on fitting individual’s responses into the larger discussion. The discussion as a whole was represented in a cyclic model which focused on themes carried throughout the discussion, rather than individual quotations. Again, this method of analysis aligned with holistic understandings discussed by participants and the interconnected nature of participants’ belief (Kovach, 2010).

Thematic analysis can be used for inductive investigation, to capture both direct and underlying meanings within the data, with the ultimate goal of identifying key features rather than summarizing the content (Clarke & Braun, 2016). In accordance with CBPR, once themes were identified from the sharing circle, a short report was prepared for T’Sou-ke Nation and shared with participants during a trip to T’Sou-ke Nation in October 2019 (Castleden, Morgan & Lamb, 2012). At this time, feedback on the initial analysis of the content was generated by community members and revisions made accordingly. Through the generation of themes, the analysis presented the sharing circle as a subjective accounting of IFS in the community, providing insight for others to learn from (Kovach, 2010).
At the end of our October 2019 trip, I reminded participants that this was not a ‘goodbye’ but a ‘see you later,’ as my advisor will continue to work with the T’Sou-ke First Nation. Due to the warm and welcoming experience I had while spending time in the community, I know I will return one day soon. While the legacies of the relationships I have built will live on in personal communication and the continuation of a research connection via my advisor, it was difficult to leave the community without feeling like I had perpetuated the role of the ‘parachute’ researcher; coming in, collecting data and leaving. Knowing the historic trauma felt by Indigenous communities at the hands of researchers, this aspect of my experience left me with a pit in my stomach. Acknowledging that this work does not end after my degree or with an article publication is necessary to ensure that the work truly is beneficial to the community. I will continue to connect with participants and community members to generate tools that will be useful to the community and provide support in any way possible. Conducting research in a decolonizing manner requires researchers be aware of their thoughts, assumptions and expectations and be open to changing these established patterns. Feeling that pit in my stomach was a sign that I knew I could not stop working towards sustainable change in this community, contradicting traditional expectations and outputs of a Masters’ degree.

4.7 Discussion

Throughout this project experience, I learned the necessity of being flexible with research plans and goals in order to best reflect community priorities and support the ongoing work of community members. Shifting control from researcher to community, as is required during CBPR projects, can lead to unexpected timelines, which is often at
odds with institutional expectations. Therefore, when uncertainties and uncontrollable situations arise, panic often ensues and I now understand why many academics are hesitant to pursue community engaged work because of its unpredictable nature. Educational training teaches the gold standard of the scientific method, but that assumes that all research projects must be researcher-driven. This method does not account for the time required to build relationships within the community, before even identifying a potential research question or problem. Further, often times what researchers view as a ‘problem’ might not be problematic to those in the community and may cause further harm. While increased structure enables researchers to maintain control over their projects, this ideology will never allow for meaningful, decolonizing and community-driven work (Ryen, 2000). Acknowledging that I am not an expert in this field as the researcher, but rather that the participants are, despite historical power differences in research, significantly helped in relinquishing control of the project and appreciating the value of participant input. I am extraordinarily grateful that the participants shared their truths, their stories, their culture, their aspirations and their fears with me; I have learned so much from them. Working with community members while volunteering in the garden shaped my perspective during the project development, data collection and analysis because I had developed personal relationships with the individuals involved with the project and I knew who this work would be influencing. Volunteering in the community put faces to the project and this research became much more meaningful than simply a degree fulfillment. The importance of showing up each week to volunteer and developing trust and reciprocity in my relationships with community members was central to engaging them in a positive and meaningful way.
This experience has taught me that not only do we need a reform of research practices, but also that of educational practices that are informing and teaching our future researchers. Discussing alternative and effective community-based methodologies for working with all communities in Canada, including Indigenous ones, will ensure more effective, sustainable and engaging research that will generate meaningful change for all involved.

CBPR enabled me to engage with the community in a mutually beneficial and culturally-relevant manner. Spending time in the community, attending weekly lunches and celebrations, I learned about community traditions and was able to participate more and more during prayers and other traditional practices. This time spent with the community also ensured that the use of sharing circles was prioritized and identified as a comfortable approach to research for all participants. Through the utilization of an Indigenous framework, the power was shifted from me to the community members, encouraging them to share their experiences in their own words (Kovach, 2009). As identified previously, the key to a successful CBPR project is the establishment of a relationship based on mutual trust (Kilian et al., 2019). Relationships between non-Indigenous researchers and communities must be built on trust, time, personal risk and reciprocity (Hyett, Marierrison & Gabel, 2018). These relationships are an ethical imperative not a way of gaining access to community knowledge and tradition, but a way of earning trust and rapport (Pyett, 2002). Consistent volunteering in the community garden, an area that the community identified as needing support, created opportunities for me to engage with residents and develop trust with research participants. The more time I spent talking and working with community members, the easier it was for me to
forgo my learned tendency to make assumptions and gain an understanding and respect for TK firsthand (Kilian et al., 2019).

As I experienced, CBPR offers opportunities for collaboration across disciplines and communities to co-develop programs and create space for the sharing of TK (Biermann, 2011). Previous works have identified the primary role of a non-Indigenous researcher as one of accountability to the community they are working with (Pyett, 2002). Collaborative researchers must forgo preconceived notions of authority and autonomy of research positions and be team players with the community members (Pyett, 2002). Similar to other researchers, the acknowledgment of the implications of academia on colonization forced a personal re-evaluation of academic traditions and opened my mind to alternative research options (Biermann, 2011; Graeme, 2013; Pyett, 2002; Selby, 2004). In order to work as a non-Indigenous researcher, one needs to be open and willing to listen sensitively to the opinions of others and have the flexibility to operate on the community’s timeline (Pyett, 2002). One of the biggest challenges I faced, as do many researchers in the field of Indigenous health, was the lack of recognition by academic institutions of the time needed to build these meaningful relationships (Kilian et al., 2019). Methodology and theoretical frameworks alone cannot change our current knowledge production system; a shift in the curriculum and an acknowledgment of the oppressive traditions at the university-level is required to begin working towards decolonizing research that accepts alternative knowledge systems as equally valuable.
4.8 Conclusions

Requirements for successful CBPR projects vary drastically from traditional scientific methods, and should not be considered less valuable due to these differences. It is important for researchers to understand and acknowledge the various time and space requirements for engaging in community-based work (Mitchell, 2018). While this paper focused on Masters-level research, these insights may aid both non-Indigenous and Indigenous researchers as they progress their academic skills throughout graduate school and beyond. While extensive time is required by both researchers and communities to develop trusting relationships, these can flourish into long-term research partnerships. The relationships I formed during this project not only determined the direction of the research project but informed my understandings of community context, relationships and realities. For example, I was able to understand some of the difficulties workers face at the community garden as discussed during the sharing circle because I had been volunteering with community members for months. Additionally, having personal relationships with the participants made me want to share their stories truthfully and meaningfully through this project, because of the trust they had shared with me throughout this process. I wanted to learn as much as I could during my time spent in the community because I wanted to honour the relationships I had formed. My time in the community taught me the importance of community perspective in creating, executing and reflecting on projects.

The realities of pursuing CBPR as a Masters’ student is that the time needed to develop relationships and establish trust in communities is often at odds with prescribed program duration and funding allotments. While this work is extremely meaningful to all
involved and definitely worthy of pursuit, it may be challenging to balance community needs and institutional degree requirements. Working with a community where there are pre-established relationships can reduce the time necessary to establish trust, however acknowledging that this work may take longer than is expected by universities is important for those wanting to focus on community-engaged work. Academia needs to provide support to researchers utilizing CBPR frameworks to ensure that work can continue to be done effectively and respectively with communities, especially Indigenous communities in Canada. This may include providing flexible degree timelines and accommodations for students and researchers engaged in community-based work without sacrificing benefits associated with full-time studies, including funding and teaching opportunities. Providing support for publishing opportunities tailored specifically to community-engaged work and presenting alternative ways of knowing as equivalent to traditional euro-centric frameworks to students and new researchers.
Chapter 5: Exploration of T’Sou-ke Nation’s Food Sovereignty Efforts and Values

These results are presented in manuscript format in accordance with the Journal of Agriculture, Food Systems and Community Development.

