

TRADITIONAL KNOWLEDGE FOR HEALTH

by

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Abstract

The objective of this research is strengthening Nl̓eʔkepmx Traditional Food Relationships (NTFR) for community health, education and self-sufficiency and ultimately self-determination of Siska community members. Upholding the interconnected Nl̓eʔkepmx worldview, the research became known as “Traditional Knowledge for Health”. Research took place at Siska within the Nl̓eʔkepmx Nation Territory. Siska Traditions Society led this research in partnership with University of British Columbia- Faculty of Land and Food Systems. This partnership made explicit respectful research processes in the Siska-UBC Traditional Knowledge Protocol (TKP), an ethical research agreement. The principles of the agreement were enacted through community-directed Indigenous action research processes.

This strength-based approach led to achieving self-determined control and application of Nl̓eʔkepmx knowledge systems through two main research activities:

1) The Siska Traditions Ethical Picking Practices- Harvest Training and Certification Program (STEPP) set a precedent for self-determined Indigenous education and policy creation for Nl̓eʔkepmx traditional food relationships (NTFR). The STEPP training resulted in hands-on culturally relevant traditional food workshops. Community members unanimously agreed the workshops are an effective way to pass on NTFR knowledge, practices and values. Following the training, participants increased their traditional food use and time spent on the land base. STEPP participants demonstrated their role as NTFR stewards and managers. The Siska community policy creation process provided clear direction for jurisdiction and management of NTFR. Indigenous title and jurisdiction will guide NTFR management.

2) The Youth-Elder Traditional Food Interviews reinstated the honourable roles of Nl̓eʔkepmx Elders as educators and youth as self-determined leaders of tomorrow. The Youth-Elder Interviews arose from Elders’ recommendation that technology may be part of the solution to getting youth to engage actively and passionately with the traditional teachings about food and health. The interviews resulted in the youth-directed documentary, “Traditional Foods of the Nl̓eʔkepmx Territory”. In this documentary, Elders’ share stories about Nl̓eʔkepmx traditional food relationships’ interconnectedness with: spiritual, cultural, educational practices; overall community health and strength; as well as impacts of colonization and ecological degradation.

Overall this research has led to sustained community actions to strength Nl̓eʔkepmx traditional food relationships and ultimately contributes to Nl̓eʔkepmx Peoples’ self-determination.

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Dedication

To all the Elders, keepers of traditional knowledge,

&

To all the younger generations,

For keeping sacred teachings living, by learning and passing them on

Chapter 1: Introduction

The purpose of this thesis is to demonstrate how Siska Traditions Society's community-action research is strengthening Nl̓eʔkepmx Traditional Food Relationships (NTFR). This NTFR research is promoting culture, health, education, self-sufficiency and ultimately self-determination of Siska community members. Upholding the interconnected Nl̓eʔkepmx worldview the research became known as "Traditional Knowledge for Health".

Siska is one of sixteen bands within the Nl̓eʔkepmx First Nation and is located 10 kilometers south of ƛq'əmcin (Lytton), within the Interior Salish cultural area, and plateau region, in what is presently known as British Columbia. The Siska Traditions Society (STS) is a non-profit organization striving to transform their community through self-determination. Recognizing that self-determination involves economic independence, the STS promotes community economic diversity in accordance with health, honour, and cultural and spiritual values.

Traditional Knowledge for Health research is contextualized in this chapter. I describe how Siska Traditions Society (STS) was established. STS was born out of Siska community members' desire to assert their responsibilities for protecting the land. Nl̓eʔkepmx peoples' ability to protect and promote ecological health of the land is necessary to continue Nl̓eʔkepmx traditional food relationships for the next generation. In crisis Siska community members asserted their responsibilities by setting up a blockade to stop logging in their sacred watershed, ƛezumetkʷu. This action was pivotal for the Siska community. Siska community members renewed a collective vision based on responsibilities to the land and each other. That collective vision remains strong in peoples' memories, and ten years later continues to be a source of strategies towards self-determination. It was a time when people were practicing and relearning Nl̓eʔkepmx ways.

1.1 Protecting Nłeʔkepmx Traditional Food Relationships

In 1997, the Siska Indian band declared X̱ezumetkʷu, the sacred watershed of Siska Valley, the Siska Band Heritage Park:

Be it known to all people that we of the Siska Band of the Nłeʔkepmx Nation have lived in the X̱ezumetkʷu (Siska Valley) and at Kupchynalth (I.R. #1) [Indian Reservation] with our ancestors' spirits since time immemorial. . . . Recognizing these inalienable rights and responsibilities on the 21st day of June, 1997, we the Siska people do solemnly and justly reaffirm. . . the entire X̱ezumetkʷu (Siska Valley) watershed and Kupchynalth (I.R. #1) as shown on the map shall henceforth be known as the Siska Band Heritage Park. It is in our Siska Band Heritage Park that the Siska people will, as did our ancestors and so will our future sons and daughters:

Practice our traditional sacred and spiritual ways and utilize our traditional native medicine.

Exercise our traditional rights of hunting, fishing, trapping, and gathering the gifts of the land.

Share our Siska Band Heritage Park with all peoples who are of a like mind and show respect for our ancient traditions, rights, and values.

Let it also be known that within our Siska Band Heritage Park there shall be no road-building, no commercial logging, mining, mining exploration, dam building or any other activities harmful to X̱ezumtekʷu (Siska Watershed) Valley. (Appendix 1: Siska Band Heritage Park Declaration, 1997))

The importance of X̱ezumtekʷu to the Siska people of the Nłeʔkepmx Nation is incalculable. When the JS Jones logging company and the BC Supreme Court ignored the above declaration, two years later, the Siska people acted on their responsibility by setting up a blockade to prevent logging trucks from entering the watershed. During the blockade, Nłeʔkepmx people exercised their responsibilities and stewardship practices for the land, practiced sweat lodges and ceremonies, and listened to Elders tell stories of how they used the land. The Elders and their wisdom gave strength to the Siska people to continue their fight (T. Sampson, 2002).

This incident exemplified the importance of the watershed to the Nl̓eʔkepmx peoples' traditional food relationships. Siska's strategy to address this issue is similar to strategies used by Indigenous peoples' globally, concerning two issues:

- 1) Social justice with respect to the recognition of Indigenous peoples' rights and title. The Canadian government's continued refusal to support the United Nations' Declaration for Indigenous Peoples highlights this issue (United Nations, 2007); and
- 2) Worldwide ecological degradation as documented in the most recent United Nations' report on biodiversity, which states that globally we are nearing ecocatastrophe (McGregor, 2004).

Indigenous peoples demonstrating such creative resistance addressing these issues head-on, also asserts a self-determined vision for the future. This vision includes maintaining their stewardship responsibility to the land, not only for Indigenous Peoples' own health and well-being and their children's, but also for all people, all living beings, and the Earth.

For the Siska Indian Band, this resistance brought them to seek permanent protection of the watershed in the BC Supreme Court in 1999. The court sided with the logging company; logging went ahead in the heritage park. Even though the logging company, JS Jones, was going out of business, logging the watershed would keep the mill running for one more month. The judge deemed the economic benefit to this logging company—to keep the failing operation in business for one more month—to be of greater value to society than the preservation of Siska Indian Band's old growth ecosystem with their sacred, cultural, historic and economic values of the Siska people.

The unity born out of declaring X̱ezumetḵu Watershed the Siska Band Heritage Park and the action of mounting the blockade led to the creation of the Siska Traditions Society (STS). This society was established in 2002, and has a six-member board of directors, including youth and Elders, to govern the independent community organization. The Society is using the momentum that began with the Watershed declaration to develop socio-economic opportunities, promote traditional values, and protect Siska Aboriginal title and rights. The community realized that to protect their watershed should future logging be attempted, they would need to show that the watershed was still being used today as it was in the past. The community decided to

enter the Indigenous traditional food products sector to help develop the community economically, to strengthen members' connections to their land, and to gain a voice in policy decisions affecting their important traditional food relationships. Working in partnership with STS, I was able to work in an applied research setting to further STS's policy objectives.

The STS recognizes the community's relationship with traditional foods as integral to its self-determining strategies. The land is a sacred refuge that supports the harvesting and traditional use of berries, medicines, teas and mushrooms, as well as hunting and fishing. Therefore, through its many programs and its research, the STS is a source promoting Siska people's health, honour, and cultural and spiritual values. STS's partnership role in this research promotes the value and importance of traditional foods and cultural practices within the Ntē?kepmx Nation.

1.2 Research Purpose

This thesis focuses on one of the Siska Traditions Society's strategies, the Traditional Knowledge for Health research project, a partnership between the STS and the University of British Columbia Faculty of Land and Food Systems (UBC). My role as the UBC research assistant in this partnership was to connect between UBC and STS and facilitate an exchange of research approaches to fulfill the research purpose. The overarching, STS-identified research goal for the Traditional Knowledge for Health project is:

Education and health creation through contemporary practice of Ntɛʔkepmx knowledge systems pertaining to ecological, spiritual and cultural values, including the local research and control of community health through food.

The STS identified this goal because of the importance of maintaining these sacred relationships to food, this research is focused on Ntɛʔkepmx plant foods in particular. To realize this general research goal, the partnership defined three specific research objectives:

1. **Increase Siska community health, culture and capacity by generating culturally-relevant and ethical knowledge and practices for Ntɛʔkepmx Traditional Food Relationships (NTFR) management;**
2. **Engage community members of all ages in the process of cyclical generation of Ntɛʔkepmx (Indigenous) knowledge systems based on traditional values and contemporary methods (technologies); and**
3. **Promote self-determined control and application of Ntɛʔkepmx knowledge systems to increase economic diversity in the Siska community.**

The partnership researched which culturally relevant Ntɛʔkepmx-centred actions would best achieve these three objectives. This thesis will assess the relevance of the following three main research actions and their success in achieving the original research goal and objectives:

Traditional Knowledge Protocol/Respectful Research Relationship

Harvest Training and Certification Program

The Youth-Elder Interviews

1.3 Thesis Overview

This introductory chapter has so far described the research significance in relation to the Siska community's goal of strengthening Nl̓eʔkepmx traditional food relationships. It also identifies the overarching research goal, specific research objectives, and research actions. In the remainder of this chapter, I will situate the research within an Nl̓eʔkepmx worldview, explain key concepts of each research objective and relate this research to the current literature. I resist the euro-centric approach of universal definitions because they do not recognize the related ecologies, social and personal contexts and beliefs that inform each concept (Battiste & Henderson, 2000, p. 36).

Chapter 2 describes the research relationship between the STS and UBC. I will explain the research methodology, including the co-creation of the Traditional Knowledge Protocol and enactment of various community processes designed to create a respectful research environment.

Chapter 3 focuses on the creation of the Nl̓eʔkepmx traditional food Harvest Training and Certification Program (HCTP). My explanation of this program will include the: planning and community-implementation processes, participant reflections, and program outcomes with respect to the Traditional Knowledge for Health research objectives.

Chapter 4 focuses on the Youth-Elder interviews about Nl̓eʔkepmx traditional foods and health. It also describes the processes of youth engaging as researchers, youth working with Elders, and Elders sharing traditional knowledge with youth. The chapter concludes with a discussion of how the interviews relate to the Traditional Knowledge for Health research objectives.

Chapter 5 states the research outcomes at Siska related to the goals and objectives of this research and to other research that focuses on Indigenous traditional food relationships. I then discuss the Siska research outcomes in relation to the continued work and current policy of the STS, from which I make conclusions and recommendations.

1.4 Situating The Research

For Siska community members to achieve health, education and self-sufficiency within the Nl̓eʔkepmx peoples' current context, considering the continuing colonization, the approach must be culturally relevant. The approach must be centered within an Nl̓eʔkepmx worldview, which recognizes Nl̓eʔkepmx sovereignty and self-determination. Considering the holistic Nl̓eʔkepmx worldview Keith James (2001) states, “ It is my belief that all of the components of Indian communities fit together such that you cannot address any one without considering, or acting on, the others. The places where these issues meet are also where the greatest opportunities occur...” In this thesis Nl̓eʔkepmx traditional food relationships form the culturally relevant approach to improvements in health, education, and self-sufficiency.

This introduction situates Nl̓eʔkepmx traditional food relationships within an Nl̓eʔkepmx worldview. The next sections connect the key components from the research objectives to Siska community members' historical and present-day experience related to traditional foods and to the current literature. The following sections introduce the fundamental concepts discussed in greater detail in Chapter 2, 3, 4.

Nl̓eʔkepmx Worldview

“We have to tell the story of how we used the mountain and how our ancestors used it, and to teach our children to use it in the same way so that they will grow up to be strong people.”

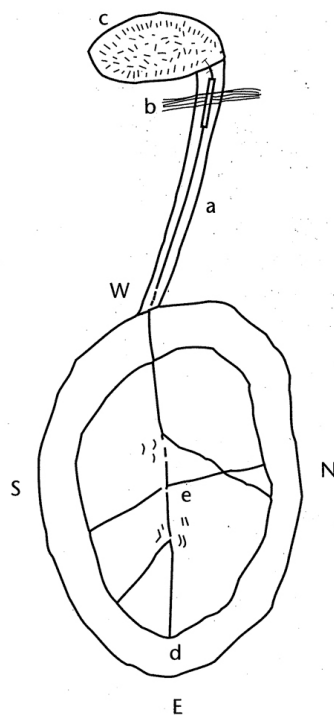
- Late Elder Mildred Michell, translated by Late Doreen McIntyre (CBC interview, 1999)

The above quotation reflects many Nl̓eʔkepmx perspectives, values, beliefs and knowledge related to life, their territory and the world. It reflects many aspects of the Nl̓eʔkepmx worldview (Steinhauer, 2002) —that are important to this research. These words convey to me four fundamental ideas: 1) the Nl̓eʔkepmx story (worldview), including all inherent knowledge and values, is so important that it must be passed on

for future generations to embrace; 2) intergenerational learning is important for children; 3) the people and the mountain are connected; 4) passing on this worldview is necessary to the strength of the nation. These four fundamental ideas conveyed are expanded on by Henderson and relates late Elder Mildred Michell's concept of strength to the spiritual realm. According to Henderson (2000), "The worldview is a unified vision rather than an individual idea. Aboriginal worldviews assume that all forms of life are interconnected, that the survival of each life form is dependent on the survival of all others. Aboriginal worldviews also note that the force to the life forms is derived from an unseen but knowable spiritual realm."

For the Nl̓eʔkepmx, their worldview operates throughout their land, a geographical area, which is fundamental to their sense of themselves and to the spiritual realms. The following figure 1. is a Nl̓eʔkepmx sketch of the world that clearly links the physical and spiritual realms.

Figure 1. Nl̓eʔkepmx Sketch Of The World



- a) Trail leading from the earth to the land of the ghosts, with tracks of the souls
- b) River and log on which the souls cross
- c) Land of the ghosts and dancing souls
- d) Lake surrounding the earth
- e) Earth, with rivers and villages

Adapted from drawing by James Teit (1997). *Part IV Thompson Indians of British Columbia*. Used with Permission from the Nicola Valley Museum Archives Association

Historically, the political centre of Nl̓eʔkepmx Territory (Teit, 1900), ʔqʷəmcin (Lytton), at the confluence of the Qʷuʔúy (Fraser River) and Qʷuʔmʹix (Thompson River), is where creation began in Nl̓eʔkepmx cosmology. The Nl̓eʔkepmx sptákʷeł (creation stories) tell of a period when the land was different than it is now: there were no trees or plants, and the animals who inhabited the earth looked vaguely human. Many of these animals were gifted and went about transforming the landscape. As humans eventually appeared, the transformers continued making the world easier for humans to inhabit. Perhaps the most notable transformers are Old Coyote and the three bears called Qoaʔqlqal (Hanna & Henry, 1996; Teit, 1900). Many of their transformations, landmarks of Nl̓eʔkepmx history and territory since time immemorial, are still regarded today throughout the Nl̓eʔkepmx territory as visible teachings of the sptákʷeł and their associated ethics (Johnson, 2001). They are talked about in the form of stories told in Nl̓eʔkepmxcin, the Nl̓eʔkepmx Nation language belonging to the Interior-Salish language group (Hanna & Henry, 1996). The translation of Nl̓eʔkepmx to English is “People of the Canyon” (Hanna & Henry, 1996).

Nl̓eʔkepmx Head Chief Sexpínłmx (1812-1887) defines the ‘posts’ or boundaries of Nl̓eʔkepmx country. The Chief’s explanation was recorded by James Teit and published by Darwin Hanna and Mamie Henry (Hanna & Henry, 1996):

One post up the Fraser at [Fountain]- one down the Fraser at Spuzzum- One up the Thompson River at Ashcroft- one up the Nicola River at Qilchena- one down the Similkameen River at Tcutcuwixa [near Hedley]. All the country between these posts is my country and the lands of my people. At Lytton is my centre-post. It is the middle of my house, and I sit there. All the country to the headwaters of all the streams running into the valleys of these posts is also my territory in which my children gather food. We extend to meet the boundaries of the hunting territories of other tribes. All around over this country I have spoken of, I have jurisdiction. I know no white man’s boundaries or posts. If the whites have put up posts and divided up my country, I do not recognize them. They have not consulted me. They have broken my house without my consent. All Indian tribes have the same as posts and recognized boundaries, and the chiefs know them since long before the first whites came to the country.

Figure 2. Map Of Nle?kepmx Territory

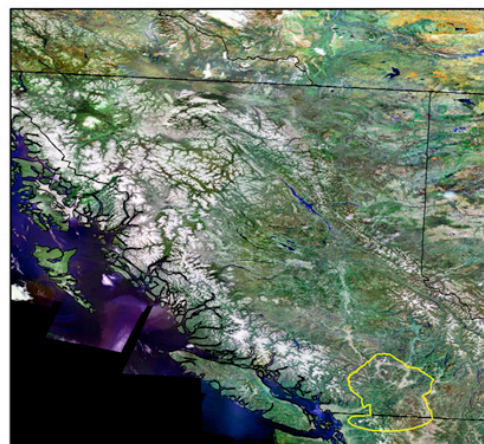


Legend

— Nle?kepmx First Nation Territory



Esh-kn-am
Cultural
Resources
Management
Services



Nl̓eʔkepmx territory, being geographically and biologically diverse, has allowed Nl̓eʔkepmxs to create a rich economy that continues to include fishing, hunting, gathering and trading (Hanna & Henry, 1996). Situated just to the interior of the Coastal Nations, the Nl̓eʔkepmx territories also contain many important trade routes linking the interior and coastal peoples (M'Gonigle & Wickwire, 1988). In the past these trails were travelled by foot; and then, by the mid 1700s, by horse. Today most people use their vehicles to continue their trade relationships with neighboring nations.

The biological diversity within the territory includes biogeoclimatic zones ranging from coastal western hemlock to ponderosa pine-blue bunch grass desert ecosystems (Turner, Thompson, Thompson, & York, 1990). Nl̓eʔkepmxs expertise and knowledge of this diversity has translated into use of at least 300 different fungi, plants, and trees for food, medicines, tools, and building materials (Turner, 2005). To ensure the abundance of these plants, the Nl̓eʔkepmxs developed complex stewardship and management systems (Deur & Turner, 2005). Plants were essential to the development of fishing technologies (dip nets, gillnets, drying racks, processing) adapted to the diverse water conditions within the various rivers, lakes and creeks (Turner, Thompson, Thompson, & York, 1990).

Siska, a renowned Nl̓eʔkepmx fishing area, located near the southern border of the Nkuʔkʷuma (Upper Nl̓eʔkepmx) territory. X̱ezumetkʷu (Siska Creek Watershed), Siska's water source, enters the Qʷuʔúy (Fraser River) from east of the Siska. X̱ezumetkʷu Creek, is one of the coldest creeks along the Qʷuʔúy, making it an important resting place for salmon to cool down and clean their gills before continuing upstream in their migration (Siska Traditions Society, 2009). Combined with the Qʷuʔúy geography at Siska, where the river narrows and speeds up, and strong south winds blow, make this an excellent area for fishing and producing Scʷuwen (wind-dried salmon). Scʷuwen is one of Siska's trademark foods and important to the local economy. Trading their wind-dried salmon over the same trade routes used for thousands of years, salmon continues to be Siska people's main staple food.

Approximately 122 community members live on two of Siska Band's eight reserves, with approximately 200 community members living off reserve. The Siska community reflects the statistic that throughout Canada, Aboriginal groups are the fastest growing and youngest overall population. Siska youth under the age of nineteen make up 37%

of the total population. Almost two thirds of Siska community members live off reserve. Approximately half of Siska community members live in urban centres similar to the statistic for Aboriginal people across Canada with 53% living in urban areas (Statistics Canada, 2002). Siska band membership, as defined by the Canadian government using the Status Indian designation, is approximately 298 band members. Eighty band members live on reserve, 100 members live off reserve in the nearby Nl̓eʔkepmx city of Merritt; another 100 members live elsewhere. However, people at Siska prefer the term “community member” to “band member,” as this is a self-designated description rather than a Canadian government-imposed identity of a person as a band member and status Indian. Therefore, throughout this research project I have used the term “Siska community members.”

The total land area of all Siska reserves combined is 319.6 hectares. The term “reserve land” is a Canadian colonial designation. The actual Siska resource area used within the Nl̓eʔkepmx territory is much greater. By using Nl̓eʔkepmx terms for understanding their communities and acknowledging the Nl̓eʔkepmx’s sacred history, I am ensuring that my research has the proper parameters needed to conduct a respectful and relevant study.

Nl̓eʔkepmx Sovereignty & Self-determination

The Siska people and the Nl̓eʔkepmxs have always recognized their sovereignty and title and rights to the land, as Head Chief Sexpínłmx stated in his declaration of Nl̓eʔkepmx Territory (see page 9) (Hanna & Henry, 1996). This perspective has often conflicted with that of the Canadian government. It was in this context that the Traditional Knowledge for Health research project took place.

Elder Arthur Sam of Merritt provides an international relations example of how Nl̓eʔkepmx people practiced their sovereignty pre-contact:

“To the Nl̓haʔ7kapmx people, sovereign authority was commonly recognized as the power that determined ownership, entitlement, inherent rights, laws, autonomous government and self-determination. The Nl̓haʔ7kapmx people made treaties with the Secwepemc and Stlʔatlʔimx peoples because they had the sovereign power to do so. There are specific sites that indicate the boundary lines between these nations. When a meeting was to take place, a messenger was sent to invite the people where we met to trade and to strengthen the relationship.” (Blankinship, 2003) cited in (Blankinship, 2006)

In recounting oral history, Chief Fred Sampson describes how Nl̓eʔkepmx people chose to maintain their own sovereignty with the coming of white people:

“At the same time, when the white people or contact came, it was the interior tribes of BC that didn’t want to get into a treaty relationship with the new comers. They basically swore an alliance to each other at Spences’ Bridge in 1910 and in the Constitutional Express that came years later. Before that there was a huge gathering at Spences Bridge where the five nations came together and basically declared their independence from staying under any kind of sovereignty or jurisdiction of the white people, the new comers.” (Blankinship, 2006).

Chief Sampson links the historical Indigenous alliances for sovereignty and self-determination to the modern political situation. Interior Alliance of First Nations was created in the late 1800’s to respond to First Nations concerns about the impacts of encroaching settlement and colonial regimes. The Constitutional Express of 1979-81 originated in the Secwepemc Nation, one of the Interior Alliance Nations and led to the enshrining of Aboriginal and treaty rights in section 35 of the Canadian Constitution. The Interior Alliance maintains strong ties today in resistance to the Recognition and Reconciliation legislation, one of the current colonial efforts of the British Columbian government (Government of British Columbia, 2009).

Ardith Walkem of Spences Bridge, Nl̓eʔkepmx First Nation, explains contemporary concepts of Indigenous people’s sovereignty and right to self-determination:

“Indigenous peoples have the right to self-determination. This right is not granted or given from any other power or government, but flows from the fact that we, as Indigenous peoples, exist. Self-determination is not only a right, it is a responsibility to live as a people: to promote and enhance our unique heritage, and to protect the lands upon which we came into being.” (Walkem, 2000).

Walkem’s view is echoed by Linda Tuhiwai Smith’s (1999) assertion that the international mobilization of Indigenous peoples in Canada and the United States needs to be seen within the context of Indigenous struggles for self-determination, which is occurring at the grassroots level. These day-to-day struggles for self-determination are the background in which the Traditional Knowledge for Health research project takes place.

Today, though the Nl̓eʔkepmx people's struggles for self-determination may take various forms, the people's responsibilities to land remain the same. In 1858, the Nl̓eʔkepmx world changed drastically when 20,000 miners and prospectors followed the gold rush into Nl̓eʔkepmx Territory. The miners' stealing, raiding, mistreating of women, killing of men, and burning of villages created an uprising among the Nl̓eʔkepmx people (Laforet & York, 1998). Chief Sexpín̓mx in 1858 had made peace with the St'at'imx and the then Governor Douglas. This ended a potential war, on the understanding that Nl̓eʔkepmx peoples' concerns over the land would be considered. Later that year, however, Governor Douglas unilaterally proclaimed British Columbia to be a British Colony. The following year the Canadian-American border was defined, separating a large portion of Nl̓eʔkepmx territory and important hunting grounds.

In 1875, the Federal Government created the Canadian Duty of Disallowance, striking down the BC Land Act. This was based on the 1763 Royal Proclamation, which recognizes Indigenous Sovereignty. The province had failed to make legal treaties obtain Indigenous peoples' land. In response, BC threatened to withdraw from Canada. Succumbing to these pressures in 1876, the federal government created the Canadian Indian Act, leaving the Indigenous peoples' land issues in British Columbia unresolved, and marking the beginnings of the current reserve system and residential school system (Union of British Columbia Indian Chiefs, 2005).

Excluded from discussions of confederation, the Nl̓eʔkepmx Chiefs met at Lytton in 1879 to resist the mounting colonization effort. Concerned with protecting their sovereignty and self-determination, Nl̓eʔkepmxs reorganized their political system to deal with the colonial governments and asked that it be recognized within the Indian Act; it wasn't (Laforet & York, 1998; Union of British Columbia Indian Chiefs, 2005). The international meetings of Chiefs grew in frequency and size. This led to the Alliance of the Interior Nations and the historical Spences Bridge Chiefs' meeting of 1910. Chiefs traveled across the province and from as far as Ottawa to have their concerns heard (Laforet & York, 1998). In 1924, with the threat of First Nations taking their land claims cases to court and in fear of recognition for Aboriginal Title, the British Columbia government made it illegal for First Nations to discuss land claims or hire a lawyer to represent them (Tennant, 1990, pp. 111-112).

Another First Nations institution effective in resistance to the Canadian and British Columbian government's colonial efforts was also targeted. It was the potlatch ban from 1884-1951 (Tennant, 1990, p. 51). Potlatches are a First Nations institution during which governance, justice, land transfers, and social and spiritual affairs are carried out (Trosper, 1998). In 1914-18 this law was expanded to include any First Nations gathering where money or goods was exchanged, effectively making almost all gatherings illegal (Tennant, 1990, p. 112).

First Nations were awarded the right to vote in Canada's government electoral system in 1960 (Union of British Columbia Indian Chiefs, 2005). The formation of the Union of BC Indian Chiefs in 1969, re-energized the First Nation land claims movement (Tennant, 1990). However, recognition of Nl̓eʔkepmx sovereignty, the right to self-government and jurisdiction over their traditional territories, has yet to be acknowledged by the Canadian or British Columbian governments. With the increased pressure by First Nations in BC to resolve land claims, the BC Treaty Commission (BCTC) formed in 1993. The purpose of the BCTC was to bring economic certainty to resources and crown land in BC. The BCTC process is based on the extinguishment of Aboriginal title replaced by fee simple title (Mills, 2005). The Nisga'a signed the first post-*Calder* treaty with the BC Government in 1996, and were granted only 8 per cent of their Nisga'a Traditional Territory (Mills, 2005). The Nl̓eʔkepmx Nation refuses to recognize the BCTC process. The Nl̓eʔkepmx Nation refuses to surrender its complete sovereignty and Aboriginal title to be ruled under British Columbian and Canadian law.

The *Delgamuukw* Canadian Supreme Court Case recognizes that Aboriginal Title exists in British Columbia, yet twelve years later there are still questions around its implementation (McNeil, 2000). With the failure of the BCTC process, the recognition and reconciliation legislation is the BC government's newest effort for economic certainty (Manuel, 2009). This proposed legislation is based on recognition of First Nations Aboriginal title. It aims to create comprehensive agreements with First Nations for benefit sharing and co-management in First Nations territories. (Government of British Columbia, 2009). This process is flawed in that it does not recognize the right to self-government and jurisdiction which Aboriginal Title necessitates (McNeil, 2000). First Nations would have little decision making power and no veto power to protect traditional food relationships within their territories under

this new legislation (Government of British Columbia, 2009). These agreements would be contingent on recognizing British Columbian crown land and the BC government's jurisdiction over Indigenous Nations territories (Manuel, 2009).

This continued climate of colonization, different in form from the 1800s but similar in intent, impacts every aspect of Nl̓eʔkepmx people's lives. However, Linda Smith states, these very sites of oppression can be the same sites for decolonization (L. T. Smith, 1999). This research focuses on Nl̓eʔkepmx traditional foods relationships as a site for decolonization. This connects to the larger Nl̓eʔkepmx goal of self-determination. Jurisdiction over their traditional territories is essential to ensure continued traditional food relationships.

Nl̓eʔkepmx Education

Nl̓eʔkepmx children's education was often the responsibility of grandparents and great-aunts and uncles, allowing parents to focus on providing for the family. Nl̓eʔkepmx education also recognizes knowledge and its associated spiritual and moral teachings can be gained from experience on the land as well as through dreams and prayers as described below by Annie York (Laforet & York, 1998).

...In the morning an old man preaches the young people what to do. It's to go up in these mountains like that Stein. They spend their life there and God is going to help them, to give them strength. The Indians claimed that place because, for thousands of years, that was just like a university to them.

They go up there [in the mountains], and they sleep, and this dream tells them. Then he writes his dream on the rock. That's left there forever.

We teach our young people to reverence things. In this life we have to have water, and we need fire to warm us. Air, food, moon, stars, and sun. The rain comes, then snow. The snow melts into the rivers. It's the cycle of life. The Stein Valley is like Moses' mountains, or Rome to the Catholics. These are sacred places.

While much of a child's training was traditionally practical or hands-on, oral histories and stories were also essential to education (Hanna & Henry, 1996; Johnson, 2001; Laforet & York, 1998; Sterling, 2002). These oral traditions in the words of Ardith

Walkem and Halie Bruce (Walkem & Bruce, 2003), “is not myths, legends, and folklore- it is the expression of our laws and the source of our continued relationship to our territories.” Children’s education has since changed considerably, but Elders and the previously mentioned oral traditions continue to be important in children’s education (Hanna & Henry, 1996; Sterling, 2002). In asserting the concept of Nl̓eʔkepmx education the concept of teaching “culture” and “tradition” and “culturally relevant” need to be understood. Beyond the surface understanding of singing, dancing and storytelling Nl̓eʔkepmx culture expresses deep territorial connections, along with laws and practices of the Nl̓eʔkepmx people (Walkem & Bruce, 2003).