5.1 Abstract

Traditional food systems are sustainable in nature but have been forcibly altered among Indigenous communities in Canada as a consequence of the colonization of Indigenous Peoples. Indigenous Food Sovereignty (IFS) has recently emerged as a method to counteract the dismantling of traditional food systems as well as the negative health impacts of environmental dispossession on Indigenous communities. Growing, harvesting and preparing traditional foods, have been suggested as a potential resolution to the health, social and environmental issues facing Indigenous communities. Through community-based participatory research, rooted in Indigenous methodologies, this research project explored community perspectives on IFS in T’Sou-ke First Nation. Through community collaboration, this project organized a sharing circle to explore community perspectives on Indigenous Food Sovereignty in T’Sou-ke First Nation. A thematic analysis of the sharing circle held with community members identified the influence of traditional knowledge on environmental concern, sustainable practices and a relationship with the land. Participants discussed memories, traditional foods, current sovereignty projects revealing concerns for their local ecosystem as well as a desire to preserve its natural state for generations to come. Further exploration of community perspectives in future research will generate a greater understanding of the impacts of IFS projects on community environmental concerns and the sharing of traditional knowledge.
5.2 Keywords

Indigenous Food Sovereignty; Traditional Food; Traditional Knowledge; Sustainability; Community Based Participatory Research

5.3 Introduction

Indigenous Peoples have been deeply connected to the plentiful resources of the land since time immemorial (Royal Commission on Aboriginal Peoples, 1995). Historically, the Canadian government’s policies aimed at assimilation have undermined Indigenous cultures and suppressed Indigenous identities, destroying families and societies; presently, these effects continue to be felt by Indigenous communities (Royal Commission on Aboriginal Peoples, 1995). Indigenous Peoples across Canada actively resist the negative impacts the legacy of colonization has had, and continues to have, on the health of communities (Vernon, 2015). Resistance efforts have focused on the struggle to preserve access to traditional lands due to a history of environmental dispossession, which stripped communities of their sovereignty and increased nutrition-related health disparities as a result of the inextricable relationship between the health of the land and the health of the people (Tobias & Richmond, 2016; Vernon, 2015; Waziyatawin & Yellow Bird, 2005).

Previous research has determined that the consumption of traditional foods is one of the most direct links between the health of Indigenous communities and their physical environment (Richmond & Ross, 2009; Kuhnlein & Receveur, 1996). Living within food sovereignty is not only an aspiration for Indigenous communities but it is a remembered reality that lives on through the intergenerational sharing of Traditional

3 In Canada, the term “Indigenous Peoples” includes both status and non-status First Nations, Metis and Inuit people (Elias, Busby & Martens, 2015).
Knowledge (TK) and traditional food practices (Morrison, 2011). Food sovereignty movements, focused on traditional foods, have been identified as a potential solution to food insecurity and diet-related illness within Indigenous communities (Bagelman, Deveraux & Hartley, 2016; Elliot et al., 2012), a platform to promote self-determination and cultural reclamation (Kamal et al., 2015), and are a helpful tool in restoring family and community relationships (Rudolph & McLachlan, 2013). The harvesting and preparation of traditional foods and the cultural protocols surrounding these customs have been identified as a potential remedy to the health, social and environmental matters facing Indigenous Peoples in British Columbia (Davis & Twidle, 2011; Kamal et al., 2015). The aforementioned research projects were successful in bringing communities and people together to share knowledge and skills through meaningful experiences, however the literature does not address community needs for the sustainability of food sovereignty efforts and sharing of TK within communities, outside of these research programs.

Due to the widespread impacts of environmental dispossession and colonization on the consumption of traditional foods, and ultimately on Indigenous Peoples’ health in Canada, there is need for research to examine the influence of member consultation for sustained food sovereignty efforts in Indigenous communities (Richmond & Ross, 2009; Elliot et al., 2012). A qualitative investigation was designed to explore community perspectives and experiences of food sovereignty efforts amongst T’Sou-ke First Nation community members. The overall goal of the research was to understand the current food sovereignty efforts in T’Sou-ke and help to establish community-driven goals. Specific objectives of the project included: to formalize community food sovereignty
goals; to identify traditional food practices and barriers to incorporating these practices in everyday life; to determine what supports are required for sustained infrastructure within the community; and, to explore the concept of food as a renewable energy source through an Indigenous lens.

5.4 Background

5.41 Indigenous Food Sovereignty

The term food sovereignty originated in 1996 and was created by a group of Latin American land-based farmers, peasants and Indigenous Peoples, referred to collectively as La Via Campesina, in protest to the globalization of their local food systems (Wittman et al. 2010). Food sovereignty is defined as the autonomy or control of a food system and is often used to increase food security through ecologically sustainable methods (Cidro et al., 2015; Kepkiewicz & Dale, 2018). While food sovereignty advocates for new relationships between individuals and their land, it also honours existing relationships (Wittman et al., 2010). As both a framework and a movement, Indigenous Food Sovereignty (IFS) aims to reconnect Indigenous peoples with their food systems through four principles: the recognition that food is sacred; community participation in food systems; self-determination; and supportive policy (Morrison, 2011; Kepkiewicz & Dale, 2018). Matties (2016) states that IFS recognizes the ongoing effects of colonialism, offering an alternative to food security based on human rights, land reform and self-determination. Participating in harvesting and hunting practices associated with traditional foods and traditional food systems fosters the transmission of cultural values, skills and spiritual practices that align more so with aspects of community well-being, rather than individualized health or nutritional status.
Through generating an understanding of strategies that facilitate traditional food practices, IFS works to describe rather than define the processes that support TK; including hunting, gathering, growing, preserving (Grey & Patel, 2014; Morrison, 2011). The complex nature of traditional food systems is part of the reason that IFS falls into its own category in comparison to traditional food sovereignty. IFS efforts require a food system revitalization as well as a, “more general Indigenous cultural, social and political resurgence” (Grey & Patel, 2014).

5.42 Threats to IFS

Results from the first Interior BC Indigenous Food Sovereignty Conference identified the colonial movement as disruptive to the intergenerational transference of food knowledge (Morrison, 2006). Additionally, the erosion of Indigenous environments including land, forests, water and air has destructed Indigenous food systems and traditional practice (Morrison, 2006). While the Douglas Treaties intended to allow traditional food practices on Indigenous territories, including T’Sou-ke First Nation, this was never employed in practice (Corntassel & Bryce, 2012). Other governmental forces, such as the Indian Act, prevented community members from leaving reserves, dictated what communities could grow on reserve and what they could harvest off reserve (Corntassel & Bryce, 2012). The smothering of the once competitive Indigenous farming industry by the Canadian government, through limits of on reserve farming, further eroded the central relationship of Indigenous peoples with their food (Ladner, 2009). The pollution of reserve water and soil, as well as the presence of heavy contaminants has created another barrier to traditional harvesting for many Indigenous communities (McLachlan 2014). Climate change impacts traditional migration routes that Indigenous
communities rely on for hunting and changes in temperature that affect growing seasons and therefore, harvesting schedules (Olson & Steager, 2015). Additionally, costs related with traditional practices and required equipment restrict individual’s participation in traditional food systems (McLachlan 2014). Relationships between Indigenous peoples and their food are complex and more research is needed to gain insight to better understand the processes which can support food sovereignty and the people involved in food systems within Indigenous communities in Canada.

5.43 IFS in British Columbia

Living within food sovereignty is not only an aspiration for Indigenous communities but it is a remembered reality that lives on through the intergenerational sharing of Traditional Knowledge (TK) and food practices (Morrison, 2011). In response to the effects of colonization on Indigenous Peoples, both Elders and activists across Canada are creating opportunities for the sharing of TK, affirming the significance of Indigenous food systems (Muller, 2018). Numerous projects in British Columbia that have proven successful in providing space for the sharing of TK from Elders with communities (Bagelman, Deveraux & Hartley, 2016; Elliot et al., 2012, Morrison, 2006). For example, the Feasting for Change program brought together Elders from across Vancouver Island to feast on traditional foods and share stories about both the loss and revitalization of these foods. Traditional food systems recognize all traditional food sources available from local resources that are culturally accepted by a community, as well as the sociocultural associations, acquisition techniques, composition and nutritional subsistence associated with foods (Kuhnlein & Receveur, 1996). Traditional food systems are complex and cyclic networks, rooted in social and economic
circumstances, that encourage biodiversity and touch the full spectrum of life in ways that modern food systems often do not (Kuhnlein, Erasmus & Spigelski, 2009). Additionally, traditional food systems are tied to elements of nature and culture that contribute to both individual and community health on physical, emotional, mental and spiritual levels, providing both healing and protection from disease (Kuhnlein, Erasmus & Spigelski, 2009). T’Sou-ke Nation was a key member in the Feasting for Change project (Bagelman, Deveraux & Hartley, 2016). The first gathering for Feasting for Change was prepared and hosted by T’Sou-ke Nation, with fresh produce from the Ladybug Garden & Greenhouse used for the feast; this meal provided the first of many opportunities for dialogue about traditional foods (Bagelman, Deveraux & Hartley, 2016). During the initial gathering held at T’Sou-ke First Nation, it was apparent that participants had a desire for more opportunities to share and learn from one another (Bagelman, Deveraux & Hartley, 2016).

Additionally, Elliot et al. (2012), engaged in a collaborative project assessing obstacles and resolutions to accessing traditional foods in Vancouver. Participants of this project identified increased access to sea and land, food-related community programs, increased traditional food practices and valued cultural traditions as potential methods to increase access to traditional foods (Elliot et al., 2012). Through the establishment of a community-based food program, Kamal et al. (2015), identified the engagement of youth and Elders in traditional land-based activities as central to the resurgence of cultural values and practices. The harvesting and preparation of traditional foods and the cultural protocols surrounding these customs have been identified as a remedy to the health, social and environmental matters facing Indigenous
peoples living in British Columbia (Davis & Twidle, 2011; Kamal et al., 2015). The aforementioned research projects were successful in bringing communities and people together to share knowledge and skills through meaningful experiences, however the literature does not address community needs for the sustainability of food sovereignty efforts and sharing of TK within communities, outside of these research programs.

5.44 IFS in T’Sou-ke First Nation

In 2008, the T’Sou-ke First Nation identified food security as one of four pillars of importance to the community (Moore, 2013). Currently, the community is lacking consistent financial and physical support to maintain the garden, relying on annual funding applications to support their work (C. George, personal communication, March 12, 2019). T’Sou-ke Nation has demonstrated a strong willingness to participate in food sovereignty movements, as demonstrated by their involvement in programs like Feasting for Change, however a disconnect exists between participation in these events and established systems within the community. Upkeep of the greenhouse and garden is a low priority for the community maintenance crew and staffing has dropped from four full time employees in previous years, to one currently (D. Ruthier, personal communication, May 15, 2019). Efforts to re-establish the consumption of traditional and sustainable food practices are central to restoring Indigenous identity due to the intrinsic link between the health of the land and the health of Indigenous Peoples (Kuhnlein, 2014). Therefore, the proposed research seeks to further knowledge about current food sovereignty practices amongst T’Sou-ke Nation, while investigating what supports the community needs to secure the infrastructure of their food sovereignty efforts.
5.5 Research Method

A qualitative approach was used for this research project. Qualitative research explores concepts in-depth through the analysis of words rather than numbers, as in quantitative research. Qualitative research does not assume that there is one correct understanding of reality (Clarke & Braun, 2013). Silverman (2000) identified that qualitative methods often more closely parallel real life experiences in comparison to experimental methods. Qualitative methods are useful in under-researched or complex topics where participants are part of the research design due to the open-ended and flexible nature of the methodology to develop to the needs of the study (Clarke & Braun, 2013). Utilizing qualitative methodologies permitted a flexible research design, which developed and evolved with community input. A qualitative approach was used in conjunction with thematic analysis to explore food and energy sovereignty efforts in T’Sou-ke First Nation.

Through the utilization of convergence Indigenous methodologies, this research project aimed to engage comprehensive understandings that exist within TK systems in conjunction with Western research methods (Ray, 2012). Convergence Indigenous research methodologies are stimulated by decolonization efforts and reconciliation aspirations, through the inclusion of TK in tailoring Western methods to a community’s needs (Ray, 2012). By utilizing these methodologies, researchers are encouraged to approach their work as a learner, which is critical in creating sensitive, open-minded researchers that aim to abstain from misrepresentation, misinterpretation and exploitation (Nakarmura, 2010). Additionally, this research program utilized the theory of two-eyed seeing, which is an approach to Indigenous methodologies that employs
Western research methods while incorporating traditional beliefs (LaVeaux & Christopher, 2009). Two-eyed seeing aims to, “see from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together” (Bartlett, Marshall & Marshall, 2012, p.335). Further, this project employed Community Based Participatory Research (CBPR) as its theoretical framework. CBPR develops research goals collaboratively with communities, based on a shared vision that helps remind all participating contributors of the potential benefits for the community (Kyoon-Achan et al., 2018). In accordance with the Canadian National Centre for Truth and Reconciliation Calls to Action (2015), the research project with the T’Sou-ke Nation was constructed with consultation from the community, through CBPR, in order to establish food sovereignty goals and identify ways to create sustainable infrastructure within the community. The bi-directional nature of CBPR research ensures that research is conducted in a mutually beneficial manner, providing a supportive environment for knowledge sharing and co-creation (Castleden, Morgan & Lamb, 2012). CBPR has been identified as a catalyst for transformation because it defies the colonial tendencies of research to exclusively give power to the researchers (Kyoon-Achan et al., 2018). Previous work conducted using CBPR in Indigenous contexts in Canada has been successful in helping to identify previously overlooked community needs (Kyoon-Achan et al., 2018). By using a CBPR framework, the research team conducted research in a decolonizing and reconciliatory manner that empowered members of the T’Sou-ke Nation through the promotion of an ongoing, positive relationship with traditional foods.
5.51 Ethical Considerations

Due to a history of poorly conducted research amongst Indigenous communities, it is especially important to consider ethical factors when working with Indigenous Peoples in Canada. Conducting research in line with TCPS2 ethical principles, which promote research that is grounded in relationships and congruent with community priorities, is a requirement for all government funded research, including this project (Government of Canada, 2018; Kilian et al., 2019). The TCPS2 articles also call for research that builds capacity in communities through hiring local community members, consulting with participants during data analysis to ensure cultural relevance and recognizing contribution to results (Government of Canada, 2018). Ethical considerations guided the direction of the research project and assured that the research was meaningful to the community.

5.52 Participants

Originally, the broad target population for this project was community members from T’Sou-ke First Nation. After consultation with community members involved in ongoing community food projects, these individuals expressed the desire to confine this project to those with vested interest in the community’s food system, in order to obtain information directly from those with specific food-related TK and an understanding of the current food projects. Additionally, consulting with individuals involved in the day-to-day food-related activities in the community encouraged a discussion of the realities of the challenges these individuals face in their roles and the viability of different prospective food projects. Therefore, the target population narrowed drastically to those involved with the community garden and organizing of traditional food outings and traditional
workshops. This research project utilized purposive sampling to identify participants in the community. Purposive sampling is a type of non-probability sampling and is applied by using knowledge of the population to choose a non-random sample based on elements that represent a cross-section within a population (Lavrakas, 2008). Working with a small community enabled, relationships were very crucial for recruitment as it was achieved primarily through word of mouth. A total of three community members participated in this research project. The original intent was to involve 6-8 community members from varying sectors in the community, however due to the aforementioned community desire to keep the project to those involved with food, 3 individuals were willing to participate. Once interest was confirmed, the research team followed up with a more formal email invitation and an in-person invitation directly to those who identified as being interested in participation.

5.53 Research Design

This project utilized CBPR as a methodological framework with community input guiding the direction of the research project. The original intent of the project was to establish a community advisory group that would help determine community participation and recruitment, data collection methods, as well as specific research questions. In action, the research team consulted with individuals who had stake in the community garden and food projects in the community to determine what would be most helpful to support their work. This project is the first step of a larger research piece that will continue to build on what was established during this initial data collection. Potentially, the three participants from this stage of the research will become the official advisory committee and will help guide the subsequent interviews and community work.
within T'Sou-ke First Nation. The original proposal cited interviews as the data collection to be used for this research project but holding a sharing circle to discuss current food projects and hopes for the community was identified as more desirable for the participants at this point in time.

A sharing circle was chosen as the main method for gaining insight into current food and energy sovereignty efforts in T'Sou-ke First Nation. By providing an open environment for participants to contribute their thoughts and knowledge with one another, sharing circles reflect the values of Indigenous epistemology and CBPR practices (Ray, 2012). Sharing circles allow increased engagement with participants, in comparison to interviews, because individuals are not restricted to answering questions but are also able to ask their own questions to further the discussion (Kyoon-Achan et al., 2018). Traditionally, the knowledge holder determines what information they would like to share; by using sharing circles, participants are in control of their knowledge (Ray, 2012). Further, the social aspect of sharing circles can contribute to a collective discussion of a topic and tends to more accurately mimic real life when participants are talking to each other, rather than directly to the researcher (Braun & Clarke, 2013). Conversational methods are significant in Indigenous methodologies because data is gathered orally, similar to traditional storytelling, consistent with an Indigenous paradigm (Kovach, 2010). Further, providing an open environment for participants to contribute their thoughts and knowledge reflects the values of Indigenous epistemology and CBPR practices (Ray, 2012). As a non-Indigenous researcher, it is critical that I acknowledge the epistemological confines to understanding TK; my personal building blocks of comprehension are fundamentally different than residents of the T'Sou-ke Nation.
However, by employing the tactics outlined above, it is possible to create room for TK to emerge. Through extensive volunteering in the community garden and attendance to community luncheons, dinners and celebrations, I began to meet individuals in the community and was able to form relationships that led to involvement in this project. A draft sharing circle guide for this project was developed with conversational, open-ended questions to help promote storytelling and participant control over the conversation. This sharing circle guide was shared and refined with participant input prior to the sharing circle. At the beginning of the sharing circle, I led the introductions and began asking probing questions. Over the course of our time together, participants began asking questions as they were provided with a list of probing questions and had previously reviewed the questions; as such, the sharing circle became participant-driven.