After contact, the Nl̓eʔkepmx people recognized that their children’s education would need to adapt to the changing world by including both Nl̓eʔkepmx and the newcomers’ ways of knowing. At their meeting with Governor Douglas in 1879, the Lytton chiefs expressed their desire to hire a teacher to instruct their children in these new ways in compliment to their children’s Nl̓eʔkepmx education (Laforet & York, 1998).

Nl̓eʔkepmx Chiefs’ concern, in the 1800’s, to maintain traditional educational practices while adding new material was not very different from today’s goals for Indigenous education. The Traditional Knowledge for Health research project aimed to uphold scholar Gregory Cajete’s ideals for Indigenous education. This same notion is, held by many Indigenous scholars (Demmert & Towner, 2003; Hampton, 1995; V. Kirkness & Barnhardt, 1991; V. J. Kirkness & Bowman, 1992; Snively & Williams, 2006; Sterling, 2002). The concept follows that, to “develop a contemporary, culturally based education process founded upon traditional tribal values, orientation, and principles, while simultaneously using the most appropriate concepts of technology and content of modern education” (Cajete, 2004). Elements of a culturally based education is expanded upon by Demmert and Towner (Demmert & Towner, 2003):

1. Recognition and use of Native [North] American ... languages.
2. Pedagogy that stresses traditional cultural characteristics, and adult-child interactions.
3. Pedagogy in which teaching strategies are congruent with the traditional culture and ways of knowing and learning.

4. Curriculum that is based on traditional culture and that recognizes the importance of Native spirituality.
5. Strong Native community participation (including parents, Elders, other community resources) in educating children and in the planning and operation of school activities.
6. Knowledge and use of the social and political mores of the community.
(Demmert & Towner, 2003)

These elements contrast sharply with the educational regime imposed on Nl̓eʔkepmxs. Between 1923 and 1973, Nl̓eʔkepmxs' desire for self-determined education was ignored and children were instead forced to attend St. George's Residential School. Elder Horace Michell remembers the day the police came to pick him up to take him to residential school: "our Mom and Dad told me in nineteen thirty nine that I had to go to the residential school or else they would put my parents in jail if I did not go" (Siska Traditions Society, 2009). In fact, the residential school system's aim to "kill the Indian in the child" (Assembly of First Nations, 2008) meets the United Nations' definition of genocide, forcibly transferring children of the Nl̓eʔkepmx Nation to the Canadian government and church run residential schools (United Nations, 1948).

The consequences of the residential school system and the multiple forms of abuses suffered by children will continue to have impact for generations to come (Wesley-Esquimaux & Smolewski, 2004). One consequence of the residential school system was that the Nl̓eʔkepmxs did not have the Nl̓eʔkepmx education Annie York describes above. Traditional food knowledge, practices, values and their ecologies have been greatly impacted. This loss of knowledge calls for a community wide, culturally relevant, intergenerational program involving children, adults and Elders in learning about Indigenous food relationships.

The vision for culturally relevant Nl̓eʔkepmx education that the Chiefs described to Governor Douglas in 1879 still has not been realized. While the residential school system was one of the most brutal forms of colonization in First Nations education, subtle forms of colonization remain in the Canadian public education system (Ball, 2004; E. J. C. Thompson, 2004). Education is how culture is transmitted from one generation to the next.

Nłe?kepmx people determined to re-claim the education of their children opened the Stein Valley Nłe?kepmx School in 1997. The new school built in 2008 has created a solid foundation and more Nłe?kepmxs are enrolling their children in this Nłe?kepmx-run private school from kindergarten to grade twelve (Stein Valley Nlakapamux School, 2009).

The Stein Valley Nlakapamux School, in its student parent handbook (2009), asserts their mission statement:

To provide a healthy nurturing learning environment in which our students are encouraged to become knowledgeable, confident, self reliant citizens enabling them to contribute to the Nlakapamux (Nłha.kapmhh) values, culture and heritage, and also to the social and economic life of our community. (Adopted May 2008)

Following from the Stein Valley Nlakapamux School mission knowledge gained through education is how individuals and communities gain the capacity or ability to reach their goals. For the Traditional Knowledge for Health research I consider capacity as the ability of Siska community to reach goals collectively. Siska Community's goal is health and education creation through using traditional knowledge. Therefore education for that capacity will also come from traditional knowledge of the community.

Stevenson and Perreault (2008) identify colonization in federal and provincial government capacity programs that use the capacity-deficit model. The capacity-deficit model ignores First Nations' knowledge or cultural worldview or that asserts that First Nations' economic situations result from a lack of capacity. The deficit model therefore proposes the economic solution of increasing an individual's skills to increase participation in the dominant society's economy. In contrast, Stevenson and Perreault advocate a ground-up approach to capacity whereby the community asserts its vision to build an economy that meshes with their specific culture and context by drawing on cultural strengths and thus increasing capacity not only for individuals but for the entire community (Stevenson & Perreault, 2008). This research uses this community-based, ground-up approach.

Nl̓eʔkepmx Economies and Trade

Nl̓eʔkepmx peoples' economies work with the diverse ecosystems that support them. Nl̓eʔkepmxs have developed complex stewardship and management systems to assure an abundance of different traditional foods and resources, while maintaining ecosystem diversity (Deur & Turner, 2005; Morrison, 2006). Nl̓eʔkepmx economies are based on hunting, fishing, gathering sharing, giving and trading foods and technologies (Morrison, 2006). Salmon is one of the primary economies at Siska (Teit, 1900). Nl̓eʔkepmx people honour and thank the salmon through ceremony for giving people life. In turn the Nl̓eʔkepmxs have maintained a responsibility to ensure the salmon's survival (Siska Traditions Society, 2009). The concept that pacific sockeye salmon are wild is a myth. Pacific salmon populations have been managed by Indigenous peoples for thousands of years according to Nigel Haggan of UBC Fisheries Centre (Haggan et al., 2006). The Fraser River sockeye population was greatly abundant before contact at 60 million (Routledge & Wilson, 1999). Before contact Nl̓eʔkepmxs vast trade networks for sc'uwen (wind-dried salmon) reached as far as the prairies, according to oral histories (Blackstock & McAllister, 2004). Guy Dunstan of Siska describes trade trails that went as far south as New Mexico (Morrison, 2006).

The abundance of salmon attest to the Indigenous concept of economy expressed by Taiaiake Alfred (Alfred, 1999), "The primary goals of an Indigenous economy are to sustain the earth and to ensure health and wellbeing of the people...Upsetting this economy upsets the balanced ideal that lies at the heart of Native societies". The balance of Nl̓eʔkepmx economies has been severely impacted by colonial policies, which have limited Nl̓eʔkepmx peoples' ability to manage and make decisions regarding their traditional territories. The colonial industrial economic model reduced the Fraser River salmon population by half, to 30 million, by 1913 due to over-fishing and environmental devastation of waterways and spawning areas (Routledge & Wilson, 1999). The Hell's Gate disaster of 1913, caused by the C.N.R. railway construction, could have wiped out the population completely. Nl̓eʔkepmxs practicing their responsibility to the salmon intervened. By building flumes for the salmon and carrying them over the Hell's gate slide Nl̓eʔkepmx ensured the salmon's survival.

Colonial land policy equally impacted Indigenous economies. Nl̓eʔkepmx family were allocated 10 acres of land by BC government, in their own territories, while settlers newly immigrating into Nl̓eʔkepmx territory were given 160 acres (Laforet & York,

1998). Farms and ranches took over Nlë?kepmxs most productive grasslands. Water diversion severely impacted much of Nlë?kepmx grassland food and economies (Blackstock & McAllister, 2004; Walkem, 2007). Forestry practices and prescribed burns had equally devastating impacts on berries and forest foods (Deur & Turner, 2005).

Siska Traditions Society recognizes the need to bring Nlë?kepmx peoples' stewardship and management practices back on the land and into the waterways to restore ecological balance. STS is achieving this by promoting their traditional economies. "In our area we have to create our own economy. We look to the gifts of the Creator to do this. We treat these gifts with respect, as they will sustain us into the future as in the past," says Chief Fred Sampson (Efron, 2004). This self-sustaining economy is the basis of the Nlë?kepmxs' traditional society. Ensuring a healthy existence for the nation's people was easily facilitated by careful relationships of gathering, fishing, and hunting in accordance to Nlë?kepmx stewardship, management and value systems. Trade was used effectively with surrounding nations for locally specialized goods.

Today's economic reality in the Nlë?kepmx Nation is a stark contrast compared to the time before colonization. Presently, unemployment among Siska community members hovers between 75-80%. Many traditional sources of income, such as salmon and specialized plants, have been devastated. Also, by creating a welfare economy, the government has reduced progress toward community driven initiatives. The government has created a history of dependency, rather than recognizing First Nations inherent right to use of their lands for economy (Mills, 2005). John Scott, the social-affairs officer at the UN Permanent Forum on Indigenous Issues explains (Lovgren, 2004), "It's easy to blame Aboriginal people for being welfare dependent after taking away their resources... Everyone would be welfare dependent if they had lost their land and their right to make decisions about their own lives."

One of the specific objectives of the Traditional Knowledge for Health research was to identify how the traditional harvesting of plants could create economic opportunities for the community. The community Elders and leaders embrace this idea of renewing their traditional food economies and related management practices. The ultimate aim of these goals is not short term profit, but using sustainable methods to ensure the health and longevity of the Siska community as well as the land.

Nłe7kepmx Health and Wellbeing

In the context of Indigenous knowledge, health involves the inseparable realms of economic, social, and spiritual life (Battiste and Henderson, 2000). The findings of the British Columbia First Nations Regional Health Survey (BC FNRHS) show that BC First Nations members consistently described health as comprising of physical, mental, and spiritual aspects (Atleo, 2000). Following from these beliefs, research indicates that prior to European contact, the Indigenous peoples of British Columbia lived with little or no illness and disease (First Nations Chiefs' Health Committee & BC Ministry of Health Planning, 2003). Mary Williams (Siska Traditions Society, 2009) recalls,

“We kept our health: there was no one with diabetes at that time or cancer, you just died of real old age. Nowadays you don't see that, people dying because they are old; they are young and they die.”

Currently, First Nations members are more likely than the general population to experience diabetes, high blood pressure, accidents, alcohol and drug use, depression, low income, and a low high school graduation rate (M. Atleo, 2000; Dion Stout, 2001; First Nations Chiefs' Health Committee & BC Ministry of Health Planning, 2003)

These statistics can be seen as outcomes of the past and present social injustice issues faced by First Nations peoples, as outlined up to this point in the introduction. Well known health researcher, Naomi Adelson asserts, “Indigenous Canadians as a group, are living out the effects of a chronology of neglect, indifference, and systematic oppression” (Adelson, 2005). Within health care, the lack of cultural sensitivity was identified through a BC First Nations Regional Health Survey as a barrier to achieving health (M. Atleo, 2000). These negative implications have all been compounded by the disruption of traditional food knowledge and practices as well as the degradation of traditional food systems (H. V. Kuhnlein & Receveur, 1996).

These Indigenous peoples' health concerns call for a holistic approach grounded in Indigenous self-determination (Chandler & Lalonde, 1998; Hutchinson, 2006; Lemchuk-Favel, 2004; Tookenay, 1996). Furthermore, at the 1996 Royal Commission on Aboriginal Peoples, witnesses called for “the protection and extension of the role of traditional healing, traditional values, and traditional practices in contemporary health and social services”.

Greater self-determination in health is being achieved through health services transfers whereby First Nations take greater control of their own health services. Since the Siska and Cook's Ferry bands took control of their health services in the form of the "fully-transferred" Hesk'w'en'scutxe Health Services (HHS) five years ago, the overall health of the clients served by the HHS has improved (Dempster, 2006). However there are still challenges, Jean York, Director of Hesk'w'en'scutxe discusses that there is no programming specific to traditional foods or medicines, making it a challenge to develop ways of integrating these into their health programming (York, 2006).

In Yukon the negotiated First Nations Health Transfer Agreements are different than BC; Yukon First Nations specifically negotiated for policy recognition and funding directed towards traditional health and healing including medicines and treatments (Gatey, 2008). Such Aboriginal-specific health systems across Canada have been successful in creating responsive, sustainable and accessible health programs. These systems offer holism, a synergy of western and traditional health philosophies, as well as the opportunity to integrate traditional food practices (Lemchuk-Favel, 2004).

The 2006 public health officer's report identifies the importance of traditional diets to the health of Aboriginal people (Officer, 2006). The B.C. First Nation's Regional Health Survey showed that rates of diabetes were twice as high in the southern interior as compared to the Northern Interior, the authors speculate that this may be due to traditional food use (M. Atleo, 2000). These reports show how communities can use their traditional knowledge systems to address current health problems (Kuhnlein, 2004). Considering the First Nations' concept of health the significance of traditional food goes well beyond a nutritional importance, impacting overall community health.

There has been very little traditional food use research among any First Nations in Canada, the majority of Aboriginal traditional food use research is with the Inuit (H. V. Kuhnlein, O. Receveur, R. Soueida and G.M. Egeland, 2004; H. V. Kuhnlein, Receveur, & Chan, 2001). The Nuxalk Nation and the current Creator's Gifts research in the Nl̓eʔkepmx Nation are of the few in the West Coast. Dr. Laurie Chan, UNBC is launching a Canadian wide research project among First Nations to get base line data on traditional food use and environmental contaminants through health Canada.

A comparative analysis of the 2002 Aboriginal Forum, co-hosted by the Romanow Commission and the National Aboriginal Health Organization, recommended that the design of health policies be specific to each cultural group and encouraged increased recognition and use of traditional practices (Spack, 2003). The Aboriginal Healing Foundation identifies feasts, on-the-land activities, cultural celebrations, traditional food harvesting and preparation as important to Aboriginal communities healing process from the legacy of the residential school system. The Aboriginal Healing Foundation identifies that more programs are needed which target healing for youth and men, also identified is the need for non-verbal forms of healing. Of existing healing programs participants identified Elders involvement in the healing process was the most affective (AHF, 2002).

As the Traditional Knowledge for Health is working in collaboration with Hesk^w'en'scutxe Health Services, this research contributes to establishing a Nl̓eʔkepmx community-based approach to integrating traditional foods and associated knowledge, practices within existing health programming (H. V. Kuhnlein & Receveur, 1996; Officer, 2006).

Nl̓eʔkepmx Traditional Food Relationships

Harriet Kuhnlein, Director of the Centre for Indigenous Nutrition and Environment, considers traditional food systems as all food from a particular culture available from local resources and culturally accepted. It includes socio-cultural meanings, stewardship, management and acquisition/processing techniques, use, composition, and nutritional consequences for people using the food (Kuhnlein and Receveur, 1996). The meaning 'traditional' here is the continued social process of learning and sharing of certain knowledge, not implying any antiquity. This social process is unique to each indigenous knowledge and heritage (Battiste and Henderson, 2000).

In the context of indigenous knowledge economic, social, and spiritual realms cannot be separated and a definition of health spans all of these. Ecologies are considered sacred realms and are encased in culture and language (Battiste and Henderson, 2000). Food is part of these realms and in fact most Indigenous Peoples do not separate food from medicine (Kuhnlein and Receveur, 1996).

There is strong evidence for health benefits of traditional foods. Evidence ranges from nutritional analysis of traditional foods to community based health programs focusing on traditional food use (Blanchet et al., 2000; H. V. Kuhnlein & Receveur, 1996; Harriet V. Kuhnlein et al., 2004; Trifonopoulos, 1998; N. J. Turner, 2003).

Traditional foods are directly linked with contemporary traditional knowledge by promoting use of traditional languages, harvesting practices, botanical education, social education, potlatches and gatherings as well as other cultural and spiritual practices (Harriet V. Kuhnlein et al., 2004; Nuxalk Food and Nutrition Program Staff, 1984).

Many Nl̓eʔkepmx traditional plant food resources are currently described as “non-timber forest resources” (First Nations Forestry Council, 2008), a term used without consultation with the First Nations, to whose health and culture, these resources are essential. In fact, the term “non-timber forest resources” erases the fundamental First-Nations relationships with these resources. Therefore throughout this thesis I have made an effort to use the term “Nl̓eʔkepmx traditional food relationships” recognizing the reciprocal nature of Nl̓eʔkepmx traditional food systems.

Turner (2001) states that over 500 plant and fungus species, the majority being forest species, are known to have specific cultural applications among Aboriginal peoples of northwestern North America. In BC, Indigenous peoples’ plant foods represent a \$280 million annual industry that is largely unregulated, creating a situation in which forest resources can be and are being depleted (S. Tedder, D. Mitchell and A. Hillyer, 2002). Most of this activity takes place on First Nations territories for which aboriginal title and rights are recognized. These currently unregulated forest resources, give First Nations’ management and policies opportunities for regaining control within their territories (Menzies, 2004).

Economies have derived substantial monetary value from Indigenous traditional food relationships. For example, the pine mushroom industry in the Nahatlatch watershed of Nl̓eʔkepmx territories was calculated at approximately 17% of the market value of the timber in the same area. In 1997, pine mushrooms ranged in wholesale price from \$35 US-\$95 US/kg (Wills & Lipsey, 1999). If Indigenous stewardship and management technologies are adopted and integrated within traditional harvesting practices of BC First Nations, certain provincial non-timber forest resources could increase to twice the

economic value of timber (Wills & Lipsey 1999). In this way the Nl̥eʔkepmx Nation could achieve economic sovereignty, which is essential for the progression towards self-determination.

These Nl̥eʔkepmx historical and contemporary contexts demonstrate Nl̥eʔkepmx and Indigenous peoples' strategies in resisting colonization and asserting their self-determined worldviews. This review illustrates what types of proactive strategies can be useful to achieve the research goal of: **Education and health creation through contemporary practice of Nl̥eʔkepmx knowledge systems pertaining to ecological, spiritual and cultural values, including the local research and control of community health through food.**

Chapter 2: Research Relationship

This chapter describes how Siska Traditions Society (STS) and the University of British Columbia (UBC) created a respectful research relationship for the Traditional Knowledge for Health research project. This relationship made explicit the position, motivations and expectations of STS and UBC. These findings were articulated in the Traditional Knowledge Protocol (TKP) agreement, which set out research ethics, governance and processes. The Traditional Knowledge Protocol enabled the achievement of objectives identified by STS.

To be a respectful and self-determining community-based process, as set out in the Traditional Knowledge Protocol, community members' expectations and motivations were also included in research processes. Community members engaged in the Traditional Knowledge for Health research by participating in four different ways, through: the Siska Traditions Society, the Research Committee, the research team, and community research activities (presentations, potlucks, gathering, workshops, and interviews). Useful and practical ways to achieve research objectives were identified by community members engaging in decision-making and design. Community confidence in the project was demonstrated by community participation. Community participation made possible the research activities and outcomes described in later chapters.

One of STS's research objectives was to sustain research actions into the future by increasing STS research capacity. Marlene Brant Castellano (2000) emphasizes when research enters into the natural flow of the community, without disruption, it will enter into the everyday decision making process of the community. This is the empowering means for knowledge to be validated, generated and transmitted to turn into daily used knowledge (Martin 2002). Both Elders and youth are important teachers within Siska community, and their experiences were especially privileged along with all community members. A safe environment for sharing research progress, results and recommendations was co-created with the research committee, research team and research participants. This transparency and inclusiveness ensured that the capacity to initiate community-directed research projects in the future evolved sustainably.

These aspects of the STS-UBC research relationship will be explained throughout this chapter. In conveying the research position, protocols and processes, I will highlight learning that occurred, challenges faced and how barriers were overcome and successes achieved in creating a community-based research relationship.

2.1 Creating Respectful Research Relationships

As an academic student researcher, I was acutely aware of the colonizing potential of the university, as described by Rauna Kuokkanen (Kuokkanen, 2007), “our lives are enmeshed in patriarchal global capitalism” and academe is part of capitalism through its focus on competition and individualization. As an academic partner, I focused on working with Siska community members cooperatively and collectively in this research relationship. This section describes preparations made for a respectful research relationship- from the initial strategizing meeting, setting research objectives, applying for research funding, and creating the Traditional Knowledge Protocol (TK Protocol).

Chief Sampson invited Dr. Cowan and I to Siska November 21st, 2006, to meet with the board of directors of the Siska Traditions Society (STS) to discuss the potential of working together in research. The board included key Elders, community members, and others who had been involved with the STS’s past research initiatives. We discussed how the society sought a research focus linking the STS’s current economic initiatives with food harvesting, community health, and education.

Appreciating the community’s investment of energy and trust in entering into a research relationship with UBC, Dr. Cowan and I prepared for the meeting by examining our responsibilities as academic researchers and representatives of UBC. We then presented the STS with various examples of research ethics protocols and funding sources that recognized community-controlled research and respected Indigenous knowledge (BC Aboriginal Capacity And Development Research Environment, 2005; Indigenous Peoples Council on Biocolonialism, 2000; Macaulay et al., 1998; Menzies, 2004; Mi'kmaq Ethics Watch, 2002; Schnarch, 2003; L. T. Smith, 1999). As sign of respect we brought gifts to thank the Siska people for inviting us into their territory (Wuyee Wi Medeck, 2004). Our three-fold intention for the

meeting was to: 1) listen to the STS's objectives and their identified next steps in accomplishing those objectives, 2) offer our collaboration and assistance in a culturally respectful manner, and 3) to establish interpersonal relationships built on trust and mutual respect for the similarities and differences between us as people and as representatives of organizations.

Our first meeting resulted in agreement between the STS and Dr. Cowan and I to enter into a research partnership. The objectives identified by the society during this meeting formed the basis of the research proposal we later submitted to BC Aboriginal Capacity and Development Research Environment (BC ACADRE)¹. These objectives within our proposal guided our subsequent Traditional Knowledge for Health research process. The next sections describe topics discussed at the initial research meeting and how these were translated into specific actions to support the research relationship.

Respectful Research Funding

During our first meeting with the Siska Traditions Society, Dr. Cowan presented research-funding opportunities in line with the Siska's research objectives. These objectives included acknowledging Indigenous knowledge systems and established protocols for Indigenous knowledge protection. BC ACADRE was the most promising source of community-controlled funding. Its respect for Indigenous knowledge and community ownership of knowledge supported Siska-identified steps toward achieving the community's research goals.

The guiding principles of BC ACADRE's research programs are the 4 Rs: respect, relevance, reciprocity, responsibility— adapted from Verna Kirkness and Jean Barnhart's approach to Aboriginal Education (V. Kirkness & Barnhardt, 1991). For the STS-UBC research relationship to contribute to Siska community's self-determination, these 4Rs were essential. As the rest of this chapter and thesis show, the application of the 4Rs principles was essential to STS-UBC achieving a respectful research partnership.

¹ BC ACADRE has evolved into the new Network Environment for Aboriginal Research BC, (NEAR BC) based out of the University of Victoria.

Traditional Knowledge for Health Research Objectives

The Traditional Knowledge for Health objectives identified by Siska Traditions board of directors and key Elders informed a strength-based approach, looking to traditional cultural strengths to increase health and educational capacity. In response, we stated our overarching research goal to be:

Education and health creation through the contemporary practice of traditional Nt̓eʔkepmx knowledge systems relating to ecological, spiritual, and cultural values, including local research into and control of community health through food.

We identified three specific research objectives stemming from our overarching goal:

- **Increase Siska community health, culture, and capacity by generating culturally relevant and ethical knowledge and practices for Nt̓eʔkepmx Traditional Food Relationship (NTFR) management;**
- **Engage community members of all ages in the cyclic generation of Nt̓eʔkepmx (Indigenous) knowledge systems based on traditional values and contemporary methods (technologies); and**
- **Promote self-determined control and application of such knowledge systems to increase economic diversity for the Siska community.**

This strength-based approach can also be described from the perspective of appreciative inquiry focusing on the existing positive core and positive potential—in this case the practice of Nt̓eʔkepmx knowledge systems—that can be realized through recognition and supportive action. As Whitney and Trosten-Bloom (2003) contend, “focusing on strengths is much more effective than focusing on problems” when one seeks to change “a situation, relationship, organization, or community.”

While it seems like common sense to focus on positive change, the academe traditionally emphasizes the importance of determining, defining and studying a research ‘problem’ (Smith, 1999). Part of the colonial approach to marginalizing Indigenous peoples is to frame a group of people as a “problem” in order to advance land, military, religious, health, or educational practices that attempt to undermine Indigenous efforts towards self-determination (Smith, 1999). Similarly, even well

intentioned researchers often identify a particular research problem within the Indigenous individual or community rather than as a social or structural issue (Smith, 1999). Ignoring such issues often means ignoring the colonial or dominant structures, policies, and economics that have led to the marginalization of Indigenous Peoples while allowing the dominant society to consolidate its wealth and power (Marker, 2003; L. T. Smith, 1999). In situating this research, therefore, I have deliberately examined the impact of colonial structures on Nte?kepmx peoples' self-determination, health, education and economy. The introduction focused on Nte?kepmx peoples' historical and current self-determining actions in resisting these colonial structures. Based on Nte?kepmx knowledge systems, these self-determining actions of resistance have brought about such positive changes, in health, as Hesk^w'en'scutxe Health Services Society; and in education, the Stein Valley Nte?kepmx School. Accordingly, for this analysis, I saw the self-determining control and application of Nte?kepmx knowledge systems as critical to the achievement of both the identified research objectives and positive change.

2.2 Traditional Knowledge Protocol

The first step in working towards the research objectives was to ensure a respectful research environment. The co-creation of the Traditional Knowledge Protocol and its processes ensured Siska community ownership and control over all aspect of the research. The Traditional Knowledge Protocol was signed and agreed upon by both the Siska Indian Band and UBC Research Services in April 2006. The complete Traditional Knowledge Protocol can be found in Appendix B.

The Traditional Knowledge Protocol development was based on many Indigenous protocols. The protocols presented to the Siska during our first meeting included, the Boston Bar Research Ethics Protocol (2004) developed between the Institute of Aboriginal Health-UBC and Boston Bar First Nation, and other protocols created by Darwin Hanna, the lawyer for STS. These protocols all informed the STS-UBC Traditional Knowledge Protocol. Darwin Hanna, Chief Fred Sampson, Dr. Cowan, and I worked together with UBC Research Services to create this Traditional Knowledge Protocol that maintained the Siska Tradition's ownership and control of the research process and Siska's traditional knowledge. The TK Protocol also acknowledges Siska peoples inherent title and rights as well as their self-determination and jurisdiction to practice those rights. We felt that it was important to create a formal protocol through

the UBC Research Services so as to make that protocol legally binding for not only the principal academic investigator (Dr. Cowan) but also for the university. Therefore the protocol was signed by the Associate Director of the University-Industry Liaison Office of UBC Research Services and Siska Indian Band Chief and Council.

In review of the Protocol, UBC Research Services expressed concern over the clause stating that the Siska Research Committee would first approve this thesis. From the academic perspective, inclusion of this clause was perceived to influence research and potentially inhibit or slow the right to academic publication of research conducted by the University. Through our negotiations on this particular clause, and its final inclusion in the Protocol, the University has demonstrated its willingness to shift the traditional academic concept about how research is conducted with Indigenous peoples: it hereby agreed to participate in protection of intellectual property rights of the Siska Band and Nl̓eʔkepmx First Nation.

The Traditional Knowledge Protocol was agreed upon and behavioural research ethics board (BREB) approval was granted before the Siska community's engagement in the research. These ethical agreements recognized Indigenous jurisdiction and provided Siska community's collective consent for research. These ethical agreements also outlined how individuals provided their consent to participate in research.

2.3 Self-Determined Community-Based Action Research

Self-determination was common to each Indigenous research ethics protocol I studied when preparing to meet with Siska Traditions board members. Not surprisingly, then, self-determination became a guiding principle in the Traditional Knowledge for Health research context, and is in fact exemplified in the National Aboriginal Health Organization's framework of ownership, control, access and possession (OCAP) (Schnarch, 2003). I concluded that a respectful research relationship between UBC and the Siska community would recognize Indigenous peoples' right to self-determination (Smith, 1999). I believe that in order to create truly respectful research, a researcher needs to recognize the Indigenous community's goal of complete self-determination, politically, economically and socially. In other words, while Indigenous research protocols and processes form guidelines for respectful and self-determining research, the

position of the outside research partner is equally important so that research will create benefit for the community and not try to undermine its long-term goals (Menzies, 2009).

Self-determination recognizes the self as an integral part of determination. According to Taiaiake Gerard Alfred, of the Centre for Indigenous Governance at University of Victoria (Alfred, 1999, p. 25),

“A crucial feature of the indigenous concept of governance is its respect of the individual autonomy. This respect precludes the notion of ‘sovereignty’- the idea that there can be a permanent transference of power of authority from the individual to an abstraction of the collective called ‘government’. The indigenous tradition sees government as the collective power of the individual members of the nation; there is no separation between society and state. Leadership is exercised by persuading individuals to pool their self-power in the interest of collective good. In the indigenous tradition, the idea of self-determination truly starts with the self; political identity- with its inherent freedoms, powers and responsibilities- is not surrendered to any external entity.”

To apply Taiaiake’s description of Indigenous People's self-determination, researchers must act in an inclusive, community-based way, and recognize both the individuals and the collective.

In summary, this research approach was community-based: Siska community members were involved in multiple ways in every step of the research processes (Whitney & Trosten-Bloom, 2003). This kind of community-controlled research is a form of action-research based on principles and mechanisms that shift the balance of power to the community (Couzos, Lea, Murray, & Culbong, 2005). As Smith (1999) points out, “Community action approaches assume that people know and can reflect on their own lives, have questions and priorities of their own, have skills or sensitivities which can enhance (or undermine) any community-based projects.” Community power is demonstrated when a community has the decision-making power and the necessary resources to make informed decisions (Arnstein, 1969). Action research seeks to transform the people involved in the research; through the process of the research itself, they will make a change in their lives.

2.3.1 Siska Community Engaged In Research

“People have to come together and work together for the health of Siska community.”

Participant in first potluck dinner, July 25th, 2006

Like any community, Siska is made up of individuals who have personal values, ideas, opinions, and ways of thinking about the world. Although I use the term “Siska community” or “Siska community members,” it is important to recognize both that this community consists of individual members who participated in the research, and some who did not. Those individuals with an interest in the project and in the Siska Traditions Society participated. The number of community members who participated increased over the life of the project.

Siska community members were decision-makers at every stage of the project. The research team tried to gain input and feedback about the research process from each family. At the same time, the research team recognized that including the interests of all members would be a challenge. As a result during the initial research team exchange we identified one goal: to find out why some people do not use traditional foods. However, because participation in this research was voluntary, the answers we received contained obvious biases. People with greater interest in traditional foods, culture, and health were more likely to participate, while those less interested chose not to participate. Community members also identified these biases during the first research forum, a community potluck July 25th, 2006.

“It is always the same people interested in this type of thing.”