5.54 Data Analysis

The sharing circle was audio recorded in the field and electronically downloaded and transcribed by the research team. NVivo software was utilized to complete thematic analysis of the sharing circle including identifying, analyzing and interpreting themes and meanings within the dataset. Thematic analysis provides attainable and structured procedures for generating codes and themes from a dataset (Clarke & Braun, 2016). Further, thematic analysis has been identified as useful in identifying patterns both within and across the data in relation to participants lived experiences and personal beliefs. Thematic analysis can be used for inductive investigation, to capture both direct and underlying meanings within the data, with the ultimate goal of identifying key features rather than summarizing the content (Clarke & Braun, 2016). Once themes
were identified from the sharing circle, a general short report was prepared for T’Sou-ke Nation and shared with participants during a trip to T’Sou-ke Nation in October 2019. At this time, feedback on the initial analysis of the content was generated by community members and revisions made accordingly.

5.6 Results

Participant passion for the growing, harvesting and consuming of traditional foods was evident through their excitement when discussing past workshops and successes as well as through their frustration when talking about barriers to IFS efforts in the T’Sou-ke First Nation community. The three participants each play a role in T’Sou-ke Nation’s food programs either through employment or volunteer positions. All three participants were women, two of them being elders from the community. The sharing circle prompts focused on IFS efforts and values in the community because of the collaborative goal to understand current understandings of IFS in the community. Hence, the central placement of IFS at the heart of the thematic map, as seen in Figure 1. This overarching theme includes participants’ memories of harvesting and gathering foods as a child, the ongoing work at the community garden, the workshops focused on traditional methods and the weekly community meals.

A strong desire to pass on TK to future generations was evident throughout the discussion of various community projects. TK is found in the second ring because it informed the participants’ beliefs and understandings of the main themes that arose from the Sharing Circle, as identified in the third ring. Environmental concerns, relationship with the land and sustainable practices were the main themes discussed in relation to food projects and outings in the community. All of the themes identified in the
third ring support the IFS efforts in T’Sou-ke First Nation, as guided by the TK held by Elders in the community. Community support is in the final ring because it is present in all of T’Sou-ke Nation’s efforts as displayed through their unwavering support for other members. An emphasis on inclusion and helping one another was evident throughout all discussions in the Sharing Circle. Fig 1 presents the components of IFS that community members identified as relevant to T’Sou-ke First Nation: TK, environmental concern, sustainable practices, relationship with the land and community support. Illustrations of these themes will be discussed below. The model was developed after identifying themes from the sharing circle; the interconnected nature of the themes discussed throughout the sharing circle, prompted a cyclic model, rather than a linear one. This notion parallels the cyclic nature of traditional Indigenous food systems and the understanding of the complex relationships between all living things.

**Figure 1. Visual representation of the thematic analysis of IFS in T’Sou-ke First Nation.**

5.6 Indigenous Food Sovereignty
To begin, all of the discussions throughout the sharing circle centred around the current IFS efforts in the community, as well as the barriers and facilitators to these projects. The outer rings as seen in Fig 1 each directly influence T’Sou-ke Nation’s understanding of their own food sovereignty and inform the values that underpin all of their current projects. Various activities within T’Sou-ke First Nation support IFS efforts including the community garden; food grown at the community garden is either used for the weekly community luncheons and culture night dinners held at the band hall, the elder meals-on-wheels program or is distributed amongst community members. The community garden is valued as a supplier of food for the nation, rather than a revenue stream, and focuses on growing and harvesting produce for the wider community.

Additionally, medicinal teas and herbs are grown at the community garden, where they are thoroughly dried and jarred for distribution in the community and for use at workshops. These medicinal teas have also been used at workshops in elementary schools within the Sooke school districts. On a couple of occasions, participants have been invited to share their medicinal teas and accompanying TK with youth in the schools. Following classroom visits, students helped participants serve approximately 400 people medicinal teas at a banquet, where students were responsible for explaining cultural values associated with the teas. Participants identified these types of events as key in sharing TK beyond their immediate community of T’Sou-ke Nation.

Participants also discussed workshops that are held at the band hall including preservation and smoking classes; developing these traditional skills help community members reinforce their TK and teaches them how to utilize food sources from their own backyards, rather than solely relying on local grocers. Workshops also include
berry harvesting and seafood gatherings. Participants explained that when they take members out to harvest wild foods, they duplicate traditional methods that their ancestors followed to spread TK amongst youth and the community. One of the participants stressed the importance of teaching children traditional practices to prevent the loss of TK:

“When we go out, we harvest the berries as we did, uhm, teaching the children that is really important because now they’re gonna teach their children and a lot of that knowledge is gonna get forgotten ‘cause nobody would know how to do it, uhm-or where to go, so-what to do with it when they get it.”

Similar to sharing TK with the community during the medicinal tea sessions at the schools, T’Sou-ke Nation’s seafood gatherings draw individuals from many different communities and organizations across southern Vancouver Island to participate in a traditional feast. Community members acknowledged the benefit to inviting many people to these events because it helps educate people about the resources available. Most importantly, the organizer of gatherings indicated the importance of teaching community members what food sources are available in their own backyards:

“Especially on the seafood gatherings because not everybody knows what’s available, even right in front of them.”

Further, participants explained that a group of members within T’Sou-ke Nation, are responsible for harvesting and supplying fish for the band each year; depending on how many fish are caught, they are distributed amongst the households within the community. Similarly, food grown at the community garden that is not used for food programs is distributed amongst community members. When directly asked about what is needed to further the IFS efforts within T’Sou-ke First Nation, the participants responded unanimously that participation from the wider community is what sustains their efforts. IFS directly relates to the theme of TK because the goal of IFS efforts is to
support the local and traditional food systems. Returning to traditional food practices through the sharing of TK and the utilization of elder wisdom in planning food projects supports community values and furthers IFS by empowering members to participate in tradition that often times aid in revitalizing cultural identity.

5.62 Traditional Knowledge

Through growing food at the community garden, leading spiritual prayers, organizing and conducting food gatherings or harvests; each of the participants are a rich source of tradition and culture in the T'Sou-ke First Nation community. Participants heavily value the ways in which their ancestors lived. On multiple occasions, participants expressed that the ways their ancestors prepared or harvested food and “lived simply” as the ‘right’ way to do things. When discussing the fulfilling aspects of organizing traditional workshops and outings, one participant exclaimed:

“The most rewarding and fulfilling I think with the food is uhm- not only watching people enjoy what it is, uhm- they’re uh … we usually prepare it the way our ancestor did so that they uhm- they enjoy it the way they’re supposed to.”

The sharing and preservation of TK was extremely important to the participants to ensure that the knowledge stays within the community for generations to come; therefore, teaching youth was identified by participants as a key way to ensure the intergenerational transfer of TK. One of the participants shared language cards that she has made for the youth outings, so that when plants are identified youth can also learn their traditional names, another way to preserve TK within the community.

TK and the associated community values inform the themes of environmental concern, sustainable practices and relationship with the land. Participants expressed that their ancestors highly valued practices that supports each of these themes. For example, sustainable practices were identified as a traditional way of life. When
reflecting on traditional practices, in comparison to development practices of the Western world, participants reiterated that they were taught to only ever take what is needed from their environment in contrast to colonial consumerism values. This mindset in and of itself is a core principle that reflects the sustainable nature of T’Sou-ke Nation’s traditional way of life. When discussing harvesting practices of the forestry industry on Vancouver Island, one of the participants asserted:

“We never did that; our people never did that. They would only take whatever they needed at the time.”

With regards to environmental concern, participants discussed the impact of human action on the climate, confused as to how the wider population isn’t aware of the impact their actions have on both the environment and the human race. This notion relates back to the traditional, deep-rooted respect and understanding of the necessity to preserve each unique ecosystem in nature. An Elder from the community mentioned the impact of ocean health on community health:

“I think we’d be totally shocked if we saw what’s in the ocean. You know, that affects all of us… And people don’t really believe we’re in dire straits, with climate change.”

Through a discussion of traditional practices, it became apparent that a strong relationship with the land was central to many of the participants’ TK. The participants expressed the impact of having Elders share stories with youth during community outings as invaluable. Reminding the youth of the cultural value the land holds and teaching them traditional methods of harvesting that they are still able to do, despite living in a modernized world, is critical in establishing and nurturing a strong relationship with the land. The organizer of community outings highlighted the value of sharing stories in establishing a relationship with the land for youth:
“Listening to their stories of when they were youth and then our youth understand why we are doing it. The importance of our lands, our beaches, we need that to live off the land. It’s so important and it’s still out there.”

5.63 Environmental Concerns

Participant concern for their ecological environment was strong throughout the sharing circle, as evidenced by the numerous occasions concerns such as forestry, pollution and climate change were discussed both as a direct response to prompts and as an indirect or related response. Community members provided clear examples as to how the changing climate is negatively affecting their ability to continue traditional practices, sustain IFS efforts and spread knowledge amongst membership. Specifically, participants who are primarily responsible for the growing of foods at the community garden have noticed that the native food sources, both in the garden and in the wild, are not as successful as they were, even 5 years ago. As articulated by one of the participants who has been gathering traditional foods since childhood:

“Especially the native plants because they’ll flower and that’s it, they won’t bear fruit, or whatever they’re supposed to grow, uhm- a lot of times when we go out to gather the fruit, they’re airy and they don’t have enough of the moisture that they’re supposed to get, uhm- they’ll grow to a certain size and stop and become little balls of air, not fruit. Even the seeds won’t grow, and that means a lot because the seeds are what make more, right? When they fall off the plant uhm- and that’s concerning because it’ll just go away and not replenishing itself.”