-Josephine Thomas

“Find out why some people are not interested.”

-Alice Munro

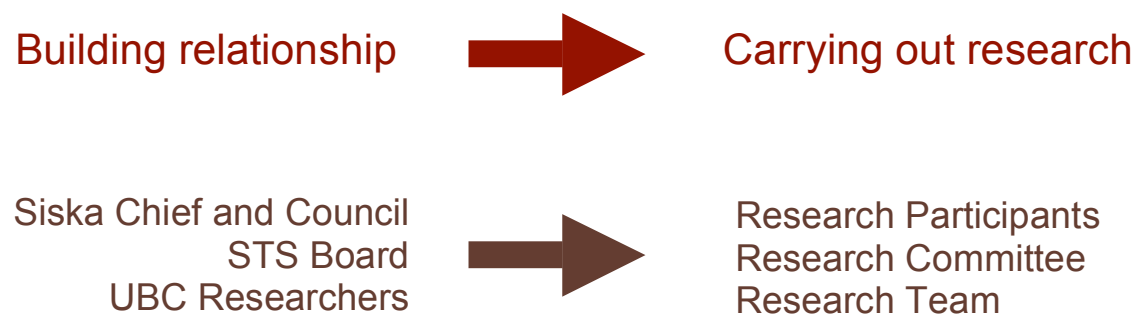
Community members were invited to participate in the research at several points and in various ways. Our first step was introducing the Traditional Knowledge for Health Project to the community and identifying our research structure, draft goals, and objectives. I joined Chief Fred Sampson during band meetings so that we could co-

present the research project at both Siska (on-reserve) and in Merritt (to community members living off reserve in the urban centre of Merritt) band meetings. At these meetings we invited community members to participate as research committee members, research coordinators, researchers, and/or research participants. We followed up these invitations with newsletter articles, postings, and advertisements around the community. At these meetings community members gave initial feedback and recommendations for the research. Participation in the research process was inclusive; anyone who showed interest was invited to participate, in recognition of the experience or insight that they offered.

The multiple perspectives of Siska community members participating in the research processes led to a Siska-specific Indigenous Research approach. This methodology included four specific research roles:

- 1) Siska Traditions Society who, in partnership with UBC researchers, developed the research proposal.
- 2) The research committee, made up of Siska community members from Siska and Lytton who governed Traditional Knowledge for Health research.
- 3) The research team, including the principal applicant (Dr. Cowan) and co-applicants (Chief Fred Sampson, Darwin Hanna, Nancy MacPherson), involved mainly in the planning, as well as researchers (Maurice Michell, Glen Michell, Nancy MacPherson, Danielle Michell, Holly Edwards, Forrest Sampson) who carried out the research project.
- 4) Siska community research participants, including over 50 community members who participated in the research activities and determined the research outcomes.

Figure 3. Creating A Respectful Research Relationship



In the following sections each of these research roles is described. I explain how the original research objectives and process were shaped by these multiple perspectives and participation, which ultimately led to the research outcomes.

2.3.2 Siska Research Committee

The Siska Research Committee guided the research, and met four times during the research to discuss its direction and make recommendations about adjusting the research process. In recognition of the Research Committee Members' expertise, honouraria and travel expenses were provided.

The roles and responsibilities of the research committee were to make consensus decisions regarding the following tasks to:

- Oversee the overall course of the research project and process,
- Give direction and recommendations on the project's objectives, processes, and activities,
- Witness research in the community and provide their observations about other community members' feedback and evaluation of the project, and
- Recommend how research results should be used and shared.

Newsletter articles, posters, and word-of-mouth were methods used to advertise research committee positions. Because only four people put their names forward, no selection from amongst candidates was necessary.

These four members included two Elders, one councilor, and one youth:

Horace Michell: Elder, fluent Nl̓eʔkepmxcin speaker, and retired orchardist, language teacher, and Siska Traditions harvester;

Mary Williams: Elder, Nl̓eʔkepmxcin speaker, Lytton band member, and community health-care worker for over 25 years;

Betsy Munro: Siska band member and councillor, experienced ambulance attendant, and community health care worker; and

Charles Michell: Siska Band member, senior student at Kumsheen Secondary School, and fisher.

“ We can learn a lot more from Grandmom than this research can do.”

First Research Committee Meeting, September 8, 2006

The research committee meetings informed every aspect of the research and each research activity. For action research to succeed, community direction is of equal or more importance than theories and methodologies of peer-reviewed published journals (Stringer, 1999). Throughout the research process, the research committee shaped research activities and informed the project's approach to health, education, self-sufficiency, and self-determination. The research committee direction is also reflected in each thesis chapter.

2.3.3 Research Team

The research process itself offers a unique learning opportunity for those involved to learn by organizing, participating, and reflecting on that process. To achieve living knowledge, community members must have at least as large a role in the research planning, implementing, and evaluating as outside researchers. The Siska research team included the principal applicants and co-applicants, and the researchers. The principal and co-applicants were primarily involved in the initial planning stages, but also oversaw the remainder of the project. The researchers actually carried out the research project under the direction of the research committee.

The research team applicants were as follows:

Dr. Shannon Cowan (nee Binns), Principal Applicant, Assistant Professor, UBC faculty of Land and Food Systems, stewarded the application process, and acted as the contact person for the project and my academic supervisor.

Chief Fred Sampson, Co-Applicant, Siska Indian Band and Chair of the Siska Traditions Society, oversaw the political implications of the project, and was also my supervisor.

Darwin Hanna, Co-applicant, Lawyer for the Siska Indian band, member of the Nl̓eʔkepmx Nation, and adjunct professor, UBC faculty of law, providing legal information for creating the Traditional Knowledge Protocol between Siska and UBC.

Nancy MacPherson, Co-applicant, Master's candidate UBC Faculty of Land and Food Systems, I created connections between the university and the community, facilitating the work of community researchers throughout the research process.

The research team researchers selected STS's hiring committee included:

Maurice Michell, Siska Research Coordinator, Siska Community Member, Siska Traditions Society Harvest Coordinator, Nl̓eʔkepmxcin teacher, cultural teacher Kumsheen High School, who lead all research activities.

Glen Michell, Siska Researcher, Siska Community member, youth worker and researcher, who played an integral role in the youth-elder interviews, harvest site identification, and the harvest training program.

Danielle Michell, Siska Researcher, Community Member, Siska Traditions harvester, and researcher, who worked with harvest site identification, integrating Nl̓eʔkepmx traditional ingredients in STS jams and doing tasting surveys.

Nancy MacPherson, UBC Researcher, Master's candidate UBC Faculty of Land and Food Systems, I worked with Siska researchers to ensure the research protocols were implemented throughout the research process.

The first step in our research together was an exchange of research methods, training, and planning by the research coordinator and researchers. The research team, consisting of Siska community members as coordinator and researchers and myself as a UBC researcher, provided a variety of perspectives regarding knowledge exchange and the bridging and creating of relationships between Siska and UBC.

I was responsible for compiling a researcher information kit with examples of Indigenous research principles. Elder Maurice Michell facilitated cultural protocols to ensure relevance and a respectful and safe research environment. Together as researchers, the research team decided by consensus which methodologies and methods were useful for achieving the research objectives.

Research Relevance

The first research-team task was to revise the research project title: “**Community Health Education and Promotion Through Sustainable Use of Non-Timber Forest Resources: Community-Based Co-Development of Research Environment to Increase Aboriginal Research Capacity in Siska Band, Nl̓eʔkepmx First Nation, British Columbia**” While the original title had conveyed considerable information about the

original research plan for the BC ACADRE selection committee, the title was unworkable on a day-to-day basis.

The original title was problematic. Although Indigenous and non-indigenous members of the research team would be working together to create the research, this title's format and language were geared towards an academic audience. In other words, though we had applied for funding to an organization that is supportive of Indigenous knowledge, our original title implied that the research was actually primarily intended for an academic audience (Marker, 2003). We recognized that in doing our research, this title might indicate our use of an exclusive language, that privileges certain types of knowledge and ways of communicating rather than reflect an Indigenous worldview (Menzies, 2009). Fyre Jean Graveline's work has encouraged me to test the boundaries of Eurocentric notions of knowledge; and to make room for Indigenous ways of knowing not only within academic discourse and research, but in all contexts (Graveline, 2001). Accordingly, I was pleased when, after the research team reviewed the original research proposal, and objectives, Maurice Michell, research coordinator, suggested the title: *Traditional Knowledge For Health*.

This synthesis of the original research objective and title is ingenious– it creates accessibility and it makes sense. The original research title included almost every technical term related to community-based research theories, but was opaque to anyone who had not taken academic courses on community-based action research methodologies, or was unfamiliar with forestry terminology. Each time I read the original title out loud to Siska community members (which I had to do because it was so long I couldn't remember it), I felt embarrassed by its exclusivity.

When the Traditional Knowledge for Health Project started the first week was dedicated to an exchange between researchers. Maurice Michell, Danielle Michell and I discussed how language would be important to the research. I asked Maurice if there was a word for health in Nl̓eʔkepmxcin. He said that, “No, there wasn't.” The closest thing to health in their language was translated to English as, “ To survive on what the creator has provided.” This quote explicitly shows Nl̓eʔkepmx peoples' understanding that health is directly connected to what the creator has provided. This helped our research recognize the reverent relationship between health and food in the Nl̓eʔkepmx worldview.

I was relieved to work with Maurice Michell, Danielle Michell, and Glen Michell in Indigenizing the research proposal, and beginning to create a Siska research approach. In the research process and in communicating the outcomes, this research project attempts to recognize Siska's local knowledge systems. This was not a simple goal given that we were working in English, a young, noun-based, hierarchical language of a colonizing country. The English language has very different ways of communicating about the world and relationships than Nle?kepmxcin, which is verb-based, non-hierarchical, and gender neutral, as are many Indigenous languages (Cajete, 1994). Mamie Henry and Darwin Hanna experienced this challenge in translating Nle?kepmxcin stories into English for the book *Our Tellings* (Hanna & Henry, 1996).

The Research Budget

Funding issues also highlight the dynamics of power. Are different types of expertise valued equally? What constitutes expertise? How are different kinds of expertise recognized? The research team made decisions about the budget by consensus decision making. These decisions were then reviewed and approved by the research committee, which had decision-making power regarding how wages and how funds were used in the project. The Siska Traditions Society and ultimately its board of directors were financially responsible for the project.

Community members who participated on the Research Committee and as research participants received honoraria, which demonstrated that the Siska research approach values Elders and knowledgeable community members. Youth were also given an honorarium for their contributions in the Youth-Elder Interviews.

2.3.4 Siska Community Research Process

During the community forums and meetings, many community members affirmed their support for the overarching goal and specific objectives and made suggestions for research activities. The forums confirmed the importance of both including intergenerational activities in research and involving youth. I believe the consensus achieved within the different forums was a result of Siska community members developing the original research objectives.

Community Dinner

This community potluck July 25th, 2006 served as both an introduction to and a forum for recommendations related to the Traditional Knowledge for Health Research Project. Fourteen community members attended. Individuals discussed experiences and issues that were reaffirmed by others. Several themes that emerged from the potluck included: the need for food and nutrition literacy, the need to involve youth in the research through empowering means, the need to reach out and involve those people not already participating in the workshop, the need to come together as a whole community to address health. As Josephine Thomas said, “There have been workshops on diabetes by Heskwen’scutxe Health Services, but people still need understanding about food.”

Youth Involvement

Community members saw youth involvement as an opportunity to pass on knowledge, “Get the younger generation interested in the workshops so they may carry it on when they get older,” At the same time, Glen Michell suggested, “ask the youth what they want to do,” Others responded, “youth can get to know the Elders”. Maurice Michell recalled how, when going out with two summer workers to see if the mecek (blackcap berry- *Rubus leucodermis*) was ready, “The summer students really enjoyed going out on the mountain looking for mecek; youth just need the opportunity to be productive and learn”

Community involvement provides a measure of the usefulness and respectfulness of the research. We found participation changed throughout the Traditional Knowledge for Health project depending on the research activity being conducted. Over sixty people from the community attended the final research gathering. This participation speaks directly to the importance of acknowledging both Elders' and youths' research contributions.

2.4 How Knowledge Is Shared

“Knowledge gains power when it is shared.” (Haig-Brown & Archibald, 1996)

In regard to the second goal, *engaging in the cyclic generation of knowledge systems*, our research confirmed the responsibility Siska community members felt to pass on the

knowledge had been shared with them. Elders were acknowledged as the people who maintained that cycle of knowledge creation by passing on knowledge. There was less recognition for those who had knowledge but did not share it (Research Committee Meeting January 16th, 2008). During our research committee meeting we discussed how the local schools are asking for support from organizations like Siska Traditions to include Nłe?kepmx knowledge in their curricula.

“The schools are asking for our support to teach this. What is Siska Traditions all about? It is about sharing, so I think we should share with them, it is for our children.”

2.5 Discussion

The “Siska-UBC Traditional Knowledge Protocol Agreement” (TK Protocol) provided an ethical research environment whereby Siska Indian Band and Siska Traditions Society’s self-determination was legally recognized by UBC. This agreement included the ownership and protection of Siska’s knowledge systems. The agreement created a level of respect and trust in which the research could effectively take place.

Following from the TK Protocol, guidelines were put into practice by the research team to ensure a respectful research environment:

- Community perspectives and individual speakers were respected by listening to them without interruption in workshops, research committee meetings, and outside of research activities
- Research Committee direction was respected and acted upon by implementing their recommendations
- Elders were encouraged to take leadership roles at workshops and the research team followed their lead
- Youth was heard and their suggestions acted upon in design and implementation of research activities relevant to youth
- Beliefs and boundaries of individuals were recognized and acknowledged
- As per cultural custom, community leaders (respected Elders and cultural leaders in the community) lead prayer and ceremony determined its appropriate timing throughout the project

The Siska Research Team was comprised of three Siska band members and one outside researcher (me), to ensure there was a balance of perspectives in research implementation, analysis and interpretation. The balance also ensured that research processes directed by the research committee were carried out in culturally relevant ways. The Traditional Knowledge For Health research acknowledged the need for First Nations' participation on the ground to ensure that respectful protocols and processes are enacted regardless of paper agreements (Perreault, 2002). In the field of health, this assertion is echoed by Janet Smylie (Smylie et al., 2003) saying that while there are increasingly more First Nations Health policy makers in communities, many Aboriginal health researchers remain external to Aboriginal communities. The Siska-UBC partnership exemplifies ways to lessen this reported gap.

Ultimately, in a community-based action research project where participation is voluntary, the number of community members engaging in the research is a good indicator of whether the research is meaningful to the community and whether it is carried out in a way that is in harmony with their values. Other research into Indigenous diabetes prevention programs found that success and sustainability of the program originated from active community participation, a collaborative relationship between community and researchers, and the way traditional knowledge and beliefs were included in the program design (Harris, 1998). The results of this study indicate that because the Siska Research Team engaged in grassroots, bottom up approaches to policy from the community, it was able to bridge that gap.

The guiding principles of this research followed Siska Indian Band and Siska Traditions Society's principles where "self-determination" was valued at both the level of community, and at the level of each community-member (Alfred, 2005). These elements of the Siska-UBC research relationship provided clear structure and process for research in which community members effectively contributed their suggestions towards research objectives; they informed research activities and participated in research itself. One example of a successful 'structure' in this research environment was consensus decision-making. For example, during community forums and meetings, consensus decision-making ensured that all perspectives were heard as research was planned and conducted. As is common with consensus-driven processes (Butler & Rothstein, 1987), individuals with opposing opinions were encouraged to work collaboratively with the person proposing an idea in order to revise and re-work

ideas until they were acceptable to all. These community driven processes have shown higher levels of culturally-relevant research and community participation, as described in the constructivist interpretive paradigm of community-based action research (Stringer, 1999).

Self-determined control and application of traditional knowledge by First Nations communities within a research context is now a well-established necessity. This is outlined in the Tri-Council Policy Statement (TCPS) for ethical research and in the CIHR Guidelines for Research involving Indigenous peoples' (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 1998 (with 2000, 2002 and 2005 amendments); Ethics Office Canadian Institute of Health Research & Institute of Aboriginal Peoples' Health, 2007). There are many accessible resources pertaining to ethical research protocols for community members and university researchers (Caine, 2003). In these resources, First Nations communities and university researchers are encouraged to be vigilant, as there are still examples of people exploiting the knowledge, resources and hospitality of First Nations in the name of research. In Siska-UBC research relationship described in this thesis, Indigenous food sovereignty and health research in general were specifically examined because of their connections to self-determination.

Within the research relationship with Siska, I became aware of the influence that individual academic researchers and university Behavioral Research Ethics Boards have on outcomes for Indigenous peoples in similar research environments to that of Siska-UBC. For example, if not protected by effective ethical protocols that are adhered to by all parties, they may negatively impact direct economic benefits to the community, as well directly impacting the possibility and assertion of Indigenous rights to ecological knowledge and governance, influencing important resource/species protection.

As a result of my observations, I share recommendations intended to help improve the guidelines for University research with Indigenous Peoples:

- I recommend all research into ecological systems or individual species that occurs within First Nations Territories should go through an ethical review

process that includes approval by the First Nation Chief and Council or appointed official(s).

- Funding resources should be dedicated to provide for that First Nations' assessment of the research and possible impacts on the ecosystem, and on Traditional knowledge in that Nation
- Explicit recognition and measures should be in place during the initial Ethical Board approval of University-based research with First Nations communities that require University researchers to demonstrate that they understand that Traditional Ecological Knowledge/Botanical research can have very real risks for First Nations peoples' health and wellbeing through potential impacts on sustainability and diversity of ecological resources for foods, as well as political implications to land/resource rights and entitlement (Castellano, 2004).

The Siska community research process was not something that was accomplished over the span of the one year Traditional Knowledge for Health research project. Siska's self-determined research methodology and methods are continually evolving according to the needs and priorities of the Siska community. They are also evolving in relation to continual reflection on successes and challenges experienced. The learning from those reflections are integrated into continued research. Ongoing learning is currently being integrated into further Siska-UBC research (and partnerships with other institutions, including University of Northern British Columbia).

Some of the challenges and recommendations for change are outlined here:

- Research Training-The research schedule and a change in the makeup of the Research Team made it difficult to have enough time for research training for each member in the team. Ongoing training has been a focus in the research, especially because of the change in the research team following the initial visioning and training period.
- Organization and Documentation- Setting up an 'information management plan' within STS for research documentation including data, results and resources. An important aspect of community controlled research is the physical possession of all research related data and information. Dedicating resources to how that information would be securely stored by STS and accessible by staff for future use is integral to long-term research sustainability.

- Communication with the community- Despite posting the research activities in the newsletter and posting them at the band office and at the gallery, the research team recognizes that extending personal face-to-face invitations to attend research activities and follow up reminders are important before an event. (This must be reconciled with academic protocols, as it is counter to behavioural research ethics board (BREB) regulations. According to BREB the researcher can only contact potential research participants by letter or notice. Personal invitation is seen as possibly coercive. Yet the Research Team and Committee find that it is personal invitations that make people feel welcome and comfortable to participate).
- Siska Research team struggled to complete information exchange and training in the allotted training time and funding budgeted, mainly because of the need to integrate both Nl̓eʔkepmx knowledge and science with relevant newcomer/Semeʔ knowledge and science. The research team identified that more time was needed to effectively discuss, test and reflect, specifically on methods used throughout the research process. This recommendation has been implemented more successfully in subsequent research projects with Siska Research team members.

In summary, the creation of the Siska-UBC research relationship, position, protocol and processes all contributed to the respectful research environment as outlined for successful Indigenous research by Menzies (2009). The research environment was positioned within the Siska community Indigenous worldview and guided by the four R's of research (Respect, Relevance, Responsibility, Reciprocity), as established by BC ACADRE (BC Aboriginal Capacity And Development Research Environment, 2005) adapted from Kirkness and Barnhardt (V. Kirkness & Barnhardt, 1991). Siska and UBC each agreed on certain relevant protocols, which engaged and enabled both parties' responsibilities in research. The research committee and team utilized these protocols to actualize a community-determined action plan for the research: accordingly, reciprocity has been demonstrated by sustained research capacity as highlighted in the following outcomes:

- There is an ongoing effective and safe research environment at Siska
- The research committee in its advisory role has actively engaged the Research Team in the decision-making for research process and methods

- The Research Team has continually evolved research methods that are both culturally respectful and applicable while maintaining rigor
- Over 50% of the Siska community actively participated at some or all points of research involvement with multiple expressed benefits; they left learning new things, they received worthwhile new information, they better understood the importance of traditional plant foods. (For results demonstrating these outcomes please see Chapter 3 Section 3.4, 3.5 and Chapter 4 Section 4.6).

Chapter 3: Nl̓eʔkepmx Food Education And Policy Creation

3.1 Introduction

The development of Siska Traditions Society Harvest Training and Certification Program is mobilizing community capacity to assert their values in the stewardship and management of their Nl̓eʔkepmx traditional food relationships (NTFR), in particular plant foods. The training aspect is an assertion of modern Indigenous education by and for community members, within the Nl̓eʔkepmx Nation. The certification aspect aims to implement community-based local level policy to protect their NTFR. Formalizing the Siska Traditions HCTP is also a strategy that supports greater community self-sufficiency and self-determination.

The Harvest Training and Certification Program (HTCP) is one element of the Traditional Knowledge for Health Research and is also part of Siska Tradition's broader strategies to strengthen Nl̓eʔkepmx traditional food relationships (NTFR). This chapter describes Siska Traditions Society's and the research team's actions to formalize HTCP. This chapter also examines the effectiveness of Siska's process to develop and implement the program to accomplish the following objectives:

- 1. Increase Siska community health, culture and capacity by generating culturally-relevant and ethical knowledge and practices for Nl̓eʔkepmx traditional food relationships management**
- 2. Promote self-determined control and application of such knowledge systems to create increased economic diversity for Siska community.**

In analyzing these two goals I propose that culturally relevant and ethical knowledge and practices must be embedded throughout the program to achieve the desired outcomes of increased:

- 1- community health, culture, and capacity
- 2- Self- determined ethical knowledge and practices for NTFR management
- 3- economic diversity for the Siska community

Recognition of Indigenous peoples' right to self-governance and jurisdiction over their affairs, is necessary for Nl̓eʔkepmxs to maintain their responsibilities for sustainable stewardship of Nl̓eʔkepmx traditional food relationships (United Nations, 2007). The multiple policy proposals for Indigenous plant food stewardship and management will be discussed in section 3.1.4. Forestry companies expanding jurisdiction of their tenures to encompass the commercial harvesting all plants not only trees is one such policy (Gagné, 2004). Siska Traditions strategy of selling Nl̓eʔkepmx traditional food products raises awareness that Indigenous people continue to use their territories for sustenance, foods, medicines and economy (Turner & Cocksedge, 2001). Taken as a whole program, the larger aim, as asserted by Chief Fred Sampson, can be expressed as:

“The dream is yes, there is economy, there are job opportunities for my community members; but the ultimate goal is to solidify our title and rights to the actual land itself, through our traditional oral history uses of the land. That is the ultimate goal.”

-Chief Fred Sampson, CBC National June 21, 2006

The research actions to achieve the goals of the HTCP include 1) Planning Symposium for the HTCP 2) Action of implementing the harvest training and certification workshops and 3) Reflection on the HTCP and outcomes by workshop participants. This chapter describes how the HTCP has contributed to Nl̓eʔkepmx traditional food education and policy creation. I format this chapter adapting Stringer's action research framework including planning, acting, and reflecting undertaken by community members to achieve this end. Using this framework I aim to convey the ever-growing spiral of learning and knowledge-creation that may be achieved through action research (Stringer, 1999).

3.1.1 Nl̓eʔkepmx Stewardship And Management Practices

Historically, all Nl̓eʔkepmx Nation members shared hunting, fishing, and gathering areas communally. Blood relations to the Nl̓eʔkepmxs from neighboring nations also had the right to use these areas. However if someone not related to the Nl̓eʔkepmxs

was caught hunting, fishing, gathering bark, or digging roots they would often pay with their life (Teit, 1900, p. 293). According to Teit (Teit, 1900, p. 294), the only areas that were designated to the family or individual were deer traps, fishing stations and Golden Eagle eyries. Often large groups of people from different Nl̓eʔkepmx divisions would travel to certain resource area and hundreds would camp there for weeks at a time. Pténi Valley a gathering place for upper-division Nl̓eʔkepmx and a prime root-digging area would see thousands of Nl̓eʔkepmx gather during May and June, the prime root digging period. Men hunted, women did berry picking, root digging, and mushroom gathering. This time was also an opportunity for governance, trade, athletics, social and ceremonial activities (Teit, 1900, p. 293).

Berry picking grounds are also common property but were strictly managed. Teit records old women as having a primary managing role of berry grounds (Teit, 1900, p. 293). Oral history provides more details of these practices. Horace Michell (Personal Communication 2008) has described that the berry picking grounds used to be managed by an old woman, of that particular area. Nl̓eʔkepmxs were strictly forbidden to pick berries before they were completely ripe. The old woman, by closely monitoring the picking grounds, would direct others to which areas were to be picked that season, when the fruit were ripe and picking could begin. Once given the signal for picking, people would travel to the berry picking grounds and camp for weeks at a time. Large numbers of women from different Nl̓eʔkepmx divisions would pick in the same area. These collective picking practices, used for most plant harvesting, facilitated monitoring stewardship practices and education where required to correct such practices according to late Elder Mildred Michell (Maurice Michell Personal Communication, 2009). People maintained regular stewardship practices while harvesting for berries pruning for example pruning. When a particular berry ground productivity declined despite these individual stewardship practices, the old woman would recommend large scale stewardship and management practices to increase berry abundance, the most common being prescribed burns (H. Michell, 2008).

These practices describe Nl̓eʔkepmx peoples' complex stewardship and management practices. Stewardship is often used to describe Indigenous people's relationship to their traditional foods and resources (Karjala & Dewhurst, 2003). Indigenous stewardship embodies the responsibility Indigenous people assume to look after and tend to different plants and resources to ensure abundance presently and in the long-

term future (Anderson & Barbour, 2003). The way the term 'management' has been used has often been at odds of Indigenous peoples concept of stewardship (Kuptana, 1996; McGregor, 2004). However for Indigenous peoples to communicate to government resource management agencies their Aboriginal title and jurisdictional relationship to the land has necessitated the use of the term management (Kuptana, 1996). Until the recent Xeni Gwet'in BC Supreme court victory ("Tsilhqot'in Nation v. British Columbia", 2007), judicial systems recognized title as existing only if there was significant 'modification' to the land (Arneil, 1996). Within the colonial construct this meant cleared land, fields, and permanent buildings. The advanced management systems of Indigenous peoples that modified and sustained whole ecosystems, a type of permanent agriculture, to produce large amounts of food, was dismissed. Indigenous peoples' 'permanent agriculture' known as permaculture is only now being taught in agricultural programs as a "new development" to address serious problems of industrial mono-cultures (Cajete, 1994, p. 147).

However Indigenous peoples are now defining their own concepts of management, which include traditional knowledge, spiritual values, and a holistic/ecosystem approach. Indigenous peoples see their sovereignty, subsistence use and very survival contingent on the ability to exercise their jurisdiction to management their territories and resources (Bengston, 2004). As Indigenous peoples self-determination is becoming recognized, some aspects of Indigenous resource management concepts are now being used by government agencies such as ecosystem-based or adaptive management. These conditions provide the possibility of Indigenous knowledge having a greater influence on forest management practices (Troster, 2007).

Burning was one of many Nl̓eʔkepmx management techniques to increase the productivity of different traditional food plants and increase grassland productivity for ungulates. Nancy Turner using anthropological records prescribed burns in Pténi, Nl̓eʔkepmx territory (Turner, Thompson, Thompson, & York, 1990). Evidence of frequent fires is visible in the charcoal black earth below the surface of the wide-open Pténi meadows covered with Nl̓eʔkepmx root foods. Regular fire patterns from the 1700s to early 1900s have also been demonstrated through core sampling in Stein Valley, a nearby NTFR area (Riccius, 1998). The Nl̓eʔkepmx language contains over 25 different terms related to active management including: pruning, transplanting,

cultivating, cuttings, prescribed burning, selective harvest, and propagation (L. C. Thompson & Thompson, 1996).

Teit's *The Thompson Indians of British Columbia*, edited by Franz Boas of The Jesup North Pacific Expedition focuses on material culture. Little is discussed of governance or land stewardship practices. This was characteristic of Boas' style of anthropology: focused on material culture and an 'imagined pre-contact past' (Wickwire, 1998). However Teit's knowledge of Nl̓eʔkepmx world was much greater than was published, he learned much from his Nl̓eʔkepmx wife, Lucy Antko and her relatives as well as chiefs and others as he became involved in Nl̓eʔkepmx political efforts in his later years. More insight into Nl̓eʔkepmxs stewardship concepts can be found in Teit's unpublished notes. As brought to light by Nancy Turner's (Turner, 2005, p. 20) research into the reciprocal relationship concept of *Earth's Blanket*. Teit describes Nl̓eʔkepmx plant names and uses. He describes "spákEm [sp'áq'm] flowers in general. Flowers are the valuables of the earth or mtns [mountains] and if they are plucked ruthlessly the earth sorrows or cries." The next entry continues: "sieKEm [s-yíqm] grass in general. Flowers, plants & grass especially the latter are the covering or blanket of the earth. If too much is plucked or ruthlessly destroyed [the] Earth [is] sorry and weeps. It rains or is angry and makes rain, fog & bad weather."

Nancy Turner in the *Earth's Blanket* describes eight distinct but related concepts that when applied together can help guide eco-cultural restoration and environmental renewal (Turner, 2005). As STS's work with Nl̓eʔkepmx traditional food relationships embodies restoring and renewing the Earth, The Earth's Blanket concepts can also be applied to Siska Traditions Ethical Picking Practices and to the larger policy dialogue surrounding these important Indigenous plant foods. These concepts include:

1. Humans within Nature
2. Rooted cultures
3. Elders' Wisdom
4. Youth and Education
5. Local Languages
6. Ceremonial recognition
7. Diversity
8. Patience and Persistence (Turner, 2005, pp. 229-232)

3.1.2 Siska Traditions Ethical Picking Practices

These beliefs recorded by Teit in the 1900s are evident in Siska Traditions Society's Ethical Picking Practices today (T. Sampson, 2002):

We as First Nations people must abide by our own cultural law of the land. The Elders and knowledgeable community members will teach: how to give thanks for the gifts we receive from mother earth, when we can start picking, how to share the bounty of Mother Earth and where and how to pick.