Participants’ traditional knowledge and beliefs, as well as a strong understanding of the interconnected nature of their surrounding environment, played a role in their comprehension of the current state of the environment. In discussing the cyclic nature of the environment and the impact of disrupting those cycles, one participant stated:

“Yeah, the trees are what cleans the air and keeps our climate, it’s a system, everybody knows that from going to grade school. If the system is stopped midway, we’re teetering, but they keep taking all the trees so that the air can’t do what it’s supposed to do, filter through the trees.”

Development in the nearby city has had major impacts on the traditional territories of T’Sou-ke First Nation. Community members described forestry and commercialization
as a catalyst for eliminating traditional food sources and negatively impacting local environmental health. Specifically, the industrialization of the nearby city of Sooke has had widespread effects on the community’s ability to participate in traditional practices.

One of the participants described the loss of traditional food sources:

“Even building in Sooke, the buildings, and the houses, and the homes and the subdivisions, that takes away from our hunting and fishing because the houses and the berries, everything – it’s gone.”

Participants also discussed the impact of the forestry industry in terms of berry harvesting. Two of the largest berry sources for the community have been destroyed; one due to the building of a Tim Hortons and the other due to forestry demands. One participant reflected upon the importance of the second berry patch, Blueberry Flats, throughout her life:

“There’s nothing there anymore, because they took it away. That’s forestry, that’s taking the trees, that’s wrecking it- oh my god. There’s nothing out there anymore, it is really sad. It’s like wow, we went there for years and years and years, even when we were kids we went out there and now it’s gone.”

The impact of plastic use was also an environmental concern expressed by community members during the sharing circle, in terms of ocean pollution and wildlife habitat destruction. Specifically, community members discussed the longevity of plastics in the environment and oceans and the impact of consuming plastics on animal health.

Participants called for an immediate end to the use of plastics, citing them as unnecessary waste and a threat to wildlife. Community members also shared the desire to be able to conserve their ecosystem on multiple occasions but expressed uncertainty about how to ensure preservation of their traditional food sources. Specifically, one participant asserted concern for the stability of all food systems, not just T’Sou-ke Nation’s traditional food sources:
“You know there’s going to be one day when all those vegetables aren’t going to be in the grocery store because the uhm- the greenhouse effect, it’s all changing, it’s changing fast and a lot of people don’t know how to correct it, yet it’s all- everybody’s fault for wrecking it because they shouldn’t have been allowed to do what they did to wreck it in the first.”

5.64 Relationship with the Land

When discussing the growing of traditional foods as a result of a relationship with the land, participants expressed this relationship is central to their identity. The extraordinary concern for the environment expressed by participants reinforces this sentiment. The importance of the land to the T’Sou-ke Nation culture is extremely high, when discussing the current state of the ecological environment, participants identified that preservation of the land is required for the health of future generations. In talking about the impact poor environmental health has on community health, an elder from the community articulated this when she said:

“We need to preserve Mother Earth for our children that are coming along, we really do.”

Traditional practices are inextricably linked to the community’s strong relationship with the land as well as an understanding of the interconnectedness of nature, which relates to the community’s spirituality. One of the participants is responsible for leading prayers and blessings in the T’Sou-ke community; her perspectives on the impact prayer has on youth was valuable. This participant explained that using prayer as a way to start a ceremony or community event prepares members’ mentality for the day ahead; the acknowledgment of being present on traditional lands makes community members think about being grateful and respecting each other, as well as the physical environment around them. Most importantly, participants identified that true respect of Mother Earth and nature would not lead to the current climate crisis, again suggesting that TK and a relationship with the land is central to the community’s cultural identity. One of the
participants summarized the various discussions throughout the sharing circle by stating:

“That’s where- that’s where people need to be, is respect. If you respect Mother Earth, you wouldn’t destroy her.”

5.65 Sustainable Practices

Many of the traditional practices discussed by community members reflected a sustainable way of living, respecting nature and prioritizing the health of the environment. When asked about the future of T’Sou-ke’s food and energy sovereignty in an ideal world, participants responded, “Living simple like our ancestors did.” A strong desire to return to a simpler time where priorities reflected ancestral values was apparent throughout the discussion. Another TK pillar that was discussed as influencing the practices of the community was planning ahead for generations to come. This concept aligns with the seven generations law from the great laws of the Iroquois confederacy, which considers the impact of today’s decisions on tomorrow’s generations (Moore, 2012). The connection between this traditional practice and sustainable ways of living is quite strong through the act of acknowledging the impact of every day decisions on future generations. As described by one of the participants, all efforts to consider this impact are made by community members:

“We always think ahead, sometimes it doesn't pan out, but most of the time it does, in whatever we do, just gotta keep pushing it, pushing it on our community to uhm- be sustainable”

Another example of sustainable traditional practices given by the participants was the collecting of rain water in barrels, a regular practice for community members even one to two generations ago. All participants had grandparents that used rain water to complete laundry with. This practice is a direct example of the traditional value placed
on water as a valuable resource not to be wasted. As indicated by the following quotation where one participant reflected on her grandparent’s way of life:

“Like using-using rain water too for water… Yep that’s sustainability, that’s uhm, saving… we used to collect water in- in the barrels when I was young and use that for-for uh- laundry”

Participants also discussed the impact of having solar power on reserve in terms of a shift in mindset for community members to more sustainable living. One specific example discussed was a change in youth programming. Participants detailed changes to include sustainable practices in youth programming, including training provided by community members focused on teaching youth simple ways to transition to a more sustainable lifestyle; including foraging and water consumption. Additionally, at the community garden seed collecting is a regular practice that enables the longevity of a variety of plant species and reduces financial costs associated with growing produce. This practice is yet another sustainable aspect of T’Sou-ke Nation’s traditional way of life.

5.66 Community Support

Community support was woven throughout the discussions of IFS with T’Sou-ke First Nation community members. Specifically, when looking at IFS, participants identified that while the community garden is supported by annual grant applications, when grants do not cover budgetary needs, the Chief and Council will allocate money from the community budget to support the garden. In times of need, the community is there for one another. Specifically, the participants mentioned a hurricane that happened a few years ago, where the community was without power for 6 or 7 days. The band hall had reliable power throughout this time so the photovoltaic solar panels that power the building and it was opened for all community members to seek refuge,
warmth and power. Considering the seven generations law, the community actively recognizes the impact of their actions on future generations, trying to ensure a viable, healthy environment for generations to come. With regards to the relationship with the land, participants stated that they encourage participation from all community members, regardless of age or ability. One participant shared that they actively alter outings to make it accessible for all members:

“Whether they are in a wheelchair or … they can walk slowly or… some kind of ailment that can’t make them go very quickly, it doesn’t matter because you go at their pace.”

Further, participants identified the need to get back on the land and away from modern technology, that can cause community members to remain in the confines of their homes. Recognizing the wider need for individuals to be active and get outside helps support the community and encourages a fruitful relationship with the land. The participant responsible for the planning of traditional outings and workshops articulated the following:

“Our whole method to our madness for gathering is to get people out of the house, away from gadgets and TVs and for our elders to move around and… You make sure that they get it done. I just think it’s wrong that people sit in their houses with all that stuffiness.”

Further, encouraging participation from those that are hesitant yields great results according to participants. Elders feel useful when they are encouraged to share their TK and they are able to enjoy the world as they once did when they were young and their elders were teaching them the same practices they are sharing with the current youth. While the participants discussed community and support, especially when expressing motives for growing food, teaching prayers and organizing workshops, they also identified the need for reciprocal support. When directly asked what is needed to ensure the future of IFS in the community, one participant replied: “Participation, participation, participation.” Community engagement is what fuels both ends of the IFS efforts in
T'Sou-ke Nation. Whether community support is through volunteering at the community garden, participating in a canning workshop, or going on a berry harvest hike, participants identified this as the number one necessity for continuing their work in the community.

5.7 Discussion

The results from the sharing circle heavily focused on the impact the changing environment has on restricting the community’s ability to harvest traditional foods and sustain traditional food systems. Bringing to light the concerns that participants have for the future of food in the community, enabled us to document these considerations in order to continue working with the community to generate potential solutions. The findings indicate that TK primarily informs the efforts of IFS in T'Sou-ke First Nation by supporting the themes of environmental concern, relationship with the land and sustainable practices, which motivate the participants to engage in IFS projects. A discussion of the fulfilling aspects of engaging in food projects showed that participants value TK as important and central to living life as a member of the T'Sou-ke First Nation community. Prioritizing educating youth and community members, sharing intergenerational knowledge, and eating good food were all identified as necessary to successful IFS projects. The desire to preserve the environment and the associated TK fueled many of the current community efforts participants are involved with; this sentiment directly aligns with the idea of community support that was indirectly associated with all of the discussions in the sharing circle.

The themes identified from the sharing circle significantly relate to each other as they all centre around respect for Mother Earth, as influenced by TK. This finding is
similar to the discussion of reciprocity amongst all living things found in Kimmerer’s book *Braiding Sweetgrass* (2017), wherein she discusses the Indigenous way of life as duties and responsibilities in relation to the living things that sustain human life. Kimmerer (2017) ascertains that humans are not in control of the natural world but are responsible for respecting all living things through harmonious living patterns that honour the value of the land. The relationship between environmental concern, sustainable practices and a relationship with the land is rooted in mindfulness for the environment and respect for the physical world around us. This understanding reflects a deep desire to conserve the natural world that aligns with the reciprocal nature of Indigenous ways of life (Coté, 2019). Further, the implementation of sustainable and traditional practices in T'Sou-ke First Nation parallels the notion of planning ahead to consider impacts on future generations through preservation efforts. As articulated in the literature and discussed by participants, the Indigenous understanding of the concept of sustainability is intrinsically tied to the sharing of TK and the teaching of cultural practices across generations (Coté, 2019). The importance of a strong relationship with the land informed all that the participants discussed. This idea is also reflected in the literature as previous works have identified the health of land to be almost synonymous with the health of Indigenous communities (Bartlett, 2003; Brightman, 1993; Coté, 2019; Kuhnlein, 2014).

When directly asked about what is needed to further the IFS efforts within T'Sou-ke First Nation, the participants responded unanimously that participation from the wider community is what sustains their efforts. IFS directly relates to the theme of TK because the goal of IFS efforts is to support the local and traditional food systems. An important
aspect of IFS, as noted by Coté (2019) is acknowledging the efforts being made by communities to fortify their local food systems and support traditional relationships with the land. Returning to traditional food practices through the sharing of TK and the utilization of elder wisdom in planning food projects supports community values and furthers IFS by empowering members to participate in tradition that often times aid in revitalizing cultural identity (Big-Canoe & Richmond, 2013). Similarly, the inability to participate in traditional practices, such as hunting and gathering, prevents a strong relationship between individuals and the natural world, jeopardizing Indigenous cultures (Coté, 2019). In the Canadian context, the colonial history of the country is often overlooked. This is problematic for Indigenous communities because, as identified during the sharing circle and previous research, the current globalization and consumerism patterns support an economy that preys on Mother Earth and disrupts reciprocal relationships between humans and the natural world (Coté, 2019; Kovach, 2009). Despite the abuse of our planet, Kovach (2009) identifies that Mother Earth continues to support the human race. The participants in this sharing circle also identified the astronomical impact human development has had on their ecological environment and also the tendency of people to ignore their destructive habits.

While mechanisms to investigate IFS vary due to the diverse needs across differing cultures and environments in communities, this project demonstrated that exploring community perspectives can help gain insight into community values and priorities with regards to sovereignty efforts. This project did not examine political impacts, treaty negotiations or conservation efforts as related to food sovereignty, all of which are critical components to ensuring effectiveness of IFS efforts. The
aforementioned loss of social, economic and political independence due to forced assimilation and colonization has had a tremendous impact on the modern Indigenous food system in Canada (Rudolph & McLachlan, 2013). Therefore, it is impossible to fully understand sovereignty efforts and effect sustained change without acknowledging all components of the complex issues faced by Indigenous Peoples in Canada. The next step of this research will be to continue working within the community and widening the scope of perspective by including community members not directly involved with food efforts to generate insights on how food sovereignty efforts impact the lives of the community as a whole.

5.8 Conclusions and Recommendations

The emerging themes from this project: TK, environmental concern, sustainable practices, relationship with the land and community support provide a framework for understanding IFS efforts within T’Sou-ke Nation. These results will help inform literature around Indigenous perceptions and perspectives of food sovereignty. Further, exploring the concept of sustainability through an Indigenous lens helps provide insight to how traditional values can be incorporated in daily living. Traditional practices are often sustainable in nature, as discussed previously; increasing accessibility to knowledge and confidence around traditions will hopefully encourage community members to initiate and partake in these practices more frequently. The establishment of sustained funding for the community garden, development of community-wide food goals, and the protection of food sources within traditional territories are all suggestions based on concerns expressed by participants. Additionally, further discussion of specific environmental concerns in the community would be beneficial in creating a strategic
plan moving forward. The next steps of this research project will be consultation with the wider community, including interviews to further explore the idea of IFS and gain a holistic understanding of the community’s vision for the future of food. The establishment of sustained funding and participation in the community garden and workshops would alleviate many of the barriers to IFS, as discussed by participants. Finally, pursuing conservation efforts to protect food sources in traditional territories and strategies to mitigate invasive species will help protect food sources that are central to the community’s cultural identity.

This research project works towards two of the Truth and Reconciliation Commission (TRC) Calls to Action, 18 and 19, which acknowledge the current state of Indigenous health as a result of government policies and work to establish measurable goals, in conjunction with Indigenous communities, to identify and close gaps in Indigenous health outcomes (TRC, 2015). The broader research program of A SHARED Future also supports Call to Action 65, the creation of a national research program with funding to advance comprehension of reconciliation (TRC, 2015). Reconciliation is an ongoing process that requires continuous efforts to understand the detrimental impacts of colonization on traditional food systems, access to food and ultimately, community health.
Chapter 6: Conclusions and Recommendations

6.1 Summary

As a non-Indigenous researcher pursuing community-engaged work this project was an eye-opening and fulfilling experience. Through extensive volunteering in the community garden, relationships of trust were established within the community that enabled collaboration with T’Sou-ke First Nation. Communication with key community members revealed opinions on potential participants, research methods and probing questions and analysis that eventually shaped this research project. Due to the small population of the community and the engaged nature of the work, recruitment of participants was primarily through word of mouth and 3 women involved with ongoing food projects participated in a sharing circle. Thematic analysis of the sharing circle, which heavily focused on IFS, revealed the interconnected relationship between IFS, TK, environmental concern, sustainable practices and a relationship with the land; which were all substantiated by the continuous theme of community support. This analysis revealed that community practices are sustainable in nature and suggested that increasing accessibility to knowledge and confidence around traditions will encourage community members to initiate and partake in these practices more frequently, fostering reciprocal relationships with the natural world. The process of developing this community-engaged process revealed the need for a reform of current academic structures that favour knowledge rooted in euro-centric frameworks and create barriers to pursuing methodologies that utilize alternative ways of knowing.

The utilization of CBPR and Indigenous methodologies enabled this project to be culturally relevant and meaningful to the community of T’Sou-ke First Nation. Despite
facing some barriers as a non-Indigenous researcher collaborating with an Indigenous community, this project was effective in broadening my research skills and providing room for TK to emerge. Through the sharing circle forum, participants expressed barriers to engaging with IFS efforts in the community from both an organizer and participant standpoint, which included: money, time and electronics. Community members expressed that the number one necessity to ensure success of their projects is participation from the wider community. The themes of TK, environmental concern, relationship with the land, spirituality and community support were identified as central to the IFS efforts in T'Sou-ke First Nation. These themes are interconnected as are traditional Indigenous food systems and the cyclic nature of their spirituality. Moving forward, research with this community will continue to utilize similar methodologies to ensure mutually beneficial research and should focus on establishing potential solutions to the barriers identified through this project. The importance of utilizing culturally relevant methodologies is very prevalent, especially when working with Indigenous communities, due to the history of over-researching and unethical practices (Tachine, Yellow Bird & Cabrera, 2016). However, researchers must be cautious not to assume that mastery of one approach in one community will be effective in all Indigenous communities; acknowledgement and inclusion of local cultural protocols and relationships is required (Tachine, Yellow Bird & Cabrera, 2016). Finally, recognition that peer-reviewed articles cannot be the only outcome of engaging in Indigenous research is critical in making results meaningful to communities and research accessible to people outside of academia (Tachine, Yellow Bird & Cabrera, 2016).
6.2 Strengths and Limitations

In general, descriptive research methodologies produce deep insight into the topic explored, resulting in significant detail (Braun & Clarke, 2013). Descriptive research conducted with qualitative methods is further able to provide valuable insight. Through the utilization of sharing circles, participants were able to express thoughts and concerns in open environment to the level of detail they deemed necessary to sufficiently explain their opinion (Tachine, Yellow Bird & Cabrera, 2016). Participants were also able to ask questions to each other; when exploring the concept of IFS as a group, one participant asked what activities would be considered part of IFS efforts by using examples of food practices common in the community. Another strength of using a sharing circle is the production of subsequent research questions due to new information shared by participants (Tachine, Yellow Bird & Cabrera, 2016). For example, climate change’s relationship with IFS was a huge topic throughout this project that was not previously identified by the research team as a key discussion point. Further, the culturally sensitive and relevant nature of sharing circles is key when conducting Indigenous research due to the history of colonial influence by ensuring participant priorities are valued throughout all aspects of the research project (Tachine, Yellow Bird & Cabrera, 2016). This work will contribute to the scant literature on T’Sou-ke Nation’s success as a solar intensive Indigenous community, and help inform community decisions in the future by providing insight into past successes. Additionally, this project will help inform literature around Indigenous perceptions and perspectives of food sovereignty, renewable energies and community nutrition. Further, Exploring the concept of sustainability through an Indigenous lens will help provide insight to how
traditional values can be incorporated in daily living. Traditional practices are often sustainable in nature, as discussed previously; increasing accessibility to knowledge and confidence around traditions will hopefully encourage community members to initiate and partake in these practices more frequently.