The assertion of Indigenous education, in Siska's Harvest Training and Certification Program, further formalizes the Siska Traditions Ethical Picking Practices (STEPP). Established in 2002, STEPP was created from Elder's teachings when Siska first began harvesting Nl̓eʔkepmx traditional forest resources for the purpose of sale. Siska Traditions Society (STS) recognized the need to re-educate the younger harvesters in Nl̓eʔkepmx ways – thus the concept of ethical picking and “training” for harvest emerged. Elders' teachings form the basis for Siska Traditions Ethical Picking Practices and include 1) Nl̓eʔkepmx language and culture, 2) respect for the land, 3) harvester health and safety and 4) food safety (T. Sampson, 2002):

As Siska Traditions initiates our own protocols, how we conduct ourselves when out on the land must be on our minds at all times. When we pick, we must leave enough behind to feed all our relations our Elders and children, the bears, birds, and other animals that depend on our traditional foods. We, First Nations are the stewards of our land and we must be on constant guard that we do not abuse Mother Earth.

What was once “common knowledge” of harvesting practices for Nl̓eʔkepmx plant foods and forest resources were new to some of the Siska community. Reflecting on the awareness of the need for harvest training, Chief Fred Sampson (Personal Communication, February 1, 2008) remembers,

I have been trained, I was trained by my grandparents. I like the idea of training because it is quite clear that a lot of our youth don't know what a person like myself knows about plants and medicines and harvesting. So I thought that it was really good that there was a training process. ... from the training itself, I learned that our young people need to be trained. The čewete? [*Lomatium nudicaule*] ordeal was a good example. People were bringing in the whole plant roots and all.

Since 2002 all Siska Traditions Society harvesters had already been receiving on-the-job training in the Siska Ethical Picking Practices. In this research, the Harvest

Training and Certification Program formalized that process and expanded its accessibility – beyond STS to the community at large.

3.1.3 Indigenous Philosophy On Stewardship And Management Practices

Indigenous people have the philosophy, “We do not inherit the land from our ancestors, we borrow it from our children.”(Morrison, 2006). This belief system creates an ethic of sustainability (Turner, 2005). It promotes continued Indigenous peoples’ values that nourish community health concepts that include that of the land and the people (J. Billy, 2006). This contrasts to a very different ethic in dominant contemporary culture which has led to vast material prosperity by exploiting natural and human resources world wide (Cajete, 1994, p. 25).

Each Indigenous Nation follows laws to ensure proper relationships within their communities (ecosystem and human). However the concept of law differs in that Indigenous law is derived from ecological observations of stability and balance, while European laws are about domination over ecological processes as Sakéj Youngblood Henderson describes (Henderson, 2000),

Aboriginal law is a highly integrated communion of values and processes....Aboriginal order and law are about sustaining relationships through ecological understanding, shared worldviews and languages, and ceremonies. Aboriginal laws are more about respect for every process in an ecosystem than about power over them....To remain rational all human societies must become more ecologically sustainable.

The context of climate change and ecological catastrophe makes Indigenous knowledge, pedagogy and practices relevant not only to Indigenous peoples but to all of humanity to restore balance to all beings through our actions. While Cajete urges us to consider these catastrophes as everybody’s concern, it is Indigenous Peoples who are being impacted most by these catastrophes (Cajete, 1994; United Nations General Assembly, 2005). Multiple modern pressures contribute to devastating impacts on Indigenous Peoples’ food resources. These pressures include: industrial logging, mining, tourism, urban development and the non-timber forest resource industry (Morrison, 2006; Nancy J. Turner, 2003). To access Indigenous knowledge to restore balance due to the above pressures, there must be a climate of social and economic justice and trust (Findlay, 2000). In the words of L.M. Findlay, “The obligations and

opportunities are obvious enough but, but old colonial habits die hard and Aboriginal suspicions derive from a heinous experience of colonial encounter.”

As Indigenous Peoples’ food plants are increasingly harvested commercially by people from “outside”, who have no connection to the place and no vested interest in ensuring the survival of ecosystems and human communities, more Indigenous peoples are witnessing abuse and damage to their traditional harvesting areas (Turner, 2001; Nancy J. Turner, 2003). Conflict over resources with non-indigenous commercial berry harvesters has been reported by several people from the Ktunaxa/Kinbasket Nation where there is a significant commercial huckleberry harvest (Williams & Clarricoates, 2002).

3.1.4 Existing And Proposed Indigenous Food Relationships Policy

Guidelines for gathering traditional food plants

Several guidelines for best practices in harvesting NTFR have been developed to address the increased impact and degradation to plants and harvest areas. These guides outline procedures to minimize impact of harvesting and to promote the ecological health of harvest areas and the plants themselves (Alberta Native Plant Council, 2005; Howe, 2006b). Royal Roads University- Centre for Non-Timber Forest Resources (CNTR) guidelines suggest that throughout First Nations traditional territory, cultural gathering has ethical priority over commercial harvesting; the guidelines, however do not recognize Aboriginal title. These guidelines also outline proper plant identification, storage and food handling to promote safety for the consumer (Howe, 2006b). These guidelines need to find their way into the hands of harvesters. However there is also the possibility that suggested practices may not be followed.

Certification of traditional food plants

Greater certainty of minimal impact to the environment and proper plant identification, handling and storage can be achieved through certification programs. While still voluntary, these programs require a greater investment by the harvester to report procedures and a complete inspections to ensure standard practices are maintained (depending on the certification). CNTR is in the first phase of developing a Best Practices and Certification for Wildcrafting and Medicinal plants. They identified the need for species-specific best practices information because there is such a variety of

practices for different species (Howe, 2006b). In the Good Wildcrafting Practices (GWP) for example,

These GWPs provide clear specific guidelines and information on plant identification, harvest area assessment, avoiding contamination and misidentification, part of the plant that should be harvested, harvest time, sustainability of harvest, processing, drying and storing for high product quality, batch tracking, official English language monographs, identification of commercial product, access to harvest areas, special points of concern for the species.

Harmonizing CNTFR certification with International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP) and Natural Health Products (NHP) will help address gaps in existing frameworks. Regulations for ISSC-MAP and NHP focus more on product efficacy, traceability, and safety including standardized Good Manufacturing Practices than on environmental protection (Health Canada, 2003; Howe, 2006a; Leaman, 2005).

CNTFR suggested that the certification of “raw ingredients” would be best under the Organic certification over the Forest Stewardship Council (FSC) program (Howe, 2006b). Organic Certification was favored as it already certifies food products. Wide spread consumer awareness of organic certification could increase return and create an incentive for the harvesters to certify. However organic certification does not require permission for harvest within First Nations traditional territories as the FSC certification does. CNTR does not address the need for consultation and accommodation with First Nations (“Haida Nation v. British Columbia (Minister of Forests)”, 2004).

If wild crafting practices are to be integrated into another certification body they should at minimum include the FSC requirements with regards to Indigenous peoples’ rights (Turner, 2001). Other certification programs also include these principles including the Silva Forest Foundation and the Forest Stewards Guild (Turner, 2001). Nancy Turner (2001) recommends that for development of sustainable harvest practices: “Following the lead, advice, and preferences of First Nations in harvesting NTFPs can give us much wisdom and direction.” Taking that lead with First Nations locally developed harvest certification is Siska Traditions Ethical Picking Practices and

the Northern Diversification Centre (Howe, 2006b; Northern Forest Diversification Centre, 2005; T. Sampson, 2002).

With lack of NTFR legislation, plant species seen as profitable have been exploited with a resulting population collapse, such as Western Yew and Cascara (Turner, 2001). Industries that do have significant state controlled resource management legislation have proved just as detrimental to the species targeted. State run forestry and fisheries resource management models enacted over the last 200 years in BC have led to devastating impacts to forest and ocean ecosystems. These systems under the control of First Nations were managed sustainably for thousands of years (Newell, 1993). As an example in forestry the “Annual Allowable Cut” (AAC) instead of acting as a maximum threshold, acts as a requirement to obtain a forest license, which is often exceeded (C. Atleo, 2001). For Nl̓eʔkepmx traditional food relationships (NTFR) we as a society can choose a different vision of stewardship and management recognizing First Nations knowledge and leadership (Turner, 2001).

Criteria and Indicators for Sustainability

Tl'azt'en Nation is taking a leadership role developed local level criteria and indicators (C&I) of sustainable forest management, within an Indigenous worldview. Tl'azt'en Nation's indicators can inform the process of policy creation for Siska and their Nl̓eʔkepmx traditional food relationships. These indicators are relevant to NTFR because the majority of plant foods are found in the forest and can be significantly impacted by forestry operations. Within the Tl'azt'en Nation approach “criteria are the essential elements that must be present to achieve a community's goals” and “indicators are direct or indirect signs and signals that can be used to monitor and assess criteria” (Sherry, Halseth, Fondahl, Karjala, & Leon, 2005).

Tl'azt'en's research shows that national and international frameworks can provide a foundation, but locally defined C&I and methods to generate them are required (Sherry, Halseth, Fondahl, Karjala, & Leon, 2005). Siska Traditions used a bottom up approach involving local people in NTFR policy creation. This approach may interest and motivate local peoples to become involved in research, management and monitoring (Sherry, Halseth, Fondahl, Karjala, & Leon, 2005). In New Zealand, the Maori have also created culturally relevant indicators of stream health based on Maori science and ecology to increase Maori participation in stream management and the

overall effectiveness of management practices (Townsend, Tipa, Teirney, & Niyogi, 2004).

Tenure

The question of Forestry tenure is integral to First Nations ability to continue their traditional food relationships. In Canada 80% of the 603 First Nations live in productive forest areas (NAFA 2005). Historically in BC, 95% of the land was appropriated unilaterally from First Nations peoples by the BC government, much of which is currently under the jurisdiction of “crown land” (Atleo, 2001). Much of the crown lands in BC make up the working forest, under the Forest Act the BC government awards tenures to log crown land. Since the late 1800’s First Nations people were largely excluded from the forestry sector, in fact prohibited from entering onto forestry companies’ tenured lands (Manuel, 1999).

Canadian Courts have consistently ruled that Aboriginal and treaty rights have been inextricably linked with natural resources and that the government has the duty to consult with Aboriginal peoples and accommodate their interests ("Haida Nation v. British Columbia (Minister of Forests)", 2004; National Aboriginal Forestry Association, 2005).

The government is beginning to include non-timber forest products in some community forest agreements as well as Aboriginal Forest and Range Agreements. Within forest tenures, aside from the exclusive right to harvest timber in a specific area the government may also grant the forest tenure holder exclusive rights to harvest, manage and charge fees for NTFP (Hillyer and Atkins, 2004).

These forest tenures are managed under the new Forest and Range Practices Act (FRPA). FRPA identifies eleven forest resource values— soils, visual quality, timber, forage and associated plant communities, water, fish, wildlife, biodiversity, recreation resources, resource features, and cultural heritage resources—that must be considered when planning and conducting forest practices (Government of British Columbia, 2002). What needs to be identified is how this act will be implemented and the inclusion of contemporary economic rights of First Nations recognized within the act.

Pamela Perreault's research into culturally modified trees (CMT) in Nl̓eʔkepmx Territory, found First Nations need to be involved with implementing decisions on the ground for forestry operations to recognize and respect legislated cultural and heritage values (Perreault, 2002).

Commercial harvesting of Indigenous peoples' traditional food plants currently happens on the fringes of the MOFR Forest and Range Practices Act. Within the current forest tenure systems there are significant impacts on many traditional food relationships, and possibly further implications if NTFR are integrated into the existing forest tenure (Gagné, 2004). This approach to tenure is not supported by STS, as expressed by Chief Fred Sampson (F. Sampson, 2004),

The approach to management within our territory is to establish a relationship with the Ministry of Forest to move our values into forest management practices especially around traditional uses and non-timber forest products. Elders talk about who should be doing this, they are quite adamant that it should only be First Nations people harvesting within their traditional territories.....I think that the management of non-timber resources is going to come from the pickers themselves and it needs to come from the pickers themselves. The pickers need to be a big part of how harvesting happens within traditional territories... We know that people aren't going to go away and we know that we need to develop partnerships, but we, at the same time, need to be able to have a strong voice in the management of our traditional territories.

Siska Indian Band signed a five-year Interim Forest and Range Agreement with MOFR in December 2004. Siska has a side agreement for "non-timber forest products" (NTFP) for the management and stewardship of non-timber forest products. This agreement includes the involvement of Siska in the Public Timber Supply Review that leads to the AAC in their area Siska Interim Forest (Siska Interim Forest and Range Agreement, 2004).

The idea of logging companies having control of non-timber forest products and selling rights to those botanical products within their tenures does not sit well with Chief Fred Sampson (Fred Sampson, Personal Communication, November 21, 2005). Using that model there is no responsibility for sustaining the plants; the logging companies can simply sell the rights to Nl̓eʔkepmx traditional food relationships to the top bidder and that bidder would do everything possible to make money back on that capital. This system could squeeze out independent harvesters, and harvesters would have to work

for brokers, who have the rights of the tenure. Harvesters would have to hope that they receive a fair price for the product; rather than independently being able to sell to the person who offers the best price for goods.

Perspectives on NTFR Tenure

Ministry of Forest and Range (MOFR)

Sinclair Tedder of MOFR, in his latest NTFP tenure research, suggests that due to the many contextual influences of NTFP establishing property rights or tenure in a similar way to timber may not necessarily lead to sustainable management. The specific resource and user related conditions suggest no single comprehensive management regime would be effective. Any management regime would need to be developed in coordination with First Nations and the users themselves. As First Nations communities have knowledge of and are tied to specific harvest areas, they have the conditions to effectively carry out local management. He also suggests that learning and adapting is integral to any management regime as it would be a new institution (S. Tedder, 2008).

Tedder does envision two possible ways management of NTFPs could be carried out. The first is to provide individual permits to specific species, however this may limit development of other species and whole ecosystem. The second proposal is to restructure the current forestry tenure system into timber harvesting and post-harvesting activities. This would lend to a co-management or joint management, where the post-harvesting activities would be managed by another entity that would manage for both silviculture reforestation and NTFP (S. Tedder, 2008).

BC Food Systems Network- Working Group on Indigenous Food Sovereignty

The Working Group for Indigenous Food Sovereignty (WGIFS) with over 60 Indigenous food harvesters at the first annual Interior of BC Indigenous Food Sovereignty Conference make several recommendations for Indigenous food policy. WGIFS state that an inter-ministerial approach between Ministry of Agriculture, Ministry of Health and Ministry of Forests is needed in the development of statutes

and policies that will protect, conserve and restore Indigenous hunting, fishing, and gathering food systems. Health funding allocated to community-based Indigenous food and health programs and centres is called for to support Indigenous food systems. Indigenous foods and economies need to be prioritized over large-scale commoditization in the newly emerging “non-timber forest products” industry. WGIFS go a step further than Tedder’s vision recommending removing commercial timber and NTFP harvesting aspect from adequate tracts of land set-aside for the exclusive purpose of protecting, conserving and restoring Indigenous food systems (Morrison, 2006).

First Nations Forestry Council

The First Nation Forestry Council (FNFC) position paper on NTFR gives further insight into future management strategies. They provide multiple solutions for both the short-term (12 months) and long-term (13-24 months). The first concern currently not being addressed within the existing forestry legislation is recognition that First Nations retain rights, title and interests to one hundred percent of non-timber resource values within their respective territories. FNFC addresses the need for First Nations to lead cross-cultural competency training with regards to NTFR use by First Nations people and the funding to do so. The government needs to facilitate the inclusion of First Nations representatives in all provincially focused research and regulatory discussions. Research funding is needed for First Nations to self-determine research needs. The scope of resource based accommodation agreements need to include management of NTFR. As a central management regime will not be effective for the diverse species, ecosystems and Nations in BC funding is required to set up regional discussion forums that would facilitate extension and learning opportunities. Finally as recommended by Monique Ross long-term area based forest tenures need to be made available to First Nations.

In the long-term the FNFC calls for the co-development of a regulatory regime between government and First Nations that recognizes, reconciles, and prioritizes Aboriginal rights with respect to access and use of NTFRs. All of these access and benefit sharing agreements need to be based on shared decision-making authority. Finally they call for funds to be made available to First Nations to explore NTFR

harvesting certification options and means of monitoring impacts appropriate to First Nations management concerns.

However policy alone will not create changes, it is in the processes enacted by policy (Perreault, 2002). In finding a new approach to conserving and protecting NTFR First Nations people practicing traditional food relationships must be provided a leadership role in the process. Traditional harvesters still maintain codes of ethics for harvesting as passed down to them by their ancestors. Siska's traditional knowledge holders play an essential leadership role in order to create Siska's proactive policy and certification for NTFR. STS approach couples policy with education recognizing many young people have not been taught in the traditional ways due to the harmful impacts of residential school. Siska's policy strategy focuses on Nt̓eʔkepmx traditional food relationship education so the younger generation will be empowered to act with their ancestors' land management knowledge. Therefore Indigenous science is important to achieve Siska's goals. Using the relevant aspects of Eurocentric science centered within an Nt̓eʔkepmx worldview can serve to meet the goals of STS within a value system congruent with their community's values (G. H. Smith, 2000).

3.1.5 New Ways Of Learning Traditional Knowledge

Eber Hampton expresses that his ideal contemporary Indigenous education is rooted in traditional Indigenous education values while integrating new approaches and technologies to reach the aims of self-determination, cultural continuity and success within both Indigenous and non-indigenous contexts (Hampton, 1995). The Siska Research Committee also acknowledged that new ways of learning are needed, that learning traditional knowledge cannot always happen within the family as it did in the past (Siska Research Committee, Williams, Michell, Munro, & Michell, 2008).

Traditionally Nte?kepmx education happened primarily within the family, mainly by relatives older than the learner (Sterling, 2002). As part of this research, Siska Research Committee explained several reasons why a community-wide approach to education was important for contemporary passage of traditional knowledge.

- Some families/generations had disruption of knowledge transmission within extended family due to residential school.
- Now the family unit is not always together; aunts, uncles, children, grandchildren living off-reserve or at a distance.
- Having community focused training provides a non-threatening way to learn for all generations. It removes the fear of ridicule a person may have because they did not learn certain traditional knowledge
- Multi-generational learning is important, providing learning for all ages from infants, children, youth, adults and Elders

3.2 Harvest Training and Certification Planning Symposium

This section describes the first step of community-based action research towards formalizing the HTCP. To create Siska’s Harvest Training and Certification program Siska Traditions Society hosted a two-day planning symposium to 1) survey the current state of the “non-timber forest resource” industry and regulatory regime in BC and 2) identify components for a local culturally-relevant program. The planning symposium and the harvest training certification program that followed were funded under Siska Band’s Forest and Range Agreement (FRA), within Siska’s Non-Timber Forest Resource Pilot Project (One of the few FRAs to include NTFR), funded by the Ministry of Forest and the BC ACADRE Grant.

Figure 4. Siska NTFR Planning Symposium Process To Establish Harvest Training And Certification Components



In planning the symposium, Siska invited Indigenous and non-Indigenous speakers to share their knowledge. This also created a space for dialogue and understanding of differing worldviews and strategies used by the different parties to gain validity within the “non-timber forest resources sector”. This follows from one of the characteristics Taiaiake Alfred (Alfred, 1999) identifies as a contemporary ideal of a strong Indigenous Nation:

The community has extensive positive social, political, and economic relationships with people in other communities, and its leaders consistently seek to foster good relations and gain support among other indigenous peoples and in the international community.

The symposium took place March 24, 25th, 2006 at the Siska Hall, Siska, Nl̓eʔkepmx Territory. Twenty-five people were in attendance, including 17 Siska community members. Following the opening prayer by Elder Horace Michell, Chief Fred Sampson gave opening remarks and co-facilitated the symposium with Michael Keefer, ethnobotanist.

Day 1 of Planning Symposium: Survey of the Current State of NTFR and regulation in BC

Beginning the workshop, Tim Brigham, from the Centre of Non-timber Forest Resources of Royal Roads University presented the Northern Diversification Centre and the Neskonlith case studies of community based training and certification programs for commercial models of “Non-timber forest resource” harvesting.

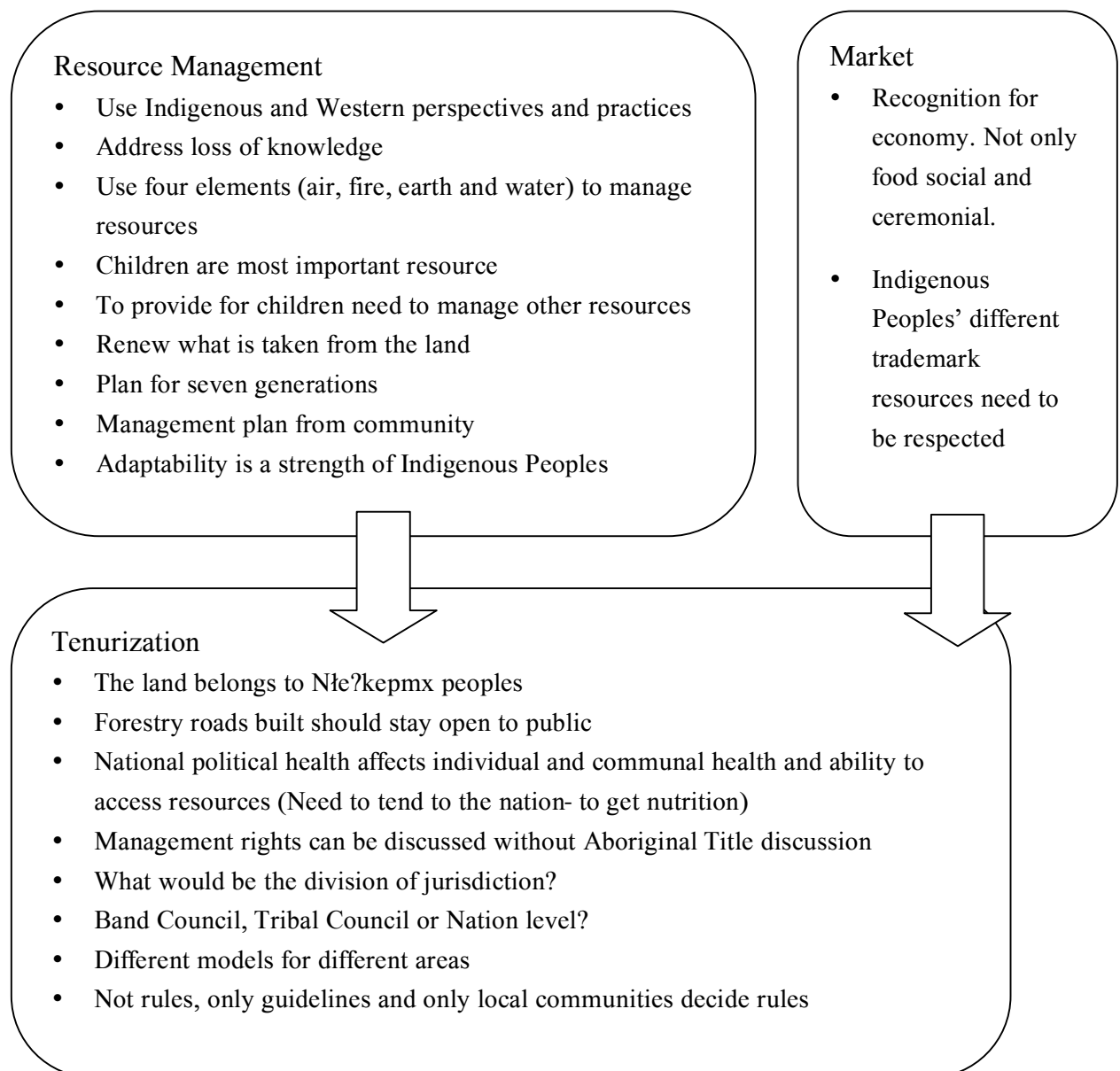
A panel discussion followed providing an overview of the current NTFR sector in British Columbia.

Bernice Garcia and Tracy Aljam, cultural resource experts of Tmix^w Research, Nicola Tribal Association presented ethical Indigenous research methodologies, methods for traditional use studies, including interview and mapping techniques.

Resource Management, Market and Tenurization

The day ended with a facilitated dialogue by Jim Adams, then Chief Executive Officer, Nicola Tribal Association about resource management, market and tenurization of Indigenous Traditional Forest Resources. Adams explained that the fundamental part of the discussion is policy around tenure. In order to defend proposed tenure policy, First Nations need research to validate it. Resource management and traditional use studies can provide that needed research to demonstrate the merit of proposed tenure policies. Key points from the dialogue with Jim Adams are presented in figure 1.

Figure 5. NTFR Resource Management, Market And Tenure Points Of Discussion



Day 2 of Planning Symposium: Community-created Siska Harvester Training and Certification Program

The first day of the symposium set the tone for the next day's discussion about designing a Siska Harvester Training and Certification Program. Three concurrent break-out sessions with the focuses of "Non-timber Forest Resource Sector", mushrooms, and education gave symposium participants an opportunity to distill the main points relevant to Siska's Harvest Training and Certification Program in small groups. Returning to the main forum, each group shared their points, which were posted on the wall with flipchart paper. A discussion of these points led to the symposium participants coming to a consensus of what components should be included in the Siska Harvest Training and Certification Program as listed below in Table 1.

Table 1. Siska Harvest Training And Certification Program Components

Spiritual practices: respect/honour the land, water and the animals
Build on Siska Traditions' Ethical Picking Practices
Stewardship and management at plant level, population level, ecosystem-level
Language and culture throughout training
Elders take on the field training role
The training would focus on a visual and hands-on learning style
In-classroom: bear alert, plant guidebook use, GPS training, first aid, food safe
One certificate for all plant types; training timed to coincide with harvest

Reflecting HTCP Planning Symposium- Survey and Evaluation

“Any courses regarding our native culture/traditions plants will be beneficial for sure. The hands on learning will be very helpful to me.”

-Workshop Participant, Siska 2006

“Elders have the experience and are our teachers, they do not need to be certified.”

-Workshop Participant, Siska 2006

To gain feedback from the wider community, 46 Siska Band members living in Siska and Merritt completed a post-symposium evaluation survey. Participants indicated in evaluations that the symposium and speakers were relevant and that they learned more about the current state of non-timber forest resources industry and regulatory system that exists in BC. The survey indicated: 74% of people harvested Nl̓eʔkepmx traditional forest resources. All those that harvested did so for the purpose of personal/family/community food use with 11% also harvesting for income. The most commonly harvested Nl̓eʔkepmx traditional forest resource was berries, followed by, in descending order, mushrooms, vegetables and medicines. The survey also included a section on educational preferences and computer skills. The preferred instructional method was almost unanimously hands-on, some also included visual and oral. Thirty-nine percent of people indicated good, average or above average computer skills. A small majority of people indicated they would not relocate temporarily for training, and unanimously people preferred training in the community.

This symposium created community-determined policy for culturally relevant capacity building program connected to practicing traditional food practices as well as identifying stewardship, management and tenure policy for the certification program to ensure sustainable harvest. It was these policies that were enacted in the Traditional Food Harvest Training and Certification Program. It is these policies that are evaluated by training participants in the follow up interviews conducted after the training program.

3.3 Action: Traditional Food Harvest Training

In each of the five training workshops held over the spring and summer of 2006 there was a focus on one particular plant harvested and sold by Siska Traditions Society. The c?éle (Mint- *Mentha arvensis*), swəlwfiqt (Stinging nettle- *Urtica dioica*) and tokaletqain (Heart-leaved Arnica- *Arnica cordifolia*) trainings took place predominantly at the particular harvest area. The q'am'es (generic term for mushroom- Morel- *Morchella sp.*) and the c'əlc'ále (Black Mountain Huckleberry- *Vaccinium membranaceum*) harvest trainings took place in community halls. The Huckleberry Jam training took place at the Siska Traditions Society laboratory. The following tables an overview of the harvest training workshops. These tables are followed by an in depth description the mint and stinging nettle training.

Harvest Training Proceedings

Table 2. Overview Of Harvest Trainings

	Harvest Training	Date	Training Location	Facilitators	Participants in attendance
1	Stinging Nettle and Mint	May 3, 06	Field North of North Bend	Horace Michell Maurice Michell Chief Fred Sampson Michael Keefer Nancy MacPherson	14 Participants Ages: 3-77
2	Morel Mushroom	May 5, 2006	Lytton Band Hall	Host: Chief Janet Webster, LFN Michael Keefer Ann Shore, Betty's Best Mushrooms	25 Participants Ages: 18+
3	Arnica	May 20, 2009	Pténí	Horace Michell Maurice Michell Chief Fred Sampson Michael Keefer	17 participants Ages:10-77
4	Huckleberry	Sept. 7 and 12th	Siska Band Hall	Maurice Michell Nancy MacPherson	5 participants Ages: 40-67
5	Huckleberry Jam	Sept. 11, 2009	Siska Traditions Society	Maurice Michell Glen Michell Nancy MacPherson	14 participants Ages: 7-14

Table 3. Nle?kepmx Traditional Plants Focused On During Training

Nlaka'pamux (English)	Latin Name	Family	Ecosystem
swəlwfiqt (Nettle)	<i>Urtica dioica</i> L.	Urticaceae	Coastal Western Hemlock
cʔéle (Mint)	<i>Mentha arvensis</i> L	Lamiaceae	Coastal Western Hemlock
q'am'es- - generic term for mushroom (Morel)	<i>Morchella elata</i> (black morel) <i>M. semilibera</i> (grey morel)	Morchellaceae	Interior Douglas fir/ ponderosa pine- bunch grass
Tokaletqain (Heart-leaved Arnica)	<i>Arnica cordifolia</i> Bong.	Asteraceae	Interior douglas fir// ponderosa pine- bunch grass
c'əlc'ále (Black Mountain Huckleberry)	<i>Vaccinium membranaceum</i> Dougl.	Ericaceae	Interior douglas fir/ coastal western hemlock/ subalpine mountain hemlock Dry to moist coniferous forests; medium to alpine elevations (Turner, 1990)

Figure 6. The Harvest Training Workshop Experience

The Harvest Training Experience- Stinging nettle and mint (May 3, 2006)

It was a bright sunny morning when everyone met at the Siska Band Hall. Chief Sampson welcomed all participants. Participants car pooled to the harvest area 60 km south of Siska near Q'apełcicn (North Bend). Driving along the Q^{wu}'uy (Fraser River) down the winding canyon and over Sxeñx (Jack Ass Mountain) the dry Ponderosa pine, balsam root, and grasses landscape transformed into Douglas Fir, ferns and moss covered rocks. As we crossed the Q^{wu}'uy we felt the temperature drop as we entered into the moist mountain hemlock and cedar forests.

We arrived as the last dew was evaporating from the leaves of mint and nettle, yet before the heat of the day. We formed a circle with Elder Horace Michell and Maurice Michell in the clearing surrounded by aspen and cedars. They showed us how to Yameet (pray), how to introduce ourselves to the area and the plants and give respect before beginning to harvest. Using Nte?kepmxcin and English Elder Horace and Maurice introduced *swəl'wl'iq̓t* (Nettle) and began to show how to harvest using scissors by pruning the plant to promote new growth. A rich group exchange followed sharing *swəl'wl'iq̓t*'s traditional uses and properties. When people began harvesting the meaning *swəl'wl'iq̓t* – “creates a stinging sensation” became a lived-experience. Those with short sleeves were shown how to use an antidote for the sting from the spores of the sword fern.