While there are many benefits and strengths to conducting a descriptive, qualitative research project, there are also limitations to acknowledge. There is some level of reactivity to consider when conducting a sharing circle with people from the same community, as participants may change behaviour to conform with desirable social norms (Braun & Clarke, 2013). Ideally, for research to be effective it should be community-initiated, however, due to the confines of the prescribed academic program length and the funding timeline, the idea for this project was partially researcher-driven, rather than solely community-driven (Kilian et al., 2019). Limitations of this project also include the small sample size from the community as well as the geographical distance of the research team from the community.

6.3 Recommendations

Through the discussion of both facilitators and barriers to pursuing food projects in the community, participants gave insight into what is necessary to support IFS efforts in T’Sou-ke First Nation. The following recommendations for the community are rooted in this project’s findings: (1) increase community participation in participants’ food projects as that is what sustains their efforts; (2) encourage community members to volunteer in the community garden to support the one full time staff member; (3) establish sustained funding for the community garden, so reliance on annual grant applications is not needed; (4) develop educational programs for community members
regarding climate change and sustainability; (5) formal development of community-wide food goals to help determine future steps; and (6), conservation of traditional food sources due to the destruction of many valuable berry patches. Additionally, continuing to share TK with the wider community of Sooke, through projects such as tea education in elementary schools, may help bring awareness to the destruction of the environment that many people overlook in their day-to-day lives.

Côté (2019) suggests that sharing TK with wider communities, including non-Indigenous populations, may help people incorporate Indigenous principles in lieu of colonial ones. Encouraging participation through intergenerational programming is another avenue that may be successful for the community as previous works have found this essential in strengthening traditional cultures (Bagelman, Deveraux & Hartley, 2016; Morrison, 2011). Finally, future research should focus on continuing to utilize decolonizing methodologies when engaging in CBPR within the Canadian Indigenous context (Kovach, 2010). Exploring what IFS means to communities will help determine what supports are necessary for successfully regaining control of a local food system. Community input is quintessential for the construction and dissemination of meaningful research projects.
References


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Figure 1: ‘A SHARED Future’ Conceptual and Methodological Model
APPENDIX B: RESEARCH ETHICS BOARD APPROVAL

RESEARCH ETHICS BOARDS
Certification of Ethical Acceptability of Research Involving Human Participants

APPROVAL PERIOD: August 12, 2019
EXPIRY DATE: August 11, 2020
REB: G
REB NUMBER: 19-08-001
TYPE OF REVIEW: Delegated
PRINCIPAL INVESTIGATOR: Tait Neufeld, Hannah (hannah@uoguelph.ca)
DEPARTMENT: Family Relations & Applied Nutrition
SPONSOR(S): N / A
TITLE OF PROJECT: From the ocean floor to the mountain top: Using the renewable energy of Mother Earth to grow food

The members of the University of Guelph Research Ethics Board have examined the protocol which describes the participation of the human participants in the above-named research project and considers the procedures, as described by the applicant, to conform to the University’s ethical standards and the Tri-Council Policy Statement, 2nd Edition.

The REB requires that researchers:
- Adhere to the protocol as last reviewed and approved by the REB.
- Receive approval from the REB for any modifications before they can be implemented.
- Report unexpected events or incidental findings to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants, and the continuation of the protocol.
- Are responsible for ascertaining and complying with all applicable legal and regulatory requirements with respect to consent and the protection of privacy of participants in the jurisdiction of the research project.

The Principal Investigator must:
- Ensure that the ethical guidelines and approvals of facilities or institutions involved in the research are obtained and filed with the REB prior to the initiation of any research protocols.
- Submit an Annual Renewal to the REB upon completion of the project. If the research is a multi-year project, a status report must be submitted annually prior to the expiry date. Failure to submit an annual status report will lead to your study being suspended and potentially terminated.

The approval for this protocol terminates on the EXPIRY DATE, or the term of your appointment or employment at the University of Guelph whichever comes first.

Signature: Date: August 12, 2019

Stephen P. Lewis
Chair, Research Ethics Board-General
APPENDIX C: RESEARCH ETHICS AMENDMENT

RESEARCH ETHICS BOARD
University Centre 437
Guelph, Ontario N1G 2W1
t: 519.824.4120 X56606
f: 519.821.5236

DATE: August 11, 2019
TO: Tait Neufeld, Hannah (hannahtn@uoguelph.ca)
FROM: Chair, Research Ethics Board
SUBJECT: REB# 19-08-001
TITLE: From the ocean floor to the mountain top: Using the renewable energy of Mother Earth to grow food

The University of Guelph General Research Ethics Board (REB-G) has reviewed the above research protocol.

DECISION: Please submit modifications.

How to resubmit your modified documents:

1. After each point in your feedback document, indicate how and/or where you have made the modification in response to the comment.
2. For every document which requires modifications, open the document, ensure there are no tracked or highlighted sections, then turn on Word’s track changes. Make your modifications. Save it with filename.appended
3. Save a copy of the document you just modified and accept all the changes. Now you have a clean copy of the modified document – save it with the same filename, clean
4. Submit the clean and tracked version of all documents along with your feedback document to reb@uoguelph.ca
5. The Principal Investigator (PI) must be made aware of, and have reviewed, the modifications being submitted. To ensure this, if modifications are submitted by another member of the research, the PI must be copied on the submission email.

Please quote your REB file number in the subject line of all correspondence.

All forms are available on the Office of Research website

If you have any questions, please do not hesitate to contact:

Research Ethics Office
X58024; reb@uoguelph.ca
APPENDIX D: INTERVIEW INFORMATION LETTER AND CONSENT FORM

DEPARTMENT OF FAMILY RELATIONS AND APPLIED NUTRITION
College of Social and Applied Human Sciences

UNIVERSITY OF GUELPH

Informed Consent Form: From the ocean floor to the mountain top:
Using the renewable energy of Mother Earth to grow food

Principal Investigator, Dr. Hannah Tait Neufeld, Department of Family Relations and Applied Nutrition,
University of Guelph, 519-824-4120 ext. 53796; hannahtn@uoguelph.ca

Co-Investigators, Chief Gordon Planes, T’Sou-ke First Nation, gordonplanes@icloud.com

You are being invited to take part in a research study. Please take the time to review this letter of
information and discuss any questions you might have prior to signing the consent form. The
purpose of this letter is to provide you with information about the study so that you can make
an informed decision about participating in this research. Please take your time to read the
letter carefully and ask questions about anything you are unsure about. You may take your time
to decide to participate in this study and may discuss it with your friends and family before
making your decision. You should not sign this form unless you fully understand what is written
and have all of your questions answered.

Who is conducting this research study?

This research study is being conducted by Brianna Poirier (MSc Candidate), under the
supervision of Dr. Hannah Tait Neufeld, in the department of Family Relations and Applied
Nutrition at the University of Guelph in Guelph, Ontario and in conjunction with Chief Gordon
Planes and T’Sou-ke First Nation. This research is funded by the Canadian Institute of Health
Research.

Who do I contact if I have concerns or need more information?

The principal investigator for this study is Dr. Hannah Tait Neufeld, in the Department of Family
Relations and Applied Nutrition at the University of Guelph. If you have any questions, please
feel free to contact Dr. Neufeld at any time during the study. Her phone number is (519) 824-
4210 ext. 53796.

Are there any conflicts of interest involved?
There are no identified conflicts of interest between participants and the research team. Chief Gordon Planes will serve as an advisor on the research project and will not be aware of who participates in the project. There are no foreseen opportunities of commercialization.

**What is the purpose of this study?**

The purpose of this study is to gain insight on current food sovereignty efforts in T'Sou-ke Nation as well as establish what support the community needs to maintain traditional food programming. You will directly influence the establishment of community values by providing your input through participation in a sharing circle. Additionally, we hope to gain insights from participants about the difficulties you may face incorporating traditional practices during your daily life, and what supports would make these practices more accessible. The results from this study will contribute to T'Sou-ke Nation's success and growth as a sustainable community.

**Why am I being asked to participate?**

You are being asked to participate in this study because you are a key member to the T'Sou-ke community. By participating in this study, you will have the opportunity to provide insight into community values and experiences of food sovereignty and contribute ideas for a community vision of food moving forward.

**What will happen in this study?**

**Sharing circle:** The research team will complete a sharing circle with 4-6 community members that will take approximately 1 hour. The questions will be designed with input from a T'Sou-ke Nation community advisory committee and will be tailored to be relevant to your role in the community. During the sharing circle, you will discuss food sovereignty movements within T'Sou-ke, your relationship with food, and how you would like to see the community grow in terms of traditional food practices. The style of sharing circle used will enable you to also ask questions and engage in a conversation rather than a direct interview. You will also be asked if you would like to review the sharing circle transcript or participate in the analysis of the study findings.

**How long will I take part in this research study?**

Your participation in this study will take approximately 1.5 hours in total. This time will be split between the sharing circle and the consent process. Additionally, a community feast may be hosted to share the findings of the research with the T'Sou-ke community, your participation is optional, but encouraged.

**What are my responsibilities?**
The research team will not reveal your identity in the final report but remember that potentially identifying information that is shared may not be removed. Therefore, please be conscious of what you would like to share with the research team.

**What are the possible risks and discomforts of taking part in this study?**

All research carried out by the University of Guelph must describe any risks or discomforts associated with participating in a study. The only potentially difficult situations this study may contribute to are taking up your time to answer questions, as well as bringing up topics that perhaps you may not want to talk about. During the sharing circle, you do not have to answer any questions that you do not want to. If you would like to stop the sharing circle, or not answer a question that is fine.

**What are the benefits of participating in this study?**

Results generated from this study will help inform community decisions about food sovereignty efforts and highlight the ideas and values that already exist within the T’Sou-ke Nation. Results will also determine what supports are required for sustainable food infrastructure within the community. Finally, results will inform community nutrition services and resources and hopefully promote a greater diversity of sustainable and traditional food knowledge and use amongst T’Sou-ke community members.

**What happens if I decide not to take part in this research study?**

Participation in this study is completely voluntary. You may refuse to participate in this study at any time. You may also refuse to answer any questions during the study or withdraw from participating in the research activities at any time, with no consequences. If you would like to withdraw from the study, you may do so prior to October 31, 2019. While you are able to withdraw from the study at any time, you will not be able to withdraw your contribution to the sharing circle because the recording is of a group conversation. If you choose to withdraw, information that you share during the sharing circle will not be used in any published reports resulting from the study but the data will remain in the transcript of the sharing circle. Not participating in this program will not affect your standing in the community. Chief Gordon will not be present during the sharing circle and will have no knowledge of which community members choose to participate in the study.

**Who will know what I said or did in the study?**

The research team will not release your identity; however, please note that you will be voicing your opinions in public to the other participants in the sharing circles. We urge all participants to keep this in mind when telling stories in response to questions. Further, we urge you and all participants to respect each other’s privacy by not discussion who was present or what was said, but the research team cannot control this. All identifiable information will be removed from the transcript but family dynamics or other less obvious things may be identifiable by
persons close to you. Please keep this in mind when participating in the sharing circle and try to refrain from mentioning other identifying information you do not want to be included in the study outcomes.

The sharing circle will be recorded and transcribed by the research team. Upon completion, the T'Sou-ke community will be receiving copies of the recorded sharing circle and of the transcription, in alignment with ownership principles of culturally relevant information. T'Sou-ke First Nation will be the sole possessor of the information gathered during this research project after the research team has deleted their copies of raw data in December 2020.

**How will you protect the information I provide?**

Immediately after the sharing circle, audio files will be downloaded to an encrypted laptop. Once data has been received it will be deleted off of the audio recorder. Data will be stored on an encrypted laptop, secured in a locked office. This computer will be accessible by the PI and graduate student only. Data will be kept until December 2020, at which point it will be destroyed.

**What will you use the information you collect for?**

The data collected in this study will help build research capacity for T'Sou-ke Nation. Findings will showcase T'Sou-ke Nation’s solar success and will help inform community decisions about food sovereignty efforts, highlighting the ideas and values that already exist within the community. Findings will be used to write academic articles to add to the sparse literature on the topic of Indigenous nutrition and renewable energies. Further, it is anticipated that findings will be useful to other Indigenous communities, to inform culturally sensitive and effective resources. Themes and quotations that arise from the sharing circle will be used when sharing the results.

**Will I receive anything for being in this research study?**

You will receive a $50 gift card for participating in this research study.

**Will the study be published or otherwise disseminated?**

The results of the study will be published in Brianna Poirier’s Master’s thesis as well as shared with T’Sou-ke First Nation community members. Participants will never be directly identified in the dissemination of findings, however please be aware that in your answers there may be identifying factors outside of the research team’s control.

**Legally required disclosure**

Information you provide will only be available to the research team, to the extent allowed by law. If the research team finds information required by law to disclose, we cannot guarantee
absolute confidentiality of your identity. However, the topics to be discussed in the sharing circle do not contain sensitive subject matter; therefore, the likelihood of these circumstances is very low.

**What are my rights as a research participant?**
You do not waive any legal rights by agreeing to take part in this study. This project has been reviewed by the Research Ethics Board for compliance with federal guidelines for research involving human participants. If you have questions regarding your rights and welfare as a research participant in this study, please contact: Manager, Research Ethics; University of Guelph; reb@uoguelph.ca; (519) 824-4120 (ext. 56606).

I have read the Information Letter and have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

Participant’s Name (please print): ____________________________________________

Participant’s Signature: ____________________________________________________

Date: ____________________________

If you would like to receive a copy of the sharing circle transcript, the analysis or the final report, please provide the best method of contact below:

Email: _________________________________________________________________

Phone Number: __________________________________________________________

Would you like to be involved/consulted during the data analysis period? (Please circle):
YES / NO
APPENDIX E: RECRUITMENT LETTER

DEPARTMENT OF FAMILY RELATIONS AND APPLIED NUTRITION
College of Social and Applied Human Sciences

UNIVERSITY OF GUELPH

Invitation Letter: From the ocean floor to the mountain top: Using the renewable energy of Mother Earth to grow food

Principal Investigator, Dr. Hannah Tait Neufeld, Department of Family Relations and Applied Nutrition, University of Guelph, 519-824-4120 ext. 53796; hannahtn@uoguelph.ca
Co-Investigators, Chief Gordon Planes, T’Sou-ke First Nation, gordonplanes@icloud.com

Dear Community Member,

We are conducting a sharing circle as part of a research study aimed at gathering T’Sou-ke Nation community perspectives on food sovereignty in order to create a shared vision for the future of food in T’Sou-ke. As a key knowledge holder in the T’Sou-ke community, you are in an ideal position to give us valuable first-hand information from your perspective.

The sharing circle will consist of 4-8 community members and will take about 1 hour. This sharing circle will be informal and will provide an environment for you to share opinions and perspectives as well as ask questions, if you desire. Your responses to the discussions and the stories that you share during this time will be kept confidential. Pseudonyms will be attributed to all participants to help ensure that personal identifiers are not revealed during the analysis and write up of findings. The research team will be creating a ‘collective story’ with all of the participants’ response, in conjunction with T’Sou-ke Nation members, to ensure correct cultural interpretations.

There will be a $50 compensation for participating in this study. Your participation will be a valuable addition to the T’Sou-ke community as well as our research. Findings from this project could lead to a greater public understanding of Indigenous Food Sovereignty as well as potentially aid other Indigenous communities across Canada.

If you are willing to participate or have any questions about the study please do contact us. My phone number is (613) 484-8195 and Hannah Tait Neufeld can be reached at (519)824-4120 ext. 53796.

Thank you very much for taking the time to read over this letter and consider participating,

Yours sincerely,

Brianna Poirier
MSc Candidate | Anticipated 2019
Department of Family Relations and Applied Nutrition
College of Social and Applied Human Science
University of Guelph
APPENDIX F: SHARING CIRCLE PROBING QUESTIONS

Sharing Circle Probing Questions

1. Start with introductions & short description of everyone’s role in the community.
2. What is your favourite memory of food?
3. What are some of the traditional food practices of T’Sou-ke Nation?
4. What is most rewarding or fulfilling about your work with food in the community?
5. What is the most frustrating part about your work with food? Where would you like to see improvements?
6. What role can the wider community play in furthering the success of food sovereignty efforts?
7. T’Sou-ke has been extremely successful in implementing solar power throughout its community; what has been the biggest impact of the shift to solar?
8. Considering food and solar as products of a relationship with the land, how important is that relationship to you?
9. What concerns do you have for the health of the environment?
10. In an ideal world what would you envision for the future of food and energy sovereignty in T’Sou-ke Nation?
APPENDIX G: TCPS 2: CORE CERTIFICATE

Certificate of Completion

This document certifies that

Brianna Poirier

has completed the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Course on Research Ethics (TCPS 2: CORE)

Date of Issue: 26 September, 2017