After harvesting there was a plant identification session with Ethnobotanist Michael Keefer and an introduction to using plant keys in the Lone Pine Plants of Coastal British Columbia. Upon returning to the Siska Hall we continued the workshop with a cup of wild mint tea and sampled the steamed nettle. Some participants at first apprehensive were assured that its sting disappears after cooking.

3.4 Reflecting On The Harvest Training And Certification Program

Follow Up Interviews

The goal of the HTCP was to be culturally relevant. For the follow up interviews I focused questions towards whether this goal was achieved. What was the learning impact? Did people transform their actions? What improvements could be made and what were implications of cultural relevance to traditional food stewardship, management and related policy?

To answer the question of cultural relevance I scripted the questions based on Ron Trosper's Comparative Framework for worldviews focusing on epistemology i.e. "What is knowledge? and how do we learn?". The interviews also had an evaluative component of the HTCP accessing learning impacts, transformative action by participants and implications and thoughts towards policy and rights to harvest. These findings are directly linked to the Traditional Knowledge for Health Research Objectives.

The interview guide was then reviewed with my supervisor, Shannon Cowan, and with colleagues, Maurice Michell, Traditional Knowledge for Health Research Coordinator, and Tina Edwards, Siska Language Instructor and harvest training participant. The interview guide can be found in Appendix H.

I did follow up interviews with nine harvest training participants a year and a half following their participation in the harvest training. I interviewed five women and four men. Three of the people interviewed were facilitators during the trainings. There was a range of traditional food and medicine harvesting experiences among participants. All people took part in at least one of the field trainings, and six people took part in two of the field trainings. Four people took part in at least one of the in-house trainings either for morel mushrooms or huckleberry. The majority of people interviewed said they learned how to harvest a plant for the first time during the training. Of the nine people, four different families within Siska were represented.

Follow Up Interview Results

The harvest training follow up interviews were analyzed qualitatively (O'Connor & Gibson, 2003). Participant responses were grouped together according to question and then summarized (O'Connor & Gibson, 2003). There was significant repetition in responses among participants. This repetition or saturation of the data is a measure of reliability, demonstrating that enough people were interviewed to make conclusions from the findings presented here (Patton, 2002). Reviewing the interview guide I grouped interview questions and responses in themes according to each question topic. For each theme, I listed the questions and summarized responses into tables. With each table I included quotes illustrating common responses in order to engage the reader into the narrative, allowing the reader to make their own conclusions (Archibald, 2008; Clandinin & Connelly, 2000). To ensure reliability and credibility of results; and for a respectful research process I verified the responses with each participant (Clandinin & Connelly, 2000). I present the summary results within each theme.

- 1) Cultural Relevance
- 2) Learning Impact
- 3) Transformative Change
- 4) Lessons Learned
- 5) Self-determined Responsibilities

Cultural Relevance

Table 4. How People Learned Prior To The Training

How did you learn to harvest traditional foods? (Question 2)
Responses
Learning occurred by hands-on methods or being shown how to pick
Grandparents and Elders
Parents
Friends
Husband
Harvest training was first time learning

“How did I learn, I learned from my grandmother, my mother, it was hands on, we went out, I learned from them as we were picking, and from my husband.”

- Tina Edwards

To assess whether the harvest training and certification program was culturally-relevant participants answered several questions related to knowledge creation (epistemology). The first question participants answered was about how they had learned to harvest traditional foods. Most participants had previously learned to harvest Ntɛ?kepmx foods from family; grandparents, and parents were most often mentioned. However, two people interviewed said they had learned from friends and Elders, as they were not exposed to traditional harvesting as children; they learned as adults. For all participants, previous learning methods were hands on. For one participant the STS harvest training was their first time harvesting traditional food.

Table 5. Indicators Of A Knowledgeable Teacher

How do you judge a teacher's knowledge is true or fact, or worth knowing? (Question 7)
Responses
Association to learner
Shows how it is done and why it is done in that way
Uses plants themselves
Is an Elder
Enthusiasm for the subject
Knows Nl̥eʔkepmxcin- Can name plants in the language
Knows harvest areas
Teachings can be verified in published book
Teaches survival knowledge
Everyone knows something different

I like them to show how something is done, and explain why, and then explaining what to do... And the teacher, I think it is very important for a teacher to know what they are teaching not learning things from a book, actually using the plants themselves.

- Betsy Munro

I guess judging knowledge comes from association. Knowing the Elders for a long time. Those Elders being able to identify the plants, using Nl̥eʔkepmxcin, you couldn't name a plant in the language and not know what that plant was. That is what I would judge an instructors ability on is do I know them, do they speak the language are they familiar with the areas. Those are pretty good indicators.

- Chief Fred Sampson

Participants provided various indicators of a knowledgeable teacher. Most participants responded that they judge a teachers' knowledge through association with that person. Other indicators included whether the teacher showed how to harvest, their enthusiasm and their enjoyment, and their use of the food or plants. It was also important if the teacher was an Elder or learned from an Elder.

Table 6. *Learning Preferences*

How do you think is the best way to learn? (Question 8)
Responses
Hands on (experiential), engaging all senses
Learning language, learning about harvest area and history
Immersion, regular harvesting from a young age
Book learning is not beneficial for learning to harvest

Me, for myself, I like to actually go out there and look at the plant and describe the plant and which parts are useful, because sometimes, like I was saying, you use the bulb and not the flower part. I always like hands-on learning myself, I like to see and do it not just look at a picture and they tell you this is what you do, I can't learn that way.

- Virginia Bleakney

Hands on learning, like when we went out with Horace and Maurice for the stinging nettle and the mint, I thought that was great, just learning about it, and learning the language along with it, learning about the area, especially the history.

- Tina Edwards

The unanimous learning style preference was hands-on learning. Some people specifically stated they could not learn to harvest from a book.

Table 7. Knowing Whether Learning Has Occurred

What is the best way to know or test whether learning has occurred? (Question 9)
Responses
Observe person harvesting
Combine on the land observation and in-house review
Observe their ethical picking practices
Person able to explain how to harvest
Monitor continued use
By a person's interest or curiosity
By the quality of product a person brings in

Just ask them, if somebody is showing me something, just ask them can you show me how you dig out that plant or only take the parts that you need and you don't take every plant, you got to leave half the plants, or 40 % of the plants there, so it will accumulate next year, Cause if you take all of them, it will be barren... That's with any plant, you always leave 40 % of the plants there, especially with c'tewete, because then they will get a chance to seed, and they will grow again.

- Virginia Bleakney

Seeing how fascinated they are with it, if they are interested, if they show a lot of interest... like I said all those boys they just grew up around me, so its just something that they're growing up with, curiosity. If I am curious in it then they will get curious in it.

- Glen Michell

In order to know (or test) whether learning occurred most participants replied that observing the person harvesting the food or plant. Some people replied that interest or curiosity shown by the learner and continued use of the food is a good indicator whether learning has occurred.

Learning Impact

Table 8. What Participants Liked Most About The Training

What did you like most about the harvest training? (Question 4)
Responses
Learning uses of plant foods and medicines
Hands on learning, how to pick, when to pick, where to pick
Togetherness, group learning, interaction between youth and Elders, sharing a meal
Being on the land
Survival skills
Open learning dialogue, free to ask questions
Learning one plant at a time
Practicing our traditional customs
Doing something so natural

Table 9. What People Remembered And Learned

What do you remember most from the training? (Question 5)
What did you learn at the harvest training? (Question 6)
Responses
Plant uses: cautions, what parts to use, different plant species, what is edible and not
How to pick: plant identification, when and where to harvest, how to respect the plant
How much fun people had learning hands-on, how fascinated youth were
Proper clothing to wear
Nłe?kepmx and English names
How to teach
How some people do not know about the power plants have to heal
Memory of late Elder
Changes in weather
Changes in transportation methods

Seeing the interaction between the youth and the Elder, getting out there on the land base within our traditional territories and practicing traditional customs.

- Chief Fred Sampson

Well it got everyone together, and we got to pick their brains about different plants, because everyone seemed to know already. Ask them questions about it, what is its use and when to pick it and that is all interesting, plus you all get together and have your lunch together.

- Virginia Bleakney

The learning impact of the harvest trainings was judged by what participants liked, learned and remembered. Participants liked learning the uses of the plants and medicines, the hands-on approach, how, when and where to pick as well as the intergenerational group learning.

Emotion is an important aspect of learning. Lee Brown describes this using the terminology of affective learning (F. L. Brown, 2004). There was a distinction of responses between those most experienced harvesters and facilitators responding to the positive group learning and interaction, and those least experienced focusing on learning traditional plant practices and uses.

Transformative Change

Table 10. Using Knowledge

Have you used the knowledge you learned at the harvest training? (Question 10)
Responses
Yes, have used knowledge since training
Passed on knowledge
Use plants more and a greater variety of plants
Use STS products more
Have identified plant to others
Invested in equipment to harvest more
Have increased my income

Table 11. Using Foods

Have you used those foods since the training? (Question 11)
Responses
Have used foods since training
Use more STS products
Make my own teas
Eat new foods that never did before
Need more training in preparation, to be comfortable using
Same
Same for favorite foods

Table 12. Spending Time On The Land Base

Did you change the amount of time you spend on the land base? (Since your participation in the harvest training) (Question 12)
Responses
Spend more time on land base, facilitated by group harvesting
More observant of different plants
Same time spent on land base (both experienced harvesters)
Depends on ability to find time

Oh yes, I spend more time out there. Now when I am out there, now I see, I look at everything, rather than just look for the deer and the moose, now I look at the conditions of the rose petals, the raspberry bushes, everything like scáq^wm and huckleberry bushes... we take note of where we are going what we see and try to go back there the next year to go harvest.

-Tina Edwards

To determine the transformative nature of the training, I asked a series of questions about how participants had used the knowledge and whether participants changed their actions since the harvest training. All participants interviewed had used the knowledge they learned since the training. An unidentified benefit of the training is the power of the teachings to reach beyond those participants that attended, similar to the “training the trainer” model. The majority of participants have passed on the knowledge they learned to others.

One participant invested in equipment to increase harvesting capacity/efficiency and has increased his income from selling mushrooms.

Those less experienced with that food felt they needed more training in food preparation to be comfortable using the foods. Whereas those with more experience were likely to either use the foods more often or maintain the same rate of use.

The majority of people spent more time on the land base, since participating in the harvest training with the exception of some experienced harvesters who spent a similar amount of time.

Lessons Learned

Table 13. Effective Way To Pass On Traditional Food Knowledge

Do you think this is an effective way for knowledge to be passed on to the next generation? If not what do you suggest? (Question 16)
Responses
Yes, the harvest training program is an effective way to pass on knowledge

Yes, for me because I had nobody to teach me. Yes it was good, because I was always too ashamed to ask all the time.

- Anonymous

I think so, because it only takes one youth or child to remember and learn [for knowledge to be passed on].

- Alice Munro

There was consensus that this was an effective way to pass on knowledge and the majority of people passed on the knowledge they learned in the training to someone else.

Barriers

Table 14. Barriers To Harvesting Traditional Foods

What barriers are there for you to get out on the land? (Question 14)
Responses
Access, road closures, outside users, logging, road conditions
Transportation, rides, have to travel further
Weather, climate change
No barriers
Balancing full-time work and harvesting

Yes there are barriers, there are logging trucks, loggers, sometimes we are told we cannot go up in the mountains because of the fire warnings, because it is too dry. Depending on the weather, whether the plants have grown or they are healthy, whether or not we harvest from them, because sometimes the weather plays a factor with the condition of the berries... Weather, logging trucks, time is a barrier sometimes, even road conditions... Sometimes, I would say vehicle traveling is a barrier. Sometimes we need vehicles to travel we don't have horse and buggy anymore, and we have to go further than we used to. We have to travel farther.

- Tina Edwards

The majority of participants discussed barriers related to access and transport while one third of people stated they had no barriers.

Improvements

Participants' suggestions for improving the HTCP were organized within categories of structure, delivery and content in Table 15. The consensus point was a desire for more training. From the policy perspective, Chief Fred Sampson identified the need for further legitimizing the certification process.

Table 15. Suggested Improvements And Extensions To The Harvest Training And Certification Program

How could the Siska Traditions Harvest training be improved? (Question 13) What other kind of workshops would you like to see? (Question 15)
Responses
Structure
Legitimize protocol surrounding certification
Increase recognition of peoples skills
Offer immersion programs- full day and week long camps on the land
Youth focused workshops- beginning with berries
Delivery
Offer courses more often
Offer courses regularly according to seasonal rounds
Repeat the same trainings
Introduce three to four plants at a time
More and better quality video
Use everyday language
Include multiple harvest areas and elevations to understand growth patterns
Content
More STS harvested plant species
More plant food species
Cedar root digging and other materials related to basket making
More about mushrooms
More medicines

How could the Siska Traditions Harvest training be improved? (Question 13)

What other kind of workshops would you like to see? (Question 15)

Responses

Include food/medicine preparation (Eg. Canning, ctewete salt, pit cooking, soap making)

Documentation- GPS/GIS skills, map reading, film training

Survival skills- including poisonous and edible plants

Self-determined Responsibilities

Table 16. *Self-Determined Responsibilities To Access What The Land Provides*

What knowledge matters for access to power and rights of what the land provides? (Question 17)
Jurisdiction Responses
<p>The right to harvest comes from knowing the Creator provided for everything needed for survival</p> <p>Nlë?kepmxs have the right to pick what they need for food and survival</p> <p>Ownership and rights are gained by learning ancestral teachings from Elders</p> <p>Language connects a person to the territory</p> <p>To have the right to harvest one needs to know the pre-contact landscape, the factors that impacted the pre-contact landscape, the present landscape and the vision for the future landscape</p> <p>We need to assert our needs</p> <p>Open access to Nlë?kepmx people within Nlë?kepmx Territory</p> <p>Request permission from the people of that specific area (Eg. Band, reserve, Territory)</p> <p>Request permission from Chief of that area</p> <p>Make sure it is not private property</p>
Stewardship & Management Responses
<p>Know ancestral uses</p> <p>Know the language connected to harvesting</p> <p>Know the terrain</p> <p>Share harvest with Elders and those who can not access harvest areas</p> <p>Use the plants in a good way that will not harm anyone</p> <p>Trade, do not sell</p> <p>Understand the plants spiritually, biologically, ecologically</p> <p>Know what is poisonous and edible</p> <p>Know when to harvest</p> <p>Implement stewardship practices</p> <p>Know how to look after each plant. For example, breaking branches (pruning) berry bushes to promote new growth and more berries for the following year</p> <p>Use a thinning approach, picking from "here and there" leaving enough for others to pick, and for plants to reseed themselves</p> <p>Protect areas from overuse</p> <p>Take only what is needed</p> <p>If a person takes too much or wastes what they have take, there will be less next year</p> <p>Do not step all over the plants</p> <p>Take proper supplies and wear proper clothing</p>

Continuing into policy dimensions participants shared what responsibilities come with using what the land provides. The main points participants shared are summarized in the above table under the categories of jurisdiction and stewardship and management in table 16.

3.5 Discussion Of Follow Up Interviews

The harvest training follow up interviews were analyzed by different interview question themes. The follow up interviews provide a useful indicator of whether the criteria established for the training is being met (See Table 1). Participant responses provide an evaluation of the HTCP as well as an identification of how the HTCP was fulfilling the Traditional Knowledge for Health research objectives. I begin by highlighting the broad conclusions as related to the original Traditional Knowledge for Health objectives. Following this section I then describe in detail the parameters of the conclusions made. Specifically:

- **Increase Siska community health, culture and capacity by generating culturally-relevant and ethical knowledge and practices for NTFR management**
 - Cultural relevance- Increased culture
 - Learning impact- Self-determined responsibilities- The interview results clearly identify that there is an increased engagement in Nl̓eʔkepmx traditional food relationships and capacity in ethical knowledge and practices- The majority of people citing ethical practices they use while harvesting
 - Transformative change- Increased food use and harvesting therefore increased health, nutrition, and physical activity
- **Engage community members of all ages in the process of cyclical generation of Nlakaʼpamux (Indigenous) knowledge systems based on traditional values, and contemporary methods (technologies)**
 - Transformative change- Majority of respondents passed on knowledge
 - Learning Impact- People enjoyed group and intergenerational learning

- **Promote self-determined control and application of Nl̓eʔkepmx knowledge systems to create increased economic diversity for Siska community.**
 - Transformative change- Majority of respondents harvested more plants increasing the community economy, one participant increased income through harvesting
 - Self-determined responsibilities- Interview participants clearly practice stewardship and management practices differentiating them as land stewards and managers as opposed to simply harvesters
 - Lessons learned- Next steps for further self-determination, control and application of such knowledge systems were identified

Cultural Relevance

Cultural Relevance

Cultural relevance of the training was judged according to the components identified during the STS planning symposium (Refer to Table 1) as well as Demmert and Towner's (Demmert & Towner, 2003) six elements for culturally based education (CBE) (See Section 1.4- Nl̓eʔkepmx Education). The follow up interviews confirmed that people had learned through hands-on methods in previous traditional food training and that this method was preferred unanimously. The preference for hands on learning is in agreement with the STS educational needs assessment survey (See Section 3.2) and to the neighboring Secwepemc First Nation educational needs surveys (Brigham, Keefer, Morrison, & Ralph, 2005). While always an important aspect of Indigenous education, the concept of the student immersing in a real experience is recognized in all education to ensure values are instilled. It enables a person to realize the consequences of their actions on other beings- human and non-human (Orr, 2004, pp. 96-97).

A knowledgeable teacher is judged through the indicator of association for the majority of those interviewed. This speaks to the need for the lead trainer to be a local person with a favorable reputation in the community. For a non-Indigenous person to be involved in training, as was the case at Siska, this feedback indicates that that person would need to be associated with other well respected community members and use culturally appropriate teaching style. As Alice Munro stated it was okay to have a non-indigenous facilitator, as long as they have learned from an Elder. Elders guiding the

non-indigenous persons role, coupled with community control and direction is recognized in Maori research as the only way for a respectful and effective approach including non-indigenous peoples (L. T. Smith, 1999).

Following from the preference of hands on learning the majority of participants indicated that a knowledgeable teacher shows how it is done, and that testing for skills should be through observing the person harvest. This indicates that knowledge must be put into practice to be recognized as such, which follows from theory of learning as transformation (Owen, 1991).

While these trainings were aimed at youth and adults, the youngest participant was three years old; she watched her parents and helped them pick. It is creating this open environment where families can attend and participate together that adds to the cultural relevance, as the family unit is central to harvest activities. Teaching children early fosters interest in traditional foods as they get older (Morrison, 2006). There are Nle?kepmx education methods to start training toddlers to harvest at an early age. Maurice Michell described to me that while the adults were out picking, the small children would stay in the camp and the older children would watch over them. When his mother returned to camp her basket would be full of berries. “Mom would pick a few branches, with berries on them, that is what we were allowed to eat. We would pick them off the branch, it was like training, learning how to pick the berries off the branch to eat.” These Nle?kepmx Educational methods have the ability to increase the benefit from the existing Siska HTCP.

Learning Impact

The learning impact of the training revealed an emotional interest in what was taught confirming affective learning; important for transformative education (Brown, 2006). While the training is aimed at increasing traditional food knowledge and practices, the results showed an unexpected benefit for those most knowledgeable and experienced. The facilitators were positively impacted from the appreciation the learners had for their instruction. Facilitators were empowered by the successful sharing of their knowledge and were motivated to continue sharing their knowledge with others.

Transformation

The transformative nature of Siska's HTCP is demonstrated in participants unanimously responding that they used the knowledge since the training (Owen, 1991). To increase least experienced participants traditional food use, trainings must include the complete process of harvesting including: processing, storing and food preparation.

With the majority of participants using these plants more, a direct link between the training and health can be made as traditional foods:

- Provides an excellent source of nutrition (H. V. Kuhnlein & Receveur, 1996; Harriet V Kuhnlein & Turner, 1991),
- Requires physical activity to harvest (Bull, Eakin, Reeves, & Kimberly, 2006)
- Are a cultural activity recognized as important to overall wellbeing, mental and spiritual health (Kishk Anaquot Health Research, 2003; Spack, 2003)

Programs aimed at increasing culture and social capital, such as the STS HTCP, are important in reducing the risk of suicide among First Nations youth. Culturally relevant health programs, such as STS HTCP, need to be supported in policy along with standard mental health care services (MacKinnon, 2005; Mignone & O'Neil, 2005).

The only person who increased their income following the trainings had participated in the morel mushroom training. While the morel mushroom training did not meet all the criteria identified in the planning symposium such as being hands-on, and taking place on the land it had the greatest number of participants.

There was the unexpected result found that Siska's HTCP acted as a "training the trainer" program, as the majority of participants passed on knowledge from the trainings, to their children and other family members. This also took place in the reverse, youth who participated passed on what they learned to their own parents, which inspired further learning by the parents (Pierre, 2006). These patterns in knowledge translation confirm the cyclic and active characteristics of Indigenous knowledge (Smylie et al., 2003).

Lessons Learned

Participants identified similar barriers to harvesting as reported by neighboring Sto:lo First Nations and many other First Nations around BC (Fediuk & Thom, 2003; Turner & Turner, 2008). These similarities point to systemic reasons for decline in traditional food use, such as reduced access due to government legislation and environmental degradation. Also connected to access is the barrier of transportation. Participants spoke about having to travel further as many traditional harvest sites are no longer productive, due to Nłeʔkepmx's lack of jurisdiction to steward and manage sites (T. Edwards, 2008).

The HTCP provides an opportunity to bring some traditional management practices back onto the landscape through the education component of the HTCP. The Research Committee identified community wide learning processes as important and so did participants. Policy makers recognize that for survivors to heal from residential school impacts, non-threatening, on-the-land learning environments to connect to cultural and traditional values are especially important (Wesley-Esquimaux & Smolewski, 2004).

Improvements

Participant's unanimous desire for more training and Chief Fred Sampson's desire to legitimize the HCTP can both be achieved through implementing the New Relationship and specifically the Forest and Range Practices Act (First Nations Summit, Union of BC Indian Chiefs, BC Assembly of First Nations, & Government of British Columbia, 2005). In forestry this means recognizing Siska Traditions ability to create and implement policy for NTFR and cultural and heritage values. Benefit sharing from current forest revenue within the Nłeʔkepmx Territory could be directed towards continued pilot of the HCTP and further development of Nłeʔkepmx traditional food relationship policy in collaboration with the wider Nłeʔkepmx Nation. Wider collaboration within the Nation has the potential to strengthen Siska's initiatives, and increase opportunities for peoples' learning.

The HTCP directly responds to the Transformative Change Accord action areas including mental health strategies to reduce substance abuse and youth suicide and reduce incidences of preventable diseases such as diabetes (First Nations Summit, 2008; Morley, 2006).

Self-determined Responsibilities

Jurisdiction

When asked, what knowledge matters for access to power and rights of what the land provides, participants responded by discussing both jurisdictional and stewardship & management responsibilities. By participants' responses focusing on responsibilities it demonstrates Nl̓eʔkepmxs act as stewards and managers, not mere users of plants (S. Tedder, 2008). Nor are Nl̓eʔkepmx people stakeholders as referred to by the Centre for Non-Timber Forest Resources at Royal Roads University (Royal Roads University, 2007). The Oxford dictionary refers to stakeholders as a third party. First Nations are the original sovereign nations that govern this land, now known as British Columbia. Referring to First Nations as stakeholder undermines that sovereignty.

Some participants identified jurisdiction as granted directly from the Creator, connecting Nl̓eʔkepmx traditional forest relationships to the spiritual. There is a reverence and reciprocity shown in the jurisdictional right to traditional food relationships- as the plants offer themselves as gifts, they must be respected through use. If plants are not used it is believed they will disappear as Maurice Michell illustrates,

“Like my Mom said, when the Creator made us there, he made everything for us to use and she said, if you stop using it, it will start go away. So she said pick a little bit of whatever... that way the Creator knows you are still using it.”

Other people expressed the right to harvest originates from being Nl̓eʔkepmx and that gives the right to survive- to pick what was needed. Traditionally Nl̓eʔkepmx people shared harvest areas communally, however some participants described current access as being open. This contrasts the change that has occurred in traditional food stewardship and management. Traditionally communal harvesting occurred by following an old woman's direction and management for specific harvesting areas (H. Michell, 2008; Teit, 1900). Some participants described a modern translation of this direction by respecting different areas by requesting permission from the chief or people of that area. Participants explained that their right to pick was always paired with responsibility to provide for Elders and others who cannot access harvest areas. This type of benefit sharing (or redistribution of wealth) is a common Indigenous resource use practice, as described by Ron Trosper's description of the West Coast

Indigenous potlatch institution (Trosper, 1998). Participants described the right to pick is gained through such ancestral teachings. Knowing Nt̓eʔkepmxcin connects a person to ancestral teachings and to the territory, as language expresses local ecologies including both external life forms and invisible forces (Henderson, 2000). As described by participants and articulated in STEPP, most Aboriginal law are processes that sustain and nourish relationships expressed as an ecological unity without separation of humans and nature (Henderson, 2000). Similar to Tl'azt'en criteria for sustainable forestry focus on the degree to which their Nation is healthy and sustainable including the environment in which to live and grow (Sherry, Halseth, Fondahl, Karjala, & Leon, 2005). This aboriginal law transmitted through ancestral teachings speaks directly to stewardship and management practices as described by participants, for example: giving respect to the plants and to the land, understanding the plants spiritually, biologically and ecologically, using harvest techniques that promote plant health, and take only what is needed.

Together the jurisdictional, stewardship and management responsibilities identified by Siska HCTP participants demonstrate proactive practices to nurture traditional food relationships. These responses demonstrate that Siska Traditions Ethical Picking Practices (STEPP) are being practiced following the trainings. These responses from participants and the complete STEPP could be used, to formalize a framework for criteria and indicators of Siska Ethical Picking Practices.

3.6 The Next Cycle Of Learning

A First Nations territory-based approach to management would compliment the natural ecosystem boundaries found within BC. Chief Fred Sampson (C. F. Sampson, 2006) has pointed out that First Nations territorial boundaries are aligned with many of natural ecosystems found within the province. Each First Nation has learned to work in harmony with the particular ecosystem niche for survival. Each First Nation has intimate knowledge of the lands criteria and indicators for health. First Nations position to manage for NTFR is further supported by the fact that First Nations have long rooted histories in particular ecosystems and have developed strong ecological management and observation practices particular to these ecosystems (S. Tedder, 2008; Turner, 2005).

3.7 Conclusions

The Siska Traditions Ethical Picking Practices- Harvest Training and Certification Program (HTCP) provide policy for the management and protection of Nl̓eʔkepmx traditional food relationships, of which some are referred to as “non-timber forest resources”. There is a need for policy and research calls for a different approach from existing Ministry of Forest and Range timber tenure policy (S. Tedder, 2008).

The Siska community policy creation process provides clear direction for jurisdiction and management of NTFR. Aboriginal title and jurisdiction will guide NTFR management. Management areas will be agreed upon according to Indigenous territorial jurisdiction. The management plan will be determined by local community members, and will be adaptable. Indigenous knowledge and values will be used in coordination with Western science. One such Indigenous value integral to NTFR policy is benefit sharing to local community members.

At the forefront of the HTCP is Nl̓eʔkepmx traditional food relationship education, as recommended by multiple Indigenous guidelines for sustainable resources. This research demonstrated the effectiveness of the NTFR harvest-training component in its evaluation. Interviews with HTCP participants demonstrated they are NTFR stewards and managers of NTFR, not mere users. Community members unanimously felt the STEPP harvest trainings were an effective way to pass on NTFR knowledge, practices and values. Siska community members unanimously wanted the STEPP harvest training to continue and to be expanded. This research concludes that the HTCP has clear benefits for Aboriginal peoples’ health, traditional food health and ecosystem health.

Chapter 4: Youth-Elder Traditional Food Interviews

4.1 Introduction

Research into the importance of traditional foods among First Nations in BC has found the lack of First Nations autonomy in regard to the exercising of Aboriginal rights and the making of decisions affecting traditional food resources to be major factors in not only environmental degradation affecting traditional foods, but also a decline in traditional food use (Fediuk & Thom, 2003; H. V. Kuhnlein & Receveur, 1996; Richmond, Elliott, Matthews, & Elliott, 2005; Turner & Turner, 2008). Other causes of the declining traditional food use deriving from colonization include the impact of residential schools, the shift to a wage-based economy, the presence of grocery stores and their suppliers, and the impacts on youth of advertising (Turner & Turner, 2008). This dietary change has led to poor social, cultural, economic and physical health; at the same time, the knowledge, beliefs, and values associated with Indigenous stewardship and management of traditional food resources have also been impacted (Fediuk & Thom, 2003; Richmond, Elliott, Matthews, & Elliott, 2005; Turner & Turner, 2008).

Building food sovereignty is a way of overcoming these impacts of colonization. Youth participation in the intergenerational passing-on of traditional food knowledge has created a turn-around in traditional food knowledge and use in some communities (H. V. Kuhnlein & Receveur, 1996; Morrison, 2006; Nuxalk Food and Nutrition Program Staff, 1984; Turner & Turner, 2008). This turn-around is evidence that the most effective traditional food research models are those that are: directed by communities and combined traditional food practices, promotion and long-term planning (Harriet V. Kuhnlein et al., 2004; Lopaz, 2002; Nuxalk Food and Nutrition Program Staff, 1984; Potvin, Cargo, McComber, Delormier, & Macaulay, 2003).

The Siska Traditions Society has declared traditional foods as central to community health and wellbeing. Also, the wider Siska community has agreed that traditional foods are important to strengthen and increase health, as expressed during research committee meetings and community forums. This consensus led to the question of how Nlë?kepmx knowledge about traditional foods and spiritual, cultural and linguistic practices can be used in a contemporary context to benefit the health of Siska

community members. Questions that came up at these forums included “How can we get our youth into traditional foods?” and “What good knowledge do we have to teach youth about health?” The wisdom and oral histories of the Elders in combination with the motivations and interests of the youth could give the Research Team valuable insight into these questions.

This chapter is about honouring Nl̓eʔkepmx Elders as educators and youth as the leaders of tomorrow. Nl̓eʔkepmx Elders speak of a time when their people were healthy, when traditional food practices and use were a way of life. These oral histories can serve as a powerful learning tool for younger generations (Huntley, 1998; Snively & Williams, 2006; Swan, 1998; E. J. C. Thompson, 2004). Nl̓eʔkepmx Elders hold the wisdom of their ancestors, realized through their own experiences; and they share their wisdom to help others improve themselves (Siska Research Committee, Williams, Michell, Munro, & Michell, 2008). This chapter describes how Elders’ process of sharing knowledge was facilitated through the Traditional Knowledge for Health Research Project. It aims to achieve the objective: **engage community members of all ages in the process of cyclically generating Nl̓eʔkepmx (Indigenous) knowledge systems, using traditional values and contemporary methods (technologies).**

4.2 Methodology

“We can learn more from Grandma than this research can do.”

-Mary Williams, Research Committee Meeting September, 8th, 2009

Mary Williams’ words speak directly to the need for Elders’ involvement in research, and for that research to be action- and education-oriented. Accordingly, the Research Team included each of these aspects in the Youth-Elder Interview methodology. Grounded in Indigenous self-determining and community-based action-research methodologies (see Chapter 2), the Youth-Elder Interview draws upon storytelling, First Nations education, and multi-media research methodologies. I will first discuss the community action-research processes that recommended the Youth-Elder Interview methodology. I will then introduce and explain how storytelling, First Nations education and multi-media research methodologies informed the Youth-Elder Interview research.

4.2.1 Developing Youth-Elder Interview Methodology

Action research recognizes that community members know better than others what research actions will and will not work to address their research objectives (Stringer, 1999). As well, Denzin (2000) and Patton (2002) asserted that including multiple community perspectives and recommendations in the research process contributes to the reliability and validity of that research.

Here, the Youth-Elder Interview method emerged from multiple community recommendations to acknowledge the role of Elders in passing on traditional health knowledge directly to younger people. Siska youth engaged in and contributed to the Youth-Elder interview method by informing the Research Team of their motivations and learning objectives. Youth objectives were then integrated into the interview guide and youth researchers carried out the interviews.

By following a community-based action-research process of planning, acting, and reflecting, our Research Team was able to gather research results that we could apply to subsequent research methods. This dynamic element of our work gave us ongoing opportunities to reflect on how to improve the usefulness of our methods, thus improving our subsequent research. The community members' opinions expressed in this chapter demonstrated that process.

Affirmation of the important role of youth in research emerged through this process in the community-wide forum for the Traditional Knowledge for Health project on July 26th 2006 (See Chapter 2, Section 2.3.4). Of the many suggestions voiced about youth participation in the research, some typical comments were “youth are very important, maybe if they got involved they could carry it on when they got older,” “ask the youth what they want to do,” “have once a month stories by Elders, have youth get to know Elders better,” and “youth just need the opportunity to be productive and learn.”

Finally, in a Siska Research Committee meeting September 8th, 2006, the discussion, focused in large part on health education and Nl̓eʔkepmx teaching methods, turned to how Elders could help develop the knowledge of youth: “grandparents are a very important part of education,” “you need to talk at someone’s level. Need to use humour, to teach about health,” need to find an Elder that can relate to young people”

and “do storytelling about health,” since “puberty is a time to talk to our children, that is the key time that can decide a person’s life, which way are they going to go.”

Committee members pointed out not only that “the kids want you to give them your time,” but also that “working with the kids, you can start to influence the parents.”

What these multiple community perspectives have in common is the importance of both Youth and Elders in improving community health and continuing Nl̓eʔkepmx knowledge and practices. In the next section I link these community-based recommendations to the storytelling, First Nations education, and multimedia methodologies that informed the research methods.

4.2.2 Storytelling Methodology

Indigenous knowledge systems use stories as a way to convey values and processes to form knowledge. These stories have historical bases and are securely rooted in actual events and geographical locations; therefore, the term “oral history” may be used interchangeably with the word “stories.” Through experience and reflection, the knowledge communicated through these stories becomes wisdom. This knowledge creation process is cyclical, since the resulting wisdom can be passed on in the same way through new stories (Smylie et al., 2003). Jeanette Armstrong (1998, p. 181), renowned story-teller, educator and Director of the En’owkin Centre, describes this cyclic process of story-telling as connecting her and the listener to her people, her ancestors, and the land:

“Through my language I understand I am being spoken to, I’m not the one speaking. The words are coming from many tongues and mouths of Okanagan people and the land around them. I am a listener to the language’s stories, and when my words form I am merely retelling the same stories in different patterns.”

Maurice Michell, our Research Team coordinator, speaks to the values embedded in Indigenous stories: “If everyone went by stories, everyone would be in tip top shape because there is a lesson in every story” (M. Michell, Pers. Comm. 2009).

The idea for youth to interview their Elders as a storytelling methodology that could be used for research about traditional foods and health came from Darwin Hanna, lawyer for the STS, who stewarded the development of the ethical research Traditional Knowledge Protocol (See Chapter 2, Section 2.2). As co-author of *Our Tellings*,

Hanna described how stories, especially those told orally, served successfully to enhance cultural and linguistic continuity among Nl̓eʔkepmx people (Hanna & Henry, 1996).

Nl̓eʔkepmx stories can be characterized as *sptákʷeł*, the “Creation stories” and *spilaxem*, “historical stories” (Hanna & Henry, 1996; Johnson, 2001). In her research into Nl̓eʔkepmx oral traditions, Shirley Sterling uses storytelling, *sptákʷeł* and *spilaxem* as the research subjects, methodologies, and methods. Sterling describes storytelling as a living story experience shared by the teller and listener. While the stories may take place in the past, they are relevant to today’s contexts from learning how to gather food or make a fish trap, to understanding strategies for resistance, university courses, or land claims. At the same time as they communicate such knowledge, they also pass on values and attitudes that connect the listener to other people, places, the community, the land, the elements, animals, their own emotions or self-identity, and they facilitate decolonization and the development of an Indigenous world view and self-determination (Sterling, 2002). In addition to storytelling being a culturally relevant and empowering methodology, Indigenous educator, Ida Swan points out (Swan, 1998), that storytelling methodology may be so successful largely because “all people, young and old, love stories.”

Indigenous oral tradition of storytelling serves many purposes beyond recording factual histories. William Basso began his work with the Apache people of Cibecue, recording place names and their associated oral histories to support land claims. These oral histories related to places are also a concrete reminder of ethical standards and a respectful, harmonious way of being in the world, as well as of the consequences of unethical actions (Basso, 1996). These embedded meanings sharply distinguish Indigenous stories and oral histories from European attempts to present these Indigenous tales, attempts which tend to diminish them to little more than simplistic, proto-science explanations of natural phenomena (Johnson 2001). For centuries, this view of Indigenous oral traditions caused Europeans to discount Indigenous knowledge and culture. In *Delgamuukw v. the Queen* (1997), however, these stories and oral histories were recognized by the Supreme Court of Canada as legitimate forms of evidence (Mills, 2005). Marie Battiste contends that, following this legal recognition, all other decision-makers should similarly consider the relevance of oral traditions to their research and in education (Battiste, 2000).

In her work concerning transformative education, J. Ball (2004) describes the success that Indigenous students achieved through interacting with Elders and participating in and listening to stories. Ball highlights the importance of role-modeling for students by mentors during storytelling. Sterling (2002) described specific successful outcomes of the use of narrative, or Indigenous storytelling, for educational purposes: they represent one of the most lasting methods of Ntɛʔkepmx education over time; the story teller as a role model; hands-on experience, theory, and concrete practice being used together; mnemonic devices, which help listeners to remember, use, and love the activities learned; and the egalitarian rather than hierarchical relationship between the story teller and listener.

Jo-ann Archibald's Storywork methodology explains that for a listener to learn from an Elder's storytelling, there must be a respectful knowledge-sharing protocol and active participation for both- of heart, body, mind, and spirit (Archibald, 2008). When this respect full sharing occurs stories can take on a life of their own. Each person may interpret stories differently and gain different meanings from them at different developmental stages in their life (Archibald, 2008). These aspects of the storytelling methodology are discussed in greater detail in the methods and results sections of this chapter.

4.2.3 Lifelong Learning From The Heart

The Research Committee and Research Team discussed Youth-Elder Interviewing at length. During a committee meeting on October 16, 2006, Elder Mary Williams expressed the strong desire to share knowledge with the younger generation in a way that would be long lasting and transformative. She stressed that for real learning to take place, youth had to feel motivated, to actively participate, and to experience real passion and inspiration: "We need youth that want to learn these things, take it into their heart...that is different than learning from a book or a video." It appeared to the Research Team that the use of narrative methods would serve this purpose. Similarly, in the film "Bowl of Bone - Tale of the Syuwe" that Annie York created with Jan Marie Martell, Annie York, who taught many Ntɛʔkepmx and non-indigenous people Ntɛʔkepmx ways, expresses her frustration with the method frequently practiced today by non-indigenous learners of relying on recorded teachings (Martell & York, 1992). She explains that to learn, she didn't write things down or record them; for her to learn

meant taking the teachings into her heart so that when the moment came for her to use them, she would be able to draw upon them. These words from Mary Williams and Annie York express how important emotional investment is to learning.

The emotional investment in learning is an important aspect in transformative education—that which seeks to change a person's attitudes and behaviors. Lee Brown using the Medicine Wheel model for education discusses that when a learner has the will to learn and engages emotionally, physically, spiritually and mentally with the subject matter transformative learning can occur (F. L. Brown, 2004).

Methodologically, video recording can document Elders' stories and wisdom for future listeners. However the Siska Research Committee recognizes the knowledge creation process also requires the learner's emotional investment and active participation in the process (Siska Research Committee, 2006). In practice, the Youth-Elder Interview method meant that the learners' emotional investment and will to practice the knowledge learned was integral. Learners embracing these conditions can then gain biophysical information about plants and other foods—their ecology, harvesting, and processing—and their recognition and development of values, cultural meaning, personal experience, and reflection (Bopp, Bopp, Brown, & Lane Jr., 1985; F. L. Brown, 2004).

Elders' knowledge about traditional foods and medicinal plants already contributes to culturally relevant curricula for science, history, social studies, life sciences, and other courses. Much of this curricular content draws on participatory research methods involving community Elders and Youth (Huntley, 1998; Snively & Williams, 2006; E. J. C. Thompson, 2004). Traditional foods research contributes the conceptual and theoretical knowledge taught in Aboriginal science courses, which emphasize how connections and sacredness relate to health and wholeness (Goodfeather & Weenie, 2007).

Furthermore, recent research has brought Elders and Youth together; it has empowered Youth in BC Indigenous communities and schools to co-create health-promotion curricula and to identify Youth preference for an approach rooted in existing strengths of cultural and traditional knowledge to promote health (Riecken, Tanaka, & Scott, 2006; Scott, 2006). Because they provide opportunities for affective learning (hands-on doing and reflecting), which is directly related to strengthening interest in

subject matter, the will to learn, and emotional affirmation, such Youth-developed curricula are more likely to appeal to the interests and perspectives of young people (Bopp, Bopp, Brown, & Lane Jr., 1985; L. Brown, 2004).

Culturally relevant curricula have been acknowledged as a solution to the education system's failure in regard to Aboriginal children for over twenty years (Huntley, 1998; V. Kirkness & Barnhardt, 1991; V. J. Kirkness & Bowman, 1992). Such curricula have increased school completion rates and achievement among Indigenous students (V. J. Kirkness & Bowman, 1992). However, education that is liberating rather than assimilating for First Nations students is not yet offered in many schools (Swan, 1998). Indigenous Education Professor Ida Swan contends that "the whole process and purpose of Aboriginal education must be established at the community level if it is to benefit Aboriginal People" (1998).

Della C. Warrior, tribal leader, member of various US national educational advisory committees, and retired president of the Institute for American Indian Arts, has found that where Indigenous people celebrate their culturally relevant education, grassroots people from the local community are involved in the achievement (Warrior, 2007). Many Ntɛʔkepmx people support cultural relevance in the classroom, which in turn requires culturally meaningful curricular material (Oppenheim-Lacerte & Loring, 2009). The Youth-Elder Interview methodology developed for our project may help to provide such material in a variety of subject areas.

4.2.4 Multi-Media Research Methodologies

In the first Research Committee meeting (September 8, 2006), discussion turned towards the challenge of getting youth involved in learning about traditional foods because of many modern day distractions. One of the Research committee members, Mary Williams, suggested, "You know, technology may be part of the problem, but it could also be part of the solution...". This comment opened up a dialogue on how to include video technologies within the traditional knowledge learning process in order to be more appealing to youth. As youth were really interested in using technology, such as computers and cameras, incorporating these technologies into research methods became an incentive for them to participate in the interviews. In fact, it could be argued that use of video and computer technology in the interview portion of this research provided a bridge across the metaphorical river of time so that the younger

generation, whose worldview encompasses technology and information much differently than that of their Elders, could engage actively and passionately with the traditional teachings about food and health.

The capacity for video recordings to serve as educational tools, as part of a legacy of learning and community socio-ecological history, is acknowledged. Along with Indigenous knowledge being passed on orally, video and print-based technology was used in this research to make recordings of the interviews. Video recordings have the capacity to promote, and assert Indigenous knowledge more than audio or print recordings because the knowledge-holder is visible and their voice and actions tell the story along with their words (Huntley, 1998). In this way, the viewer/learner has more potential to interpret the multiple levels of learning that are available, beyond the language communicated (eg. Body posture and emotion that reveals depth of significance of the teachings and opinions held)(Archibald, 2008).

The Research Committee anticipated that no amount of technology to aid in sharing of research results would be as powerful as an experiential learning interaction and direct oral transmission of Indigenous knowledge (Archibald, 2008). Importance of maintaining oral history and traditions is also recommended by educator and researcher Bente Huntley (Huntley, 1998). Hence, the research methods included some of the Siska community younger generation directly in the interview process.

4.3 Methods

4.3.1 Planning And Preparing

One of the Research Team members, Glen Michell, informally surveyed some of the youth for interest in film-making and their positive response set the film project in motion. The Research Team then adjusted the budget to purchase a camcorder and cover course fees for Glen Michell to attend the Aboriginal Intensive Media Course at Galiano Island Film and Television School (GIFTS). Glen completed this course and then mentored nine youth in filmmaking for the purpose of the Youth-Elder interview portion of this research.

Youth Engagement Workshops

Letter-writing workshop

The objective of the Letter Writing Workshop was to create a space where all youth could come and learn about the Traditional Knowledge for Health project. The research team had previously put up posters asking youth to submit a letter to the Band Office in interest to participate in the project, and no one responded.

Posters around the reserve achieved advertising for the letter-writing workshop. The Research Team also used “word of mouth”, directly inviting youth to attend the workshop and reminding youth of the workshop by contacting them individually that day.

Youth wrote letters in response to questions: 1) Why do you want to interview your Elders? 2) How will this help you and your community? After this was complete, the research team presented the goals of the project and how youth could be involved. Youth asked questions and shared their opinions about the project.

After the workshop, the Research Committee decided that all youth who had written a letter would have the opportunity to participate in the project, in an effort to send the message that the research environment in the community was inclusive. Nine youth chose to participate in the research. Each youth who chose to participate gave their own informed consent and received consent from a parent or guardian.

Interview and Documentary Skills Workshop

Maurice Michell, facilitating protocols for working respectfully with Elders, and Glen Michell, facilitating the use of video technology, led the interview capacity building workshop.

Maurice discussed showing gratitude and reciprocity towards the Elders. Youth would present a gift to the Elder before the interview to thank them for coming and sharing their knowledge. In interacting with Elders, Maurice guided youth on respectful manners: to look directly at their Elder, and not to interrupt Elders while they are speaking. In consideration of the Elders’ age and hearing, youth were asked to raise their voice and if necessary to repeat what they said with respect. Maurice directed

youth that even if the Elder went off topic let them continue speaking, it was because Elders wanted youth to know what they said. Most of all Maurice instructed the youth to approach the interview with an open mind, and to listen to the Elder.

Glen taught youth all about video technology from treating equipment respectfully, to using different camera angles. In teaching, Glen first introduced the equipment and demonstrated its use, then guided youth to each take turns practicing because they would be responsible for all technology during the interviews. In consideration and respect for the Elder, youth had the responsibility to ensure all equipment was set up, checked and working before the Elder arrived to ensure a smooth and comfortable interview process for the Elder.

For many youth this was their first working experience therefore Maurice and Glen stressed the importance of professionalism and first impressions. Youth were asked to come to the interviews well dressed as a sign of respect to the Elders, to take initiative in their different roles and support each other to do their best for their Elders.

Developing the Interview Guide

The research team decided to combine a short interview guide and a storytelling opportunity in the interview process. The short interview guide was to assist the youth think of questions to begin the conversation allowing the advisor to warm up for storytelling. While Maurice, Glen and I worked as a team to create the interview guide, we each contributed our personal perspectives. The interview guide focused on the overall Traditional Knowledge for Health goal of how traditional foods can contribute to health and education; we also drew on the letters youth had written so their learning objectives would be represented in the interview guide found in Appendix I.

In conversation about the interview guide I asked Maurice if we should focus on topics that were not previously documented. He responded,

“I don’t think we should. We should just let the person tell what they want to tell about and if it is already written in a book, then it is confirming what was said and written.”

My question to Maurice came from trying to understand a local approach to research in comparison to the academic convention of novel discoveries (L. T. Smith, 1999). Maurice's response demonstrates that for research to be successful it does not need to include novel discovery, equally valid qualitative research approaches assert that knowledge repeated from different sources demonstrates reliability and validity (Clandinin, Jean & Connelly, 2000; Community Associates Training Workshop, 2003; Denzin, 2000; Patton, 2002; Van Manen, 1990) Throughout this research, multiple cross-cultural dialogues such as that one, created understanding and trust among members of the Research Team (under direction of the Research Committee). This open, collaborative process was how we came to consensus on the research methods chosen.

4.3.2 Interview Protocol And Process

Maurice Michell, as the Elder of the Research Team, purposefully invited Elders and knowledgeable community members for the Youth-Elder Interviews. As this was the first project of this kind for Siska, Maurice invited those Elders he knew would be patient with youth and who would be willing to be video taped. Maurice explained to Elders the interview purpose and how the knowledge they shared would be used. Maurice also explained the informed consent process and each advisor gave permission to share their interview for the purpose of the documentary and for my thesis.

The interviews took place over four days from November 20th-24th, 2006. Two interviews were scheduled each evening. Maurice Michell made records of all those involved and took detailed notes during the interview.

Youth participated in the interviews by operating the boom microphone for sound, operating the video camera, or interviewing the Elder. To promote punctuality the first three youth that showed up for the interview participated in a paid researcher role. Any other youth that were present were invited to listen and take part in the next interview. As it turned out, youth organized amongst themselves to take turns in the different researcher positions. Youth were responsible for setting up, operation of and putting away the audio and video equipment. Drumming was also always a part of the interview process and provided a fun and familiar activity following the interviews and built teamwork among the youth.

A short biography of each Elders that participated in the Youth-Elder Interviews is provided in the Appendix J.

Creating a Documentary Film

Youth researchers expressed their strong motivation to participate in making the documentary was because it was for their Elders and it would be shown to the wider community. Following the interviews the youth all learned how to operate the computer video-editing software and spent over 60 hours collectively creating the documentary with the mentorship of the Research Team. Youth had creative freedom in choosing what to include from each interview in the documentary, which also contributed to interest in the project. Youth were also free to work on the project at their own pace, taking breaks to check email, messenger, play video games and surf the internet. The combination of these factors along with the group dynamic contributed to youth's continued engagement in the project.

As a respectful way of giving back to the Elder interviewed youth made individual archival DVDs for each person interviewed. The DVDs included the documentary and the Elder's full interview. STS manages archival copies of the documentary and STS has ownership and control over access to information.

4.3.3 Method Of Interpreting Youth-Elder Interviews

Methodology for Interpreting Youth-Elder Interviews

Cedar root baskets are more than containers, they are important tools. They can hold many things, babies, water, food, and values. They represent the work of women. Nlẽ?kepmx women are renowned for their basket making skill. During the interviews Freda Loring speaks about what cedar root baskets mean to her,

“I am going to talk about a passion of mine... it's a way of life that I had grown up in with my parents, and it has made me stronger today, and it has given me patience and a lot of strong values that I use with this, and it is cedar root basket making.”

I have been told by Tina Edwards, a Nl̓eʔkepmxcin instructor at Siska, that cedar root baskets represent the strength of community- a single strand is weak by itself but when the strands are woven together they are strong, when the people are united together they are strong.

The youth used these cedar root baskets made by their community's women in the "Traditional Foods of the Nl̓eʔkepmx Territory" documentary to visually weave the stories of their Elders together. Elder Rita Haugen invited youth into her home to videotape these cedar root baskets that she has been repatriating back to Nl̓eʔkepmx Territory for many years. In presenting these results I use cedar root baskets as a metaphor. To make meaning from the youth's work with the Elders I look towards Jo-ann Archibald's (2008) seven powerful storywork principles that she learned from her Elders: respect, responsibility, reciprocity, reverence, holism, interconnectedness and synergy. These principles form a framework for making meaning from stories and for their use in an educational context. According to Jo-ann Archibald (2008):

"...these storywork principles are like strands of a cedar basket. They have distinct shape in themselves, but when they are combined to create story meaning, they are transformed into new designs and also create a background, which shows the beauty of the designs. My learning and the stories contained in this book form a "storybasket" for others to use."

I use this "storybasket" metaphor and their principles to weave together the themes of the Youth Elder Interviews and the values they represent.

Interpreting the Youth-Elder Interviews

I became very familiar with each of the Elders' interviews from working with youth researchers in the process of creating the documentary. Following from a grounded theory approach, I gained more meaning from the interviews with each time I viewed them (Corbin & Strauss, 2008).

There is a synergy between the storyteller and the listener in the oral telling that can be lost in the writing (Archibald, 2008). As I prepared to transcribe the interviews I addressed the challenge of maintaining the integrity of what was told without the help of the tellers' voice, gestures and feeling, by including complete segments of the

interviews. This is essential in narrative inquiry and phenomenological methodologies that compliment Indigenous storywork methodology. I used this phenomenological approach so the experience of Elders could be conveyed more authentically in my writing. As explained by Max Van Manen's (1990) book *Researching Lived Experience*,

“Phenomenology, which asks, ‘What is this or that kind of experience like?’ differs from almost every other science in that it attempts to gain insightful descriptions of the way we experience the world pre-reflectively, without taxonomizing, classifying or abstracting it”

Correct cultural interpretation of the intention behind Elder's storytelling was another challenge for me, coming from another culture. To address this challenge, I followed narrative inquiry and Jo-ann Archibald's Storywork methodologies (Archibald, 2008; Clandinin & Connelly, 2000). I engaged in conversation with each Elder about the meaning of their stories and quotes, checking whether my interpretations were accurate and if the stories were properly represented in the context of my thesis. This type of verification is essential for reliability, credibility of results; and for a respectful research process (Clandinin & Connelly, 2000).

So while I share my own interpretations that have been verified by each Elder, by including complete quotes, the reader can derive their own meanings. The meaning is interpreted cooperatively by the Elders, the researchers (Youth, Maurice Michell, Glen Michell and myself), and readers (Rigney, 1999; L. T. Smith, 1999).

Making Meaning through Themes

To make meaning from the interviews I went back to the original research questions, then I used Van Manen's (1990) 'holistic reading' approach- to find the main significance or meaning of each of the interviews as a whole. I then reviewed each interview again and asked “What reveals more information about the primary significance?” (Van Manen, 1990). I highlighted key concepts that revealed this information. I also looked for specific words, topics and concepts that kept reappearing in all of the interviews. As I considered these words, topics and concepts, I could see themes emerging.

I coded the transcripts with these themes using the data management software TAMS. TAMS analyzer is an open source share ware developed by Matthew Weinstein (Weinstein, 2005). Through doing a search for a specific theme, the TAMS analyzer produced a query of all the coded interview segments for that theme. By grouping common examples of themes, I focused on the shared themes and similarities of the Elders' wisdom that could be conceptualized (Community Associates Training Workshop, 2003). It is these themes in which I represent the teachings shared by Elders in the interviews (Corbin & Strauss, 2008).

4.4 Results And Discussion About Youth-Elder Interviews

4.4.1 Results Of Letter Writing Workshop

The following table summarizes themes youth expressed in their letters to participate as researchers interviewing their Elders.

Table 17. Youth Motivation To Participate In Youth-Elder Interviews

What do you want to learn from your elders?	How will this help you and your community?
The Past	Passing on Knowledge
My ancestors	Learning about the land
Culture	Helping the little
Wildlife	Learning from the Elders
Respect, honour and dignity	Helping people understand our culture
My Language- My native name	
Traditional foods- berries, plants, herbs and medicines	For people to start to learn about our language
How and where Elders used to live when they were young	Respect for ourselves and our community
Residential school	

The following quotes demonstrates how youth expressed their motivations:

“I would like to learn all about culture. I think that would be nice and about wildlife. One thing I never knew about the earth and plants and learn more about respect, honour and dignity.” - Eric Michell (Age 11)

“I want to learn about my culture and language. I also want to learn as much as possible about traditional foods and how the Elders used to live when they were young. To be real I would like to learn as much as I can from the Elders before they pass on. I would interview the Elders by asking them whatever pops into my head. Like where did they live when they were young and what their daily life was like. What they can remember about their parents and grandparents.”- Dakotah Nordquist (Age 13)

“I think it will help me know the knowledge I did not know from the past. I think it will help the community when I know from the past and pass it on.” - Joe Michell (Age 12)

“Not many people know much about our Elders, and interviewing them will help our people understand our own culture and maybe others too. Our people should know all there is to know about our native culture. I would like Siska reserve to know our language, and for generations to come to know the language.” - Forrest Sampson (Age 14)

Youth Letter Writing Outcomes

The outcomes of the letter-writing workshop allowed the personal interest and motivation of the youth to drive the interviews, which can be critical to success for not only research but all aspects of education (Bopp, Bopp, Brown, & Lane Jr., 1985; Riecken, Tanaka, & Scott, 2006). All youth showed an interest in learning about and from the past; how their elders lived. Some youth literally and metaphorically connected this to learning more about their own identity. Richard Vedan, UBC's past director of the First Nations House of Learning asserts awareness of one's identity is needed to dream and attain goals (Vedan, 2009).

The motivation to discover and re-new identity through learning about traditional knowledge for health that Siska youth demonstrated was mirrored by other indigenous youth. In 2001-2002 the Assembly of Manitoba Chiefs conducted a series of youth workshops to increase awareness of welfare dependency on reserve and get input for social development policy. In the workshops youth stated: “culture, including language and tradition, is essential to... growth as independent self-supporting people” (Ten Fingers, 2005). The report: *Sayt K'uulm Goot- of One Heart- Preventing Youth Suicide* created by 150 youth and community members also reiterated the desires of youth at Siska to have more opportunities for involvement in cultural activities, opportunities to work with Elders and supportive adults, along with other factors promoting a safe and nurturing environment (Morley, 2006). Youth need a spirit of belonging, this research provided that belonging and recognition for their wisdom (Morley, 2006).

In the Siska letter-writing workshop, youth all described how the Elders' knowledge would be able to help the community today; they would pass on Elders knowledge. The results of this workshop indicated to me youth were aware of the transformative and cyclic intent to use Elders' knowledge for the benefit of the community as a whole. While youth are growing up in a digital world of mp3s, chatting, instant messaging, emails, YouTube, Google, etc., the results of this letter-writing workshop demonstrate that youth perceive Elders' wisdom to be relevant to the current and future wellbeing of their community. This finding is supported by research by Riecken et al. (Riecken, Tanaka, & Scott, 2006) who, when working with Aboriginal youth on a health promotion curriculum, identified that many youth independently chose to go to their Elders for wisdom to contribute to the project. Finally, time with Elders is precious and limited, as outlined in Dakotah Nordquist's letter in the above section. Snively and Williams highlighted the sense of urgency for Indigenous communities and the global community to not merely acknowledge the wisdom of Elders, but to actively fund and support research and continued transmission of this invaluable Indigenous science knowledge before Elders who hold this knowledge pass on (Snively & Williams, 2006).

4.4.2 Youth-Elder Interview Thematic Results

From the analysis of the Youth-Elder interviews I identified four main themes expressed in the interviews (Corbin & Strauss, 2008). Within each theme are sub-themes identified with sub-headers.

The four main themes are:

- **Spiritual and Cultural Practices**
- **Educational Practices**
- **Health**
- **Change in Traditional Food Use**

Very quickly the storywork principle of interconnectedness emerged (Archibald, 2008). Many of the interview segments or quotes I highlighted represented multiple themes. I believe this could be for two reasons:

- Elders explain their experiences in a holistic and interconnected way
- Traditional foods are interconnected to every aspect of Ntʼekpmx life

Multiple Layers of Meaning

I interpreted meaning within the interviews using two layers:

- 1) The Ntʼekpmx traditional food knowledge, practices and values. This level of meaning was empirical in that it was consistent, and accurate and reliable predictions could be made and tested.
- 2) Elders as educators: Elders' method of telling stories and historical data is an effective method for learning about traditional food knowledge, practices and values.

Adding the second layer of meaning in my analysis provided insight into effective educational strategies to support youth learning about and using traditional foods for increased health.

The results and discussion are presented by theme. For each theme, and sub-theme within, I summarized Elders' common views shared during the interviews. I then exemplified this summary by highlighting a quote or story from Elders' interviews that embody the particular theme. In addition to providing the thematic analysis, within each of the themes I also demonstrated the second layer of meaning- the way Elders passed on their knowledge. To follow each of the Elders' stories or quotes I discussed my interpretation, which has been verified with that particular Elder. I ended each thematic section by contextualizing Elders' wisdom with discussion of related research and movements.

Cultural and Spiritual Traditions

All Elders interviewed spoke of how traditional foods are an important way to learn about spiritual and cultural values. Interviews demonstrated specific cultural values and spiritual traditions through reference to language, spiritual teachings, reciprocity, family, identity and connection to place.

Elders spoke of the importance of learning practical traditional food skills. The cultural learning from these skills reaches far beyond the importance for survival and self-sufficiency. Elders encouraged respect to the spiritual teachings Elders share. These teachings included how to have reverence for the location and the plant or animal to be taken as food. Elders expressed how using traditional foods made them stronger as an individual, as a family and as a Nation. For the older generations, traditional foods were a way of life, a mainstay in the diet and important for winter survival. Today, traditional food continues to be an important part of the diet especially in winter. Elders imparted the value of sharing and providing for those who do not have the means to gather provisions. Traditional food practices are also a time to share in the non-material, like stories, knowledge and connections with family. This sharing takes place on the land, in the mountains, meadows, at the rivers, lakes and creeks and specific valleys. Elders felt it was important to continue to learn about and use traditional foods as it connects the learner to their identity, culture and to place.

The theme is encompassed in Ina Dunstan's interview, for example:

“I love to harvest and use our traditional foods. I like to go picking huckleberries, that's in the fall time... And I like doing that because we get together as a family, there

is four or five or six of us that go at a time and it is more like an outing and it is fun. We go leave early in the morning and bring lunch and we go picking and then we have lunch out there and its like a gathering of the family and we find the time to share, at that time, so I really enjoy the harvesting part of our culture, cause I really believe that is what brought our people together and made them stronger as a people, because we were able to get out and share and do things together... And I usually like to do a lot of harvesting because I harvest for my children also and I believe that in sharing with them, my harvesting, that they become more aware of where they come from, their traditions and their culture.”

Language

Nl̥eʔkepmxcin (Nl̥eʔkepmx language) continues to be an important for people to express themselves. Elders say using Nl̥eʔkepmxcin is easier to express cultural values and connections to the land. All those interviewed used Nl̥eʔkepmxcin terms for foods with youth. While youth that interviewed Elders are not fluent speakers, Elders used Nl̥eʔkepmxcin to the ability that youth could respond and understand giving youth confidence in their skills.

Reciprocal Relationships

Elders shared the spiritual, energetic and reciprocal relationships they have with food and all beings. Freda Loring discussed this respect when taking the legs of deer for making awls for cedar roots basket making,

“My brother would go hunting and get their deer and I would always go and get their legs off the deer, and I’d say my prayer because, you know, whenever you take something, you have to respect it or it can harm you.”

Mary also mentioned this relationship to food when sharing how they harvested and stored potatoes,

“Not one potato turned rotten, because we were nice to it, we were really nice in placing it and putting it in. We just do that to all our food, we have to be really nice, so the food can keep nice to us, it is healthier that way, we eat really good.”

Family

The concept of reciprocal relationships extends to all aspects of Nl̥eʔkepmx life. Elders described the extended family as the core of traditional food knowledge and practices. Participating in traditional food activities together is where these reciprocal

relationships are learned. There is a complex exchange of traditional foods within family and giving to those who cannot access traditional foods themselves, whether because of ability or leaving off reserve in urban areas. Food continues to be given to people in need as a way of the harvester recognizing their privilege to harvest by giving away. Drives are an important exchange for some people to be able to access traditional foods.

Horace Michell when asked who he harvested for stated in the interview:

“Well mostly for ourselves and a long time ago we used to harvest for my uncle, Uncle Shaleten, ‘cause he had a stiff leg and couldn't get around and his wife she was kind of old, so we used to harvest for them and a lot of people. You know, my grandmother had a lot of relatives so they would come, you know, she would share whatever it was with them. Most of the time they brought something too, you know, my grandmother would have a trade, you know.”

Changes within the household and extended family influence how the extended family worked together to use traditional foods and traditional food knowledge. For example, some family members lived off reserve and some families may not have parental figures present in the household.

Ina Dunstan shared,

“I do can quite a lot, I have my younger brother, Wilmwilmest, that catches fish for me in the summer time and I can up to about ten dozen cases of salmon and he just gave me three big bags of sc’uwén [wind-dried salmon].”

Knowledge was also passed down within the extended family system. Freda mentioned that two of her Cedar root basket teachers were her relatives and so they were happy to tell her where to find roots.

“Suzanna was one of my teachers, and she was also my relative, so she would tell me how, how and where, to go to get the best cedar roots.”

Identity

Freda Loring shared that there are a lot of strong values that come with learning about traditional foods. Learning about traditional foods, including knowledge and practices helped her children remember the important values passed down from their Elders,

“I think the values that was instilled in us, is what I wanted to pass on to my children

too, it is important how you pitch in and you help your family and how you give and that made me feel good, and that is what I do today, I still go out in the mountains, although there are supermarkets, and there is such access to other foods now. My children because I pass it on to them they come to me and tell me, “Mom, I am missing huckleberry jam” or “why don’t you make a mócək” pie” or “ where is that sc’uwén?” or you know “the moose meat, we need some of that” and they just like the traditional foods and they remember, they remember that those are important things and it has been passed down from our Elders and from myself.”

Connection to Place

This quote from Freda shows the connection to place one feels when eating traditional foods as well as the satisfaction gained from the effort taken to gather the food to be self-sufficient.

“I always get the scaq”m berries, we have to dry it and we use that in our porridge every morning, a handful of that in the middle of January, and you just think about where you got it from and appreciate that you put it there...”

People interviewed stated they ate as much traditional foods as they could achieve. Even though there are supermarkets, Elders still felt it was important to go out to the mountains to get and use traditional foods. They indicated that the purpose was equally for health and nutrition as well as the fact that practicing their use instills strong values such as connection to place.

Learning

Within this section I highlighted both teaching and learning because it is reciprocal and both are needed for the learning experience.

Elders were happy to share their knowledge with the youth. They spoke of how they learned about traditional foods with their grandparents, parents, aunts and uncles. From a young age, those interviewed had a responsibility in harvesting traditional foods and were trusted by their elders. This is exemplified in the story told by Horace: Horace’s uncle trusted him to shoot the Groundhog and Freda’s mother trusted her to use her mother’s sharp deer awl. That sense of trust appeared to encourage the learner, from what Elders revealed about these experiences. Elders revealed that by watching their own Elders, they learned this knowledge; watch and then do.

Elders spoke of the determination required to learn different traditional practices. Teachings connected to place may aid in the complexity of this type of education, as identified by those interviewed here. It follows that learning from relatives, or from people of the same place is important for depth and dimension in learning about traditional ecological knowledge.

Elders acknowledged their own teachers and were proud of their role here in these interviews as “Elders”, in turn. To learn through having fun and nurturing acknowledges the learner as important to the process. Laughter and humour helped keep the learners interested and motivated. Learners expressed this interest by asking the Elders to continue telling stories.

Elder Horace Michell (Sla) enjoyed telling one particular story to youth in the interviews for this research project (G. Michell, 2006). This story highlights many of the themes and Nl̓eʔkepmx values connected with traditional food gathering. Sla in this story shares some of the training he received from his Uncle Jimmy White (X^welix). This story is also an oral history account of traditional food use and resources areas used. Siska youth researchers chose this story to open the documentary- “Traditional Foods of the Nl̓eʔkepmx Territory”. This story demonstrates the interconnectedness in Elders’ teaching highlighting all themes and values identified through the analysis of the Youth-Elder interviews.

Hunting With Uncle Jimmy White (X^welix)

My uncle [and I], we used to go hunting. My uncle, X^welix, his name was Jimmy White, we used to go way up the mountain across from Jack Ass Mountain, used to take us about a day to get up there on horse back, and we’d stay up there, it all depend how many deer we’d get, we used to get three before we come home. There was one day there, we had to stay up there one week before he finally caught his three. Most of the time he used to leave me at the camp, and I’d be the camp man, make sure the coyotes and stuff like that don’t come around rob our groceries. Sometimes they go out before I’d even wake up and they would get back after dark... Used to show me how to cook and make fire you know, and make that bread, used to make dough you know, and put it in the pan, and put it up against the fire like that, and every once in a while we’d have to take it off and turn it so the other side would cook.

On the last day he took me for a ride, way over that way, above Keefer's. The trail was really, well it wasn't really a good [trail], but it was a good deer trail, it was getting late in the fall, the leaves had dropped off all the huckleberries, you could see just the huckleberries, just hanging there off the trees, we were going by, then we seen this one lake, he told me don't look down there, don't look at the lake, or else it will give us a big rain storm, or a kind of bad storm. We were going by there I was kind of looking trying to look sideways you know. He said, 'Hhhhhhughh that there is *sʔúsmn* [sacred] don't look down.' So when we came back by above Keefer's there, you could look down and see the highway, way down. We stayed there about an hour or so, we went down to where the berries weren't frozen yet, we picked a little bit before we came back up. And on our way back we came to where that lake was, where I was kind of looking down, and boy that rain came down, and he told me, "You seen what you done? You looked at that lake, that is why we are getting rained on."

We got back to camp, I think we only came home with two deer that time, well we ran out of food.

So we had to come home, and my grandmother told my uncle to get one of those *xʷsule*, one of those big groundhogs, those big mountain groundhogs, they are big, so I was coming home, so coming by a pile of rocks and they were running around there and he told me, you get one, so I was looking and I thought I seen one, so I took a shot at it, and it was just a stick sticking up, and the thing kind of all blew apart, and my uncle said, "Oooh, that's the smart guy" [Smart guy is the *xʷsule*'s nickname]. And we kept on coming down a little further down, and then he got one for our grandmother.

And then later on we got home, oh I guess a lot later, I think we got home after midnight, after we got down, down below, you know, we had to depend on the horses to get us back home, cause they knew where they were going, and we couldn't see where we was going, got home and the first thing my grandma asked, "Did you guys get my groundhog?" My Uncle *Xʷelix* said, "*Héiy*, I shot the groundhog."

Next, first thing in the morning, my grandmother took that groundhog and singed the hair off it, and she didn't skin it, just singed the hair off it, she made a fire and put a stick there, and put the groundhog on it, and she just cooked it there, outside on the stick, and kept turning it, and then towards evening she ate it and said, "*c'ál't nuk xé?e!*", Ooh my that is tasty.

Discussion of Elder Horace Michell's Story of Hunting with Uncle X^welix

The story gives a rich description of what hunting was like half a century ago, and the deeper layers in it draw attention to many traditional food themes and values at the foundation of Nl̓eʔkepmx knowledge and Archibald's storywork principles (Haig-Brown & Archibald, 1996). The values of reverence, discipline and responsibility were highlighted, which are key Nl̓eʔkepmx principles in resource stewardship. Maurice Michell told me that he thinks the story teaches the lesson that if an Elder tells you to do something you should take it to heart and follow it with self-responsibility and discipline. Horace's story also exemplifies the theme of learning traditional food and knowledge practices with extended family, such as uncle X^wélix (Jimmy White). Experiential education with extended family remains the core of most traditional food activities, as described by all Elders interviewed in this research.

According to Swan (1998), Indigenous children were encouraged to demonstrate readiness for learning new tasks rather than being coerced or prodded. In the story above, X^welix acknowledged Sla's readiness, abilities and interest by taking him hunting, yet because he deemed Horace was too young for certain tasks, the child was entrusted with the responsibility to tend the camp. Tending camp taught Horace self-sufficiency and discipline by being alone from dawn until after dark. Through this experience he learned to cook for himself and others. All Elders interviewed spoke of taking responsibility (from a young age) to participate in their family's food harvest and preparation.

In his story, Horace also described learning reverence for the mountain and sacred areas, including a sacred lake. This aspect highlighted the degree to which all water was sacred to the Nl̓eʔkepmxs. When Horace disobeyed his uncle's request to avoid looking directly at the sacred lake, the themes of discipline and reverence were again revealed. Horace expressed his enjoyment at getting to pick huckleberries and being high on the mountain with his uncle. This showcased fun, adventure and the passions of youth today. As they reached the sacred lake a second time in the story, Horace learned from the weather about reverence and respect for the mountain and sacred areas. The consequence was they got rained on and left the mountain with one less deer than they would normally bring home. Uncle X^wélix brought Horace's attention

to the consequences of his actions by saying, “Look what you did, you looked at the lake and now you made it rain.”

Rather than dwelling on correction of mistakes, Elder-youth knowledge transfer often followed the “watch and learn” method and emphasized an environment where mistakes were acceptable, even beneficial for learning. For example, X^wélix nurtured Horace with a caring comment and gave him another chance to hunt in order to practice his new skills, even when Horace acted in ways that reduced effectiveness and efficiency of the hunting trip as a whole. This method of holistic teaching was an important part of traditional Indigenous education and was spoken of by many Elders in their interviews. Creating many chances to experience and to emulate role model’s behaviour is also a hallmark of Indigenous education (Swan,1998). In his second chance at hunting, Horace missed the mark, yet rather than dwelling on what did not work, X^wélix emphasized that x^wsule was a really “smart guy”, which was supportive and non-critical of Horace’s practice attempts at hunting.

The story ends happily as X^wélix ends up getting the groundhog and sharing it with Grandmother. Horace is rewarded by Grandmother’s happiness getting to eat this tasty traditional food. This highlights the important values of sharing food with family members, especially Elders and those not able to get out to harvest themselves.

This story is also rich with important Nl̓eʔkepmx traditional food resource information, including areas used for harvesting and hunting, plus animals and plants used for food. This story also demonstrates the changes in access to traditional foods. In the 1950’s, horse was the main form of transportation to get up the mountains. Horace tells about staying out on the mountain for a week at a time and it taking a day to get up the mountain by horse in contrast to today’s vehicle travel people make day trips to the mountain. With horse travel Nl̓eʔkepmx trails and different resource areas were used; areas not accessible by road. All Elders interviewed remembered staying in the mountains for weeks at a time. Thirty or forty people would camp and harvest together in one area. It was a rich time for Nl̓eʔkepmx cultural and material sharing between and amongst families. Today, most youth have not gained the knowledge or experience from spending an extended time in the mountains as previous generations.

Youth interest in traditional foods is encouraged by Horace's description of ripe huckleberries, one of the most popular berries. Horace describes the huckleberry harvest timing, the leaves starting to fall of the bushes can indicate ripeness as well as cold weather or frost. While deer continue to be an important traditional food, the x̣ẉsule or Whistler Marmot/groundhog (*Marmota flaviventris*), is rarely eaten currently. With this story Horace provides insight into past food preferences and preparations by the older generation.

Health

Elders told numerous health properties of particular traditional foods during the interviews. Ellen Spinks emphasized how certain traditional foods were as effective or more effective than store-bought herbs or foods. Everyone interviewed shared that their own parents and grandparents taught them to go out and get as much traditional foods as possible. When asked how much people harvested everyone responded that they harvest as much as they can. Elders discussed the importance of traditional foods to survival. Ellen shared that her family mostly live on deer meat and fish,

“Yeah we love doing all these Indian traditional foods because that is how we survived when our grandparents, as we were growing up, that is all they used to do,”

Ṣx̣ẉúsm, mentioned by everyone interviewed is one of the most prized traditional foods and people will travel large distances to pick it. Ellen says how it is much better than pop or juice to quench your thirst. Mary speaks about how it is a purifier. Freda shared,

“And the ṣx̣ẉúsm you know the ṣx̣ẉúsm the berry is very medicinal has got a lot of vitamins, and our Ṇḷeʔkepmx People swear that it is very good medicine for you, for everybody, all year round,”

This medicinal knowledge of ṣx̣ẉúsm, is common knowledge among the Ṇḷeʔkepmx. However ṣx̣ẉúsm is only starting to be understood for its properties by Western science. Ṣx̣ẉúsm is health promoting and preventative against diabetes confirmed by laboratory analysis in collaboration with United Tribes Technical College, North Dakota serving five Native American Tribes (Kraft et al., 2008). There are both benefits and risks for using Western science to test for health properties of wild plants. Wild Cascara and Pacific Yew populations have been devastated from over harvest to supply the nutraceutical industry (Turner, 2001).

Comparing Traditional food and Store Bought Food

Everyone felt that all traditional foods were healthy foods and healthier than what you get in the store. That anything you get out in the forest is good. That nature is the best source of vitamins, and that traditional foods do not have all the sprays, pesticides, and fertilizers. Traditional foods don't have the additives processed foods do either. Ina thinks that all these sprays and additives are affecting the children. Mary Williams also shares the same sentiment in this quote:

Chad- Do you think that the nutrition of the traditional foods is healthier than the store bought foods?

Mary- Oh definitely, at that time when I was little and eating all that food I didn't have diabetes, like I have now, you'd go to the store now and everything in there that you see contains sugar, or something we shouldn't have or isn't good for us, but years ago all the food that we put away was natural, we didn't have anything that was soaked in this or soaked in that.

Elders also talked about the physical activity while picking, Horace shared,

“Well I think the traditional foods is a whole lot better because it doesn't have all that fertilizer and that to make it grow, it is a real natural food. You have to work for it though, but it is good for you to get out and do your own thing, instead of just going to the store and buying it, you get exercise and lots of fresh air. I think in that way natural food is good, you know traditional food.”

Storytelling as a means for Health Education

Elders told stories in the research interviews to share their wisdom about traditional foods and health, yet a secondary purpose was to give explicit health/spiritual guidance to the youth interviewers. In the example below, Mary Williams shared the changes she has observed in peoples' health over time and she imparted on the interviewer the belief or moral that each individual holds self-responsibility for their own health. Mary's guidance was even more effective because she uses humour and inspiration to engage youth in topics relevant to their lives.

“But anything we did in those days we were always preparing for to put away, to store it and sometimes we'd go in to a gathering or sometimes a party and we'd bring out our food and I am going to trade with you. I'll trade, we'd trade, maybe they'd have canned

fish or something, not too much over there, so we'd trade over there. We'll give you maybe rhubarb, or maybe even wine, you know they make rhubarb wine or they make sunflower wine, but I don't know how to make wine 'cause that's no good for you. (Everyone laughs) But what, all the good stuff I know, we kept our health, there was no one with diabetes at that time or cancer, you just died of real old age, now a days, you don't see that people dying cause they are old or too old, they are young and they die. Well any comments, want to hear more? (Everyone laughs) I could have you here all night, no school tomorrow.

Mary- Okay?

Everyone Laughs

Mary- Yeah, so that was a little bit of my history, a little bit about me and how I got here, but you know what bothers a person in their health is stress. It is what you do to yourself, what you do, you wanna drink, you wanna go party, you want pop like I do, that's no good for you. You know, you should drink lots of water, but you gotta boil your water now-a-days, but have lots of water 'cause it flushes out your system, keeps you healthy.

Chad- So is that everything?

Mary- No. Like I said, I could have you here all night.

Chad- Some of it?

Mary- Some of it, I'll save some of it for another time.”

In this research, Elders, including Mary Williams in the example above, used storytelling techniques to generate curiosity, interest and passion for the topics so that the learning became more transformative and less about merely listening passively. Mary's interaction with Chad illustrated how Mary used storytelling not merely to deliver traditional teachings, but to allow Chad the experience of learning in the moment – for him to reflect during the interview on complex life decisions with regards to peer pressure, alcohol, drugs, and food choices combined with the direct instruction to drink water, something youth can easily understand and act upon. This technique has been utilized often throughout Indigenous education, as demonstrated by

the work of Jo-ann Archibald. Archibald (2008) related that success of storytelling as an educational tool relies on the meaning children make of the stories, which can be enhanced through the use of some dramatization, or adding the element of intrigue and curiosity.

Changes in Traditional Food Use

Environmental Degradation

Modern ecological and economic realities affected access to traditional foods according to each Siska community member interviewed for this research. Each participant described staying out in the mountains weeks at a time when they were young, which is more of a challenge with peoples current schedules. Participants also cite environmental degradation as partially responsible for current apparent resource scarcity. Current resource management practices also play a role in making the traditional food species more scarce than what Siska community members recall from their past. Scarcity of resources was described specifically for each type of ecosystem where Siska traditional food knowledge was practiced, and specific cultural/economic actions were related. For example, intensive logging practices were cited for scarcity of the pine mushrooms, reduced forest burning practices in other areas were cited for scarcity of certain berry plants, which in turn affected population health of deer and moose.

Over time, Siska Elders described that travel distances have increased to reach resource areas where abundance was able to support harvest. This common experience described in the interviews have indicated a change in forest stewardship practices over time such as the diversion of water supplies to farms and cattle which have influenced health of the grassland ecosystems in which important Siska root and plant foods and medicines were found (Turner, 2005). Also Ina Dunstan and Horace Michel both expressed that in addition to scarcity of traditional berry plant communities, those located nearby have become “overgrown”, which suggests forest management practices eliminating controlled burns have impacted berry production, as reported by other Indigenous peoples in BC (Deur & Turner, 2005). Finally, Horace Michell, discussed these interview results during the January 16, 2008 research committee meeting. Horace Michell emphasized that the impact of contemporary environmental degradation and forest stewardship practices on salmon may be more critical than to

other traditional foods. Horace described the salmon is more susceptible to human pressure because they depend on the health of entire rivers and the Pacific Ocean (Siska Research Committee, Williams, Michell, Munro, & Michell, 2008).

For traveling the greater distances from home to harvest foods, Siska Elders also described that an increase in automobiles and roads may be partially indicative of the resource scarcity affecting the use of traditional foods by Siska community members. In addition, the railroad has severe environmental implications for Siska community. In her interview, Freda Loring cited a train derailment as the sole reason that her family did not have enough salmon to process into sc'uwén (wind-dried salmon) during summer 2005, which was a time of three train derailments in the Lytton area. The creosote and other chemicals released into the air, soil and water of Siska community as a result of the railroad that bisects their land may be responsible for a significant amount contamination or degradation of traditional food resources, among other more direct negative effects on human health (Johannessen & Ross, 2002).

Here, I highlight another direct example of environmental degradation: Freda Loring shared a story about harvesting cedar roots with her teacher, the late Elder Suzanna Swartz, renowned cedar root basket maker from North Bend, and grandmother to Chief Fred Sampson. Elder Suzanna was also known to be a self-determined woman, in this story Elder Suzanna Swartz teaches Freda Loring about the changes in their harvesting areas.

“Come on Freda I am going to show you where we get the roots.” I got her in the car and a way we went to Boston Bar, and we pulled over. She says, “Pull over here.”

And I says, “Suzanna there is nothing there. Suzanna, there is nothing there, you can’t go.”

“But that is where I get my roots.”

And I am going, “Oh my gosh, I can’t tell her, there is nothing down there”. So I pulled over to the side of the road and we got out and she had on these warm pants on, like snow pants, and she sat on her bum and she slid down this little hill. And I am going, “Where are you going?”

“I am going down here this is where I dig my roots.”

And she got down there, and she is looking around, and it was a road that had been built in there, it was all logged off, and there was just a road.

“Oh my goodness, everything’s changed, they have taken everything out of this area.”

So I hauled her back up to my car, and she said, “Okay, let’s go up to this other area.”

But she had a vision in her mind, that the location where she got her straight cedar roots, because it is really hard to get straight cedar roots, was down in this area, which happened to be all logged off and a road was put in, wire, and that was where she always got her roots, but just bringing her out in the woods and being more aware of the environment where she was taking me was really important. I wasn’t at that time, it didn’t matter to me, I was just learning, but I thought, it is important enough for her to take me down this hill, and she was an Elder, who had to show this location. So when I talked to her she said, “It’s really hard to get good cedar roots. They have taken it all away.”

And that’s true, I have to go to Boston Bar and even then I have to go way up to get the good roots.”

From my perspective, Freda’s story captures Elders’ determination to express the changes that are happening in their territory and the impact of those changes on integral aspects of Nl̓eʔkepmx life. It also illuminates the importance of Elder’s place-based teaching the impact of changes to the environment.

Freda’s story also highlights how Elders may not reveal what they are teaching explicitly; in this example, Elder Suzanna Swartz guides Freda, but leaves Freda to make her own personal realizations. This story also illustrates Freda’s respect for her Elder Suzanna, that although she did not understand why Suzanna wanted to show her certain locations, she trusted in Suzanna and followed her lead.

As indicated by Horace Michell’s comments about degradation of water systems that impact salmon and human health, water is very sacred to Nl̓eʔkepmx people. In the cedar basket story, Freda Loring also mentioned how important water is to cedar root basket making. During the interviews, Elders expressed that there is much less winter

snow pack than there was fifty years ago and there is less water. Nl̓eʔkepmx people believe that these facts are partly due to logging, and also diverting creeks for agricultural irrigation (Walkem, 2007). Climate change is also a contributing factor. Elders also indicated in this research that they believe lack of water to be part of the reason for reduced berry plant population abundance . As a result, Elders feel like they have less autonomy due to the lack of water because of its direct effects on their food, cultural traditions and health of their families. Ellen Spinks also describes how water restrictions means more dependence on commercial foods because she cannot grow the gardens she had in the past.

From the interviews as evidence, it can be concluded that current environmental destruction (primarily industrial and economic-based), degradation and contamination (from both anthropogenic causes) in Nl̓eʔkepmx territories makes it more difficult to practice traditional food knowledge systems today compared to 10-40 years ago.

Self-sufficiency

Siska Elders remember even fifty years ago a large part of the economy was based on trade. Mary Williams remembered that during the war (WWII) everything from the store was very expensive, her family grew beans to trade for all of their store-bought supplies. However at there home there was always an abundance and variety of food both traditional foods and introduced foods they grew themselves. She describes their cellar as integral to their food sovereignty. Gatherings and parties were a time of trade for this great variety of foods. People from different areas would bring certain trademark items. Trade continues to be an important part of the Nl̓eʔkepmx economy. Modern expressions of Indigenous economies include sharing, giving, trading, bartering and selling (Morrison, 2006).

Just as traditional food use has changed much over the last half century, so has gardening in the Lytton area. Most Elders remember growing up with large gardens to supplement their traditional foods. Local introduced agricultural crops and orchards were also an important part of food production, diet, and economy; however water shortage makes it more difficult to practice. Currently at Siska water restrictions are enforced for the spring, summer and fall months, many people do not garden for this reason. A few Elder's households still keep gardens. There is an abundance of fruit trees in areas surrounding Siska where creek or river fed irrigation is still possible. The

Spence's Bridge area supplies a wide variety of fruits and vegetables. Most people process large quantities of fruits and vegetables for winter months. Mary Williams remembers back when the canyon was all green with gardens. Now she says everything is all dried up and brown. Mary described this shift in landscape corresponded to change in climate and the introduced welfare system. Ellen and Mary talked about gardening and storing vegetables for the winter. Mary remembers the luscious garden of her childhood. She learned to help her family in the garden from a young age,

"So as I grew up I didn't go to school, I was about six, seven, I took care of myself, I helped my Mom and Dad they hoed the garden, you had to plant the garden, hoe the garden, water the garden, all those things that you have to do, just to get your food... We used to do a lot of gardening. Everything I ate as a little girl was right from our garden just like watermelons, cantaloupes, you name it, we had everything in our garden."

Mary describes how her family combined both gardening and traditional food activities to maintain their self-sufficiency and food security,

...But in late fall when harvesting season for the garden is over we would hike up to Pténi Lake and we'd pick wild potatoes, wild onions, bitter root, sometimes sunflower seeds if we could find it, I know lots of names but I don't know no white man's name for it, and one of those roots its like a clove like this we take it and we dry it out on a net or a blanket or something and when its dry we dig a hole and we put it in there. So come summer or when summer ends those bitter roots are still in there, so come winter time when we are out there hunting, my Dad used to know where to find the food and he didn't have to pack anything. Because all our food was already stored up there and he'd go there and dig it up... but when we got back home I was sure glad there was canned fruit in the cellar and apples and pears, you name it, it was still good, in the cellar, so it stayed in the cellar until, oh I'd say, early spring before we finished the whole thing, our cellar was like our deep freeze, there was no ice in there though, hahaha just cool.

Change in Transport

Over the last sixty years the main form of transport has changed from foot and horse and buggy to vehicles. Ellen Spinks remembers,

"Oh I used walk a long way for picking berries, years ago, when I was younger, when I used to go out with my mom. And I used to pick with her and we used to walk. But now that there are a lot of roads, that reaches all these berries, now you don't have to

walk anymore. You go in a truck so its not that hard now to get to them berries.
Okay?”

While having vehicles has made it less effort to get into the mountains to access traditional foods, the change in lifestyle means people spend less time out in the mountains.

Change in Processing

Some interviewed said how certain traditional foods are not used as frequently or in the same quantity as they were or are processed differently. Fred Sampson doesn't remember seeing pit cooking. Elle Spinks a generation older remembers her grandma preparing roots but she did not process as many. Mary Williams the same generation as Ellen remembers preparing large quantities of roots and using food caches. The differences among Elders traditional food use could be due to number of reasons, including geographic area where Elders are from, decrease in trade and differences in retention of traditional practices by family.

Change in Gender Roles

From the interviews, and the literature it seems that in the past, distinct gender roles were more prevalent (Teit, 1997). Women mainly did plant and mushroom gathering and processing of all traditional foods including animals and fish, while men did most hunting and fishing, however neither gender role was exclusive and men and women worked cooperatively during these activities. Today, gender roles are far less distinct. However, the division of tasks is still largely determined within the extended family and extended families work together to prepare foods. There are complex reasons for the change in gender roles in traditional harvesting that are beyond the scope of this research.

Change in Storage and Quantity

As a child, Mary Williams recounted in the interviews that her family stored traditional foods (roots, seeds, berries) up in the mountains, so in the winter when hunters were out hunting they didn't need to pack any food. They would store it in many places miles apart, not only for themselves but for others to access as well. Those interviewed all spoke of processing foods for the winter:

“We pick lots, we pick I'd say almost half a sack, or when you go the white man's way, I'd say about fifty pounds. But to us, when we place it, we place it over here, or on the other side of the creek, or we place it miles apart because a person could be walking way over there or riding his horse over there and he could get stranded because there is too much snow and he'll say ooh I know there is food down in the ground here, and he'll park his horse there and camp over night and he'll dig up that, its like a little cellar for them.”

Chief Fred remembers going out into Siska Creek with his grandfather and grandmother hunting deer, and gathering berries and mushrooms:

“I was started off when I was about six years old, and my grandparents started taking me out into the land base, we used to go by horse up in the back of the Siska watershed here, and we'd go up there for two weeks, in the fall, and that's what they were doing, they were out, they would pick mushrooms, and dry it right there at the site, and the old man would go out and shoot deer and they would dry that meat, right there at the camp, and we'd be picking berries and through out the whole fall time, we'd stay right in the mountains and we'd pick everything and when we left the old man would have two or three deer, on the horse, but it was all dry, so it compacted down, and it was easier to carry, same with the mushrooms, they dried lots out there in the field, then plus all the fresh ones they'd take home for canning.”

Fred's grandmother taught him how to make sc'uwen and he remembers picking 1000 scaq^wm twigs, needed to spread the salmon for making sc'uwén (dried salmon).

“You know what sc'uwen is, but when I a kid, when I got taught by my grandmother how to do dried fish, it doesn't look like it does now, we used to do the whole salmon, so cut it through the back, lay the fish out, so the belly wasn't cut through, we cut it through the back and spread it out this way and the head was on there and the spine, all of that, and we spread it out and we cut little holes at the top and at the bottom and put scaq^wm bush in there, kind of bend the stick and put it in there and we'd put little notches on the sticks and it would help spread the fish right out and the head and the tail would hang down on the back. When you dried it, it was the whole salmon, the only thing that was missing was the insides and even then, they'd made sure they'd eat the, ?ék^wn, the eggs, and the pōne, which is the white sack from the males, that was eaten too, not like today when we throw out a lot of fish, it gets wasted.”

Changes in Sharing Resource Areas and Equipment

Those interviewed placed a lot of emphasis on salmon as one of the centrally important

traditional foods for Siska people. The community held a focus group-style interview for a concurrent research project: *Sisqé? Sqyéytñ eł Á'u?sqáy's Suméx Scúws-* Siska Salmon and Indigenous Peoples Life Work- on September 29th, 2007. In that interview, Wesley Williams shared how much things had changed over time with regards to fishing areas. He remembers when everyone would share fishing areas. If one area was running well people would go there, and depending on the time of year and water level people would use different locations. He remembers, “ If you were fishing you would get your share then let the next family fish.” He remembers in those days’ people left all their fishing gear down at the river for the next person to use. He talked about how the Department of Fisheries and Oceans (DFO) divided up the river in parts, each Band with part of the river and that DFO assigned specific areas to each nuclear family. People in the focus group discussed the social and disruption and the division the DFO management created. Some examples include people not letting others in to fish at a communal fishing area. Some people will not let anyone even come near their fishing area. Fishing in another Band’s area could cause trouble. Gear is no longer left at the river as it once was for fear either someone might take or DFO might take it.

Older people remember leaving camping supplies, like pots and pans up in the mountains at campsites so they would not have to pack it and so others frequenting the area could share them.

4.5 Youth-Elder Interview Overall Outcomes And Discussion

The success of the Youth-Elder Interviews is attributed to Nłe?kepmx teaching strategies (Demmert & Towner, 2003; Hampton, 1995; Sterling, 2002). The Nłe?kepmx teaching strategy used here acknowledged reciprocal nature of learning, Elders as educators and youth as self-determined contributors to their community (Alfred, 1999; Archibald, 2008; Ermine, 1998; Huntley, 1998; Riecken, Tanaka, & Scott, 2006). The intergenerational aspect of the Youth-Elder Interviews created a strong bond for important traditional food relationship knowledge and history to be exchanged. Youth expressed the desire to pass on Elders’ knowledge of their foods, culture, language, and history to help their community. Elders expressed the desire to share their wisdom to achieve continued traditional knowledge practices and transmission as expressed in the next quotes. Ellen Spinks encouraged youth to continue traditional food practices because traditional foods are better than store bought foods and modern conveniences make traditional food use easier. She describes

the abundance of traditional foods she stores and offers these foods to Joe. She closes by describing how she had learned about traditional foods and gave words of encouragement to Joe Michell in his learning.

Joe- Thank you for sharing, I am sure this will help our youth get back into traditional foods.

Ellen- Yes, that would be good, because I know that it is needed in some places where you can't get to the stores. It comes handy. So I am glad that I am able to share this with you young people. Because, you know picking, it doesn't take much to put a little bit in the freezer, or else do something with it to, make use of it through the winter. All through the summer, I use soapberries for juice, you know, and it really comes handy in the summer time, especially when you go out picking in the summer. I make juice, and I put it in the freezer, and I take it with me when I am picking. Oh gosh, it is good. It just quenches your thirst. It is better than pop and juice, you know, what you buy from the store. That is what I use. I use that a lot, I got lots on my shelf now. If you ever want come and get some, it's there. Same with the jam, it lasts longer than the jam you buy from the stores... So to me that is all healthy food. And that's how I was growing up my Mom and Grandmother, they used to do all this too, you know, before I was able to do it. I used to watch them, that's how I learned how to do canning and drying. I used to watch my Mom and my Grandmom do that. The only thing I didn't know how to do was drying salmon. Do you? Have you tried it?

Joe- Yeah

Ellen- Or you just watched? That's is really good. Oh I used walk a long way for picking berries, years ago, when I was younger, when I used to go out with my mom. And I used to pick with her and we used to walk. But now that there is a lot of roads that reaches all these berries, now you don't have to walk anymore, you go in a truck so, its not that hard now, to get to them berries. Okay?

Elder Horace Michell spoke to the relevance of learning traditional foods today and left the youth reflect on what it would be like if they had to be self-sufficient, as he had grown up. I share this excerpt when Eric Michell thanked his Grandfather, Horace Michell,

Eric- Thank you for sharing, I am sure this will help our youth get back into traditional foods.

Horace- That's okay, I think you young people should learn a lot of that stuff, maybe one day your going have to make use of it. You know, go back to the old days when we used to have go out and survive on our own. Okay?

Eric- mm hmm [nodding in agreement]

Horace- Okay? Húmeł.

Eric- Húmeł.

Storytelling as a research method emerged from the Research Team trusting in the community-based research processes (K. Edwards, Lund, Mitchell, & Andersson, 2008). The intergenerational aspect created a strong bond in which valuable historic knowledge was documented through documentary. Youth had a keen interest in learning their history. Elders had a strong desire for youth to know and value traditional foods in the same way they did. Elders expressed this desire through sharing their life experiences growing up, as Freda Loring expressed, “Traditional foods were a way of life”.

The main outcomes of the Youth-Elder Interviews are presented below in relation to the Traditional Knowledge for Health specific research objectives. This is followed by an expanded narrative account.

- **Increase Siska community health, culture and capacity by generating culturally-relevant and ethical knowledge and practices for NTFR (Non-timber forest resource) management;**
 - Youth affirmed interest in learning about culture and traditional food practices
 - Youth gained understanding and awareness of importance of traditional foods to health and culture
 - Youth gained understanding of traditional food use changes in Elders life time
- **Engage community members of all ages in the process of cyclical generation of Nt̓eʔkepmx (Indigenous) knowledge systems based on traditional values and contemporary methods (technologies)**
 - Youth affirmed desire to pass on cultural knowledge
 - Reaffirmed Elders' role as educators
 - Intergenerational learning between youth and Elders
 - Oral traditions upheld and maintained
 - Created a Nt̓eʔkepmx documentary serving as a education tool and historic record
- **Promote self-determined control and application of Nt̓eʔkepmx knowledge systems to increase economic diversity in the Siska community**
 - Youth researcher role is an empowering way for youth to contribute to their community and participate in research
 - Youth increased their research, technology and communication capacity in a culturally relevant way
 - Three youth have gained sustained part-time employment in cultural video production
 - Created a spirit of storytelling that fostered future storytelling events at Siska

Community-Based Researcher Perspective- Glen Michell

The impact of the Youth-Elder Interview methodology for youth researchers, was reflected upon among research team members. The following discussion section recounts a dialogue I had with co-researcher, Glen Michell, and verified by Glen. Glen discusses both the strengths and challenges faced in the research as well as the intricacies of research by both outside researchers and community-based researchers (G. Michell, 2009).

When I first asked Glen Michell what the benefit of the Youth-Elder interviews “Three” was his reply. Glen was referring to the three youth who have continued working in film since 2006. This emphasizes the importance Glen places on sustained actions and transformative change from research. Along with sustained actions, Glen acknowledged the opportunity for youth to demonstrate their capacity and skills and work cooperatively as a team, “For me this program [Traditional Knowledge for Health] was really good, it gave me a chance to see what we could do, everyone finished the program.”

Glen is a strong advocate of sharing knowledge with and mentoring youth. Glen dedicated many volunteer hours during the Traditional Knowledge for Health working evenings and weekends to coordinate with youth school schedules, “ You know people say they don’t have time [to work with youth], but I believe you have got to make time. We need support for the youth.” Glen’s willingness to mentor youth was returned by youth’s interest for the project. Youth’s enthusiasm was maintained throughout the Youth-Elder Interviews research with Glen’s guidance creating a balance of work, leisure and familiar cultural activities, such as drumming.

The main challenge Glen discussed was “follow-through” in research or programming in general. Glen said he tried not to get attached to initiatives from previous disappoint seeing beneficial programs not continue. Glen identified the power differential between community-based researchers and outside researchers as myself as part of that challenge. Glen reminded me, “ They [Band administration] don’t listen to us like they listen to you, you may not know it, but you have authority. You are a student, going to one of the best schools, they will listen to you, they won’t listen to us. You have got to live it, to understand what it is like here.”

While Glen acknowledged the benefit of youth empowerment through community-based research methodologies, the challenge was to maintain this programming without continued advocacy and support, “Well you are going to be leaving, there have been other students come work with forestry and fisheries, but they never did anything like this for the youth. It is just hard to keep things going, you are leaving. ” Glen is a strong advocate for the past Stein Rediscovery program a cultural immersion program where, as he expresses, “youth spend time getting to know the plants”. In evaluating the Traditional Knowledge for Health Project, one of Glen’s primary recommendations was to continue a youth film program and more opportunities for film and cultural training. Glen made that recommendation a reality through leadership of an Aboriginal Arts Development Award, from First Peoples’ Culture Council, with the support of research coordinator Maurice Michell and myself. In reflection of that program Glen speaks about exposing youth to broader opportunities, “ I try to get the kids out of here [the Siska Reserve], to see new things, expose them to different things, because around here it is always the same thing.”

Overall Glen would like to see the continued support for youth in technology, he sees technology as a key literacy for the future. “ We are so far behind with computers, I understand we are fighting for a cause with fisheries and forestry... but what is being put into technology?” He advocates that youth need encouragement, individual recognition, and Band administration support to navigate opportunities for funding and education to increase their technological skills, which could one day be used for land management such as mapping.

University-Based Researcher Perspective- Nancy MacPherson

The Youth-Elder interviews were a learning experience for everyone involved, the research team, Elders and youth. The research team identified several ways to improve future research. We identified that the research team make up itself largely determines participation. To create a gender balance for youth participation it is important the research team has men and women community researchers that are respected by youth and parents. Other Nle?kepmx research involving youth also expressed this key determinant of participation (Martz, 2009). There were certain technical aspects that could be improved in the documentary, such as the setting for the interviews and ensuring gift giving protocols did not hinder Elders use of body language and hand signals to tell stories.

As a non-Indigenous researcher working cross-culturally, learning Nl̓eʔkepmx teaching strategies was key to maintaining a positive learning environment that encouraged youth in self-directed cultural learning (Archibald, 2008). Working within the research team, following the lead of Glen and Maurice and learning Nl̓eʔkepmx values, was essential for my skills to have meaning in this research (L. T. Smith, 1999). Youth who participated had a strong negative association to learning because of their experiences in the current public education system. I learned how to earn the respect of youth by working with Glen and Maurice and seeing how they demonstrate respect to youth. Through this process I am learning some Nl̓eʔkepmx teaching strategies. These strategies have also been identified by other Indigenous scholars (Demmert & Towner, 2003; Hampton, 1995; Sterling, 2002). They include building relationships outside of formal research, ensuring a non-hierarchical approach, maintaining a collective team approach, involving youth in decision making, providing artistic freedom, leading through example, mentoring in small groups or one on one, use of humour, integrating cultural practices such as drumming and promoting self-directed learning. I also thank youth and their apt recognition of appropriate cultural and teaching practices; youth were also excellent teachers to me. They were quick to make me aware when I strayed from the above practices. When I followed the above practices they expressed their appreciation and respect in return.

4.6 Sharing And Celebrating Research

Publicly giving back research findings is an important aspect of respectful and culturally relevant research with Indigenous communities (Menzies, 2005). The Traditional Knowledge for Health Project held a research celebration presenting its findings with the focal point being the youth documentary *“Traditional Foods of the Nl̓eʔkepmx Territory”*. Attended by over sixty people, the potluck table was lined with many Nl̓eʔkepmx delicacies. After dinner the research team presented the Traditional Knowledge for Health research findings including the Traditional Knowledge Protocol, the Harvest Training and Certification Program as well as the Youth-Elder Interviews. Chief Fred Sampson honoured the youth researchers calling them up in front of their community to be recognized. With this recognition the youth in turn honoured each of the Elders that shared their knowledge by presenting to them a DVD of the documentary.

Then came the first screening of the documentary film, it was so quiet you could hear a pin drop. Tina Edwards came up to me while her mother, Mary Williams, was being interviewed and said, “ Nancy, you know my mother has never shared that story with me before.”

That whispered moment, in a packed hall of over sixty people encapsulated the strength of bringing elders and youth together in research. The process of sharing this documentary with the community was profound from the perspective of education, research and culture: it was the first time youth were empowered to interview their Elders, create educational resources and to bring research alive in the Siska community and the wider Nl̓eʔkepmx Nation.

4.7 Conclusions

Currently, funding for Nation-specific curricular development is piece meal. Shelley Oppenheim-Lacerte, District Principal for Aboriginal Education for School District 74, expresses that schools want to implement more culturally relevant education specific to the Nl̓eʔkepmx Nation. However, relevant curricula and mentorship/training for teachers to learn Aboriginal teaching methodologies is largely absent. As Ida Swan (Swan, 1998) and Della Warrior (Warrior, 2007) confirm, successful First Nations Education that is integrated into schools is that which is created and grounded in grassroots communities. I recommend that funding towards Aboriginal Education curricula creation be directed towards Aboriginal communities.

The content of the Elders stories and interviews directly related to youths learning objectives including practical knowledge about harvesting, processing and stewardship of traditional foods and wildlife. This knowledge is equally as important as the resources themselves, for without knowledge it is not possible to use them (Turner & Turner, 2008) The themes from the interviews such as culture, history, and changes in traditional food use also responded directly to youth’s learning objectives. How Elders told their stories highlights how traditional food knowledge, practices and values can be passed on through engaging youth with stories. This amounted to active learning and the continuation of the cyclic generation of knowledge. Youth acknowledged this point in their learning objectives by describing how they wanted to pass on the knowledge they learned with others.

Chapter 5: Conclusions And Recommendations

Overarching Concluding Remarks

This conclusion discusses how our Traditional Knowledge for Health research has contributed to the research goal and objectives, the continued traditional food actions at Siska, and the broader Indigenous food movement; it then offers a number of recommendations.

Overarching Goal: Education and health creation through contemporary practice of traditional Nl̓eʔkepmx knowledge systems pertaining to ecological, spiritual and cultural values, including the local research and control of community health through food

To close the gaps between Aboriginal peoples and the Canadian population, Aboriginal health, education, and economic, research and policy has called for culturally relevant and self-determined approaches (The First Nations Leadership Council, Government of Canada, & Government of British Columbia, 2006). Accordingly, our Traditional Knowledge for Health research developed a self-determined community-based process to fill those gaps between research, policy and practice (Harris, 1998; Smylie et al., 2003).

Traditional Foods was the focus of this research, creating a culturally relevant, strength-based approach. In other research, the development of traditional foods programs has been shown to improve a community's health, education, and economy (Berkes, 1990; Berkes et al., 1994; Nuxalk Food and Nutrition Program Staff, 1984; E. J. C. Thompson, 2004). This research shows that when these strategies include self-determining factors such as community control, Nl̓eʔkepmx traditional food relationships are an affective focus for health and education creation. These self-determining factors include the application of OCAP principles: Ownership, Control, Access and Possession in the Siska-UBC Traditional Knowledge Protocol agreement (Schnarch, 2003). The principles of the agreement were fulfilled by community-controlled funding, decision-making, and resources for the research (Arnstein, 1969). Independence from colonial structures, such as the Indian Band structure, encouraged

participation and trust in the research process (Alfred, 2005). A strength-based approach that recognized community capacity gave our project relevance and, in turn, encouraged community participation in the research (Stevenson & Perreault, 2008).

Both the Harvest Training and Certification Program (HTCP) and the Youth-Elder (YE) Interviews contributed to the overarching goal while these processes differed significantly. Elders' role as educators was common to both, as was the focus of traditional foods, Nl̓eʔkepmxcin (language), and the use of Nl̓eʔkepmx knowledge, values and practices. Youth participated in the HTCP, while in the Youth-Elder interviews they acted as leaders, a role demonstrated to promote resilience and mental health (Morley, 2006). The research activities happened during different seasons. The HTCP occurred during harvesting seasons and therefore focused on current traditional food knowledge and practices on the land. In contrast the Youth-Elder Interviews took place late fall after harvesting, hunting and fishing seasons had finished, and therefore focused on storytelling (including past and present traditional food use), feasting and research celebration.

The combination of these two research activities could possibly bring greater benefit to strengthening Nl̓eʔkepmx traditional food relationships. Creating videos of the harvest training could produce culturally relevant curricula, as recommended by Tina Edwards, an HTCP participant and language instructor. Indigenous peoples have been using video to create culturally relevant curricula two decades (J. D. Billy, 1993; Maltby et al., 2002; Yinka Dene Language Institute, 1989). Similarly, Elders and knowledgeable community members integrating storytelling and the teaching of harvest practices at Nl̓eʔkepmx harvest areas and feasts could increase the culturally relevant learning component for youth and all community members.

Like other Elders across BC, Siska Elders discussed how the decrease in traditional food use in their lifetimes has weakened community health, well-being, strength, and self-sufficiency (H. V. Kuhnlein & Receveur, 1996; Turner & Turner, 2008). Nl̓eʔkepmx traditional food relationships are being impacted by ecological degradation and climate change, and by a lack of traditional management practices (Bandringa, 1999; Blackstock & McAllister, 2004; Richmond, Elliott, Matthews, & Elliott, 2005; Siska Traditions Society, 2009; Turner, 2005; Turner & Turner, 2008). Despite ecological degradation Elders encouraged youth interest in traditional foods by

pointing out that vehicles and roads made access to traditional foods more convenient than it was when they were young. Elders also stressed how relevant traditional foods are today for strengthening individual and community health, for passing on Nl̓eʔkepmx values such as sharing and self-sufficiency, and for nurturing cultural identity. This continued relevance is demonstrated by the multitude of traditional food initiatives in Indigenous communities across BC (Morrison, 2008).

Participants of both the HTCP and the Youth-Elder Interviews all expressed a great desire to see these activities continue in their community. Below, I discuss how the research actions taken led to the achievement of our specific objectives, and I link these achievements to ongoing Siska Traditions Society traditional food initiatives.

Specific Objective Concluding Remarks

Specific Objective: Create increased Siska community health, culture, and capacity by generating culturally relevant and ethical knowledge and practices for NTFR (Nl̓eʔkepmx traditional food relationship) management

The creation of STS HTCP has transformed participants' health, culture, capacity, and economy. These are results that we identified in the HTCP follow up interviews. These results were evaluated according to cultural relevance, learning impacts, transformative changes, lessons learned, and self-determination in stewardship and management responsibilities. Improved health was suggested by how participants changed their actions following the HTCP. Participants described harvesting traditional food plants more frequently and in greater variety following their training. This activity, which was also observed within the Nuxalk Nation, resulted in increased health measures such as key vitamin levels (Nuxalk Food and Nutrition Program Staff, 1984). Further research would be needed at Siska to quantify the nutritional change due solely to the harvest training. We determined that for the HTCP to achieve transformational benefits for health, especially for those with the least experience, all steps of traditional harvesting from picking and processing to cooking must be undertaken. Repetition repeating HTCP training would strengthen these benefits.

The cultural relevance of the harvest training and certification program was evaluated according to components identified during the community-planning symposium. The HTCP also met criteria for culturally based education (Demmert & Towner, 2003) and Shirley Sterling's characteristics of Nl̓eʔkepmx cultural education (Sterling, 2002). The harvest training participants' evaluation of their training confirmed the value of hands-on learning and of learning about the cultural practices and language associated with NTFR. In future, Siska Traditions Society could enhance the transformative nature of the training by including all of the steps in the harvest process: gathering, processing storing, cooking and feasting, as do other Indigenous traditional food programs such as the Feasting for Change Program led by the T'Sou-ke First Nation. The follow up interviews also identified participants as not only users of the traditional foods but also NTFR stewards and managers. Participants identified management techniques to promote plant abundance and harvest in future years. Their knowledge supports the assertion by the Ministry of Forest and Range researcher, Sinclair Tedder (2008), that First Nations would be well positioned to manage NTFR.

An expected and welcomed outcome of the training, demonstrated during follow-up interviews, was its "training the trainer" quality, with its benefits reaching further than the attendees to their families and the wider Nl̓eʔkepmx community. This outcome also demonstrates culturally engrained practice of passing on knowledge for others benefit (Smylie et al., 2003).

The cultural relevance of the HTCP was also confirmed through the positive feedback we received via the surveys and evaluations following the Siska NTFR Symposium: for example, "any courses regarding our native culture/traditional plants will be beneficial for sure. The hands on learning will be very helpful to me." Similar affirmations were made during follow-up interviews with participants of the Siska HTCP a year and a half after their training. As Tina Edwards said, the best way to learn was "hands on . . . like when we went out with Horace and Maurice [community Elders] for the stinging nettle and the mint, I thought that was great, just learning about it, and learning the language along with it, learning about the area, especially the history."

In fact, all sources of evaluation and follow-up identified the preferred learning style as hands-on (experiential). Participants' transformative actions resulting from their HTCP training corresponded to their previous knowledge and practices; the HTCP had a

particularly catalyzing effect on the most experienced harvesters, who, realizing the enjoyment other participants felt, not only gained confidence about passing on their knowledge to others, but also more deeply appreciated the importance of community-wide learning.

Specific Objective: Engage community members of all ages in the process of cyclical generation of Nl̓eʔkepmx (Indigenous) knowledge systems based on traditional values, and contemporary methods (technologies)

Nl̓eʔkepmx knowledge circulated in this way during the Traditional Knowledge for Health Research. In Indigenous communities, the process of knowledge translation happens when knowledge is passed on then upon practice and validation becomes wisdom (Smylie et al., 2003). The process of community researchers and research participants working together to pass on knowledge inspired additional research activities, mutual trust, and a positive attitude towards the research (K. Edwards, Lund, Mitchell, & Andersson, 2008). In fact, participation in the research increased over the life of the project: by the end, over half of the Siska community had participated. Ultimately, the cyclical use of knowledge promoted by the research process led to Youth-Elder Interviews, one of the most successful research activities.

Both The HTCP and the Youth-Elder interviews reinforced the role of Elders as educators and demonstrated the cyclic generation of Nl̓eʔkepmx knowledge. Youth involvement in the Youth-Elder interviews created an especially strong dynamic because of the Elders' desire to share their knowledge. Youth expressing self-determined learning objectives confirmed the young people's desire to learn from Elders about culture, language, and history as well as the Elders' desire to pass on their teachings so as to help others in their community, as has been documented by youth in other Indigenous Nations (Morley, 2006; Ten Fingers, 2005). Clearly, youth are strongly motivated by the wider community's acknowledgement of young people's wisdom and contribution to their community (Morley, 2006).

The Youth-Elder Interviews produced resources that can be used for curricula. Local schools have been requesting culturally relevant curriculum to teach; through this and subsequent projects, Siska has built the capacity to give them local, place-based, culturally-relevant curricula. Siska Traditions Society developed Nl̓eʔkepmx curricula

includes the book *Sísqe? Sqyéytn el Á'u?sqáy's Suméx Sciúws- Siska Salmon and Indigenous Peoples' Life Work*, which presents the Nl̓eʔkepmx science, knowledge, and practices related to salmon and the environment, as well as Western scientific environmental testing. STS Nl̓eʔkepmxcin curricula include *Traditional Food Seasonal Rounds* and *Nl̓eʔkepmx Place Names and Stories* DVDs.

Other research into Indigenous ecological knowledge has resulted in culturally relevant curricula development (Snively & Williams, 2006; E. J. C. Thompson, 2004). This has been shown to be important to academic achievement, cultural relevance, and the strengthening of identity (V. J. Kirkness & Bowman, 1992; Marker, 2003). The STS videos have the ability bring the voice of elders into the classroom and have the ability to help non-Indigenous teachers to learn about local Indigenous cultures. However, because how a subject is taught is as important as what is taught (Archibald, 2008), the teaching approaches used in the interpretation of these educational resources require the continued involvement in the classroom of community members and Elders (Swan, 1998).

Youth participants in the Youth-Elder Interviews identified a desire for more opportunities to learn about culture. Research among many groups of young Aboriginal people has identified the same desire (Morley, 2006; Ten Fingers, 2005). Siska youth and research team members also expressed a desire for the STS focus be expanded to include those technological advances in computer and multimedia that will complement fishing and forestry initiatives. These science capacity initiatives are important to future practices concerning the land jurisdiction and management modeled by the Nl̓eʔkepmx organizations Es-kn-am Cultural Resource Services and Tmix^w Research, who specialize in cultural resource mapping. Youth's desire to learn culture and technology calls for a culturally relevant science education. A western perspective dominates current science curriculum. What is needed is a science education centered within an Nl̓eʔkepmx worldview and recognizes Indigenous science (G. H. Smith, 2000) An education is needed that balances community-based experiential learning and science education, that will provide skills and Nl̓eʔkepmx values to assert Indigenous jurisdiction and management for land, culture and resources in the future.

Specific Objective: Promote self-determined control and application of such knowledge systems for economic diversity.

The Traditional Knowledge for Health realization of this objective was integral to the ongoing significance of research actions. Our combination of the Traditional Knowledge Protocol, community-based action research processes (Alfred, 2005; Menzies, 2001), a strength-based approach to health, education and economy that recognized the knowledge, skills, and capacity within the Siska community (L. T. Smith, 1999; Whitney & Trosten-Bloom, 2003) led to achieving self-determined control and application of Nl̓eʔkepmx knowledge systems.

The self-determination gained within this research is specific to community-university research partnerships. It is a small step towards the ultimate goal of the Nl̓eʔkepmx Nation for complete self-determination, not internal to the Canadian state but with external and equal status as the Canadian state (Moses, 2000).

The Siska Traditions Ethical Picking Practices Harvest Training and Certification Program is a precedent in the Southern Interior BC for self-determined Indigenous education and policy creation for Nl̓eʔkepmx traditional food relationships (NTFR). Siska community members are proactively determining their future jurisdiction, stewardship and management relationship with the land and Nl̓eʔkepmx food plants. STS's approach community-based consensus approach to policy provides a new vision for forestry and range management. The Nl̓eʔkepmxs taking this forward-looking vision will empower the provincial government to support STS. Following from STS's established NTFR policy the provincial government will have no need to try to regulate the harvesting and use of Nl̓eʔkepmx food plants within Nl̓eʔkepmx territory with methods that do not fit Nl̓eʔkepmx values system or that do not protect traditional food relationships for current and future use (First Nations Summit, Union of BC Indian Chiefs, BC Assembly of First Nations, & Government of British Columbia, 2005).

Within the Siska community, the success and acceptance of the STS Harvest Training and Certification program comes from its grassroots consensus approach to policy creation, as seen in other research (Fernandez-Gimenez, 2008; Sherry, Halseth,

Fondahl, Karjala, & Leon, 2005; Trosper, 2007). Such self-determination promotes Ntē?kepmx values and related concepts.

Siska's NTFR policy approach integrates approach including culture, health, education, economy, and land stewardship and management. This integrated approach is in agreement with other Aboriginal criteria for sustainable forest management (National Aboriginal Forestry Association, 1995; Sherry, Halseth, Fondahl, Karjala, & Leon, 2005) and specifically with NTFR management (First Nations Forestry Council, 2008; Morrison, 2006).

To address the issues pertaining to the multifaceted Indigenous food systems, the First Nations Forestry Council and the Working Group for Indigenous Food Sovereignty call for a provincial government inter-ministerial approach that incorporates meaningful Indigenous participation, (First Nations Forestry Council, 2008; Morrison, 2006). Several provincial ministries are currently meeting on an inter-ministerial committee for NTFR. However, this committee does not include representation from the Ministry of Health, nor does it have formalized Indigenous participation. The Ministry of Health's knowledge about how important Indigenous traditional plant food relationships are to Indigenous peoples' health is as important as the Ministry of Forest and Range's knowledge regarding the ecological and economic perspectives of NTFR.

Thus, for instance, because berries represent an important part of the economy and nutrition for Aboriginal communities in Canada, the provincial forest management policies have direct impacts on Aboriginal health across Canada (Berkes et al., 1994; H. V. Kuhnlein & Receveur, 1996). Forestry management practices, such as spraying herbicides to inhibit all plant growth except plantation trees, not only kills the berry plants but can have serious health impacts for animals and pickers (Suzuki & Moola, 2009).

Like other certification and tenure programs (Cocksedge & Schroeder, 2006; Howe, 2006b; S. Tedder, 2008), the STS's policy approach to NTFR supports the need for species- and region specific training and certification. This was implemented through the STS's Harvest Training and Certification Program. Indigenous peoples' complex ecological knowledge of their territories better equips them to manage their territories

than a centralized government agency (Sherry, Halseth, Fondahl, Karjala, & Leon, 2005; S. Tedder, 2008; Turner, 2001, 2005).

Some Indigenous communities have viewed formalized resource management planning with apprehension due to the danger of an external body appropriating the plan. In past experience this has resulted reduced flexibility for adaptive management and conflicting conceptions of enforcing law (Fernandez-Gimenez, 2008). However a crisis is a strong factor influencing a community's desire to make a stewardship and management plan. There is a sense of crisis to maintain Indigenous food systems within the Indigenous territories of British Columbia Interior. The mountain pine beetle epidemic is compounding the issues surrounding increased development in rural and remote areas, there is evidence of increased harvesting of Indigenous food plants by outside users, and there is yet absence of legislation protecting traditional food sources (J. Billy, 2006). In response to this crisis, the STS is developing proactive educational and other policies to assert Nlë'kepmx territorial jurisdiction. And just as Maori people have defined the roles of their knowledge and values to increase their place in resource management (Townsend, Tipa, Teirney, & Niyogi, 2004), the STS's harvest training and certification program has made Nlë'kepmx knowledge and values explicit, to guard against potential misuse and appropriation of their resources.

Furthermore, economic diversity within the Siska community increased as a result of HTCP a year and a half following the training; people were harvesting a greater variety of plants, and harvesting plants more often. This activity has translated to an increased food supply, for the elderly and those least able to harvest themselves, as well as for participants. Indigenous economies combine both monetary and non-monetary sources of value. One HTCP participant noted that he had increased his income by applying the skills he had learned at the morel mushroom training workshop. It is possible that his financial gain may be related to a greater market demand for morel mushrooms than for other NTFR.

The morel training was the least culturally relevant part of the HTCP, as it was held in a hall versus on the land, and neither employed Elders as teachers, nor drew on hands-on experiential learning (Greenwood & Leeuw, 2007; Scott, 2006). However, mushroom picking accords with the Indigenous values that are integral to sustained economic development among Aboriginal peoples (Myers, 1996). The morel harvest

training was best-attended workshop, offered to spur economic diversity by providing harvesters with the skills they need to take advantage of local morel availability. And in fact Nl̓eʔkepmx knowledge and skills undoubtedly played a factor in this success, since those who attended were experienced at picking other better known Nl̓eʔkepmx mushrooms such as the pine mushroom. The morel harvest training workshop demonstrated that Nl̓eʔkepmx people are interested in an economy aligned with traditional values, as is true in Cree Territory (Northern Forest Diversification Centre, 2005) and confirmed among other Indigenous peoples in the North (Myers, 1996). It also confirmed that if there is a market, harvesters can quickly adapt their food-gathering skills to take advantage of that opportunity.

5.1 Significance And Implication For Further Work

As a result of this research, STS continues to implement culturally relevant policies and practices for NTFR and land stewardship and management. For example, Siska formalized the HTCP and continues to develop Nl̓eʔkepmx management guidelines for specific traditional plant food species. This research identifies many criteria for responsible NTFR practices, yet more research is needed to express the complete Nl̓eʔkepmx stewardship and management systems and Nl̓eʔkepmx criteria for maintaining ecosystem health. Local Siska level and Nl̓eʔkepmx Nation level dialogue and consensus processes would need to take place to determine the value of developing a more elaborate framework of criteria and indicators, as exemplified by the Tl'azt'en Nation's criteria for sustainable forest management. The Tl'azt'en Nation's criteria for sustainable forest management has increased their ability to assert their values into forest management (Sherry, Halseth, Fondahl, Karjala, & Leon, 2005). An Nl̓eʔkepmx Nation assertion may help foster recognition for a localized approach where the Nl̓eʔkepmx Nation jurisdiction is recognized to implement NTFR and forestry policies. By working at the Nation level the Nl̓eʔkepmxs can gain a stronger voice for Indigenous jurisdiction, self-determination and protection of their territories.

Continued STS research looks to Elders direction to bring Nl̓eʔkepmx management practices back onto the land. "Measuring Success in Managing for Saskatoon Berries and Other Traditionally Important Plants" funded by the Forest Science Program focusing on scaq̓melp (Saskatoon bush) as this is a trademark plant food in abundance

in one of the ecosystems surrounding Siska. Management practices will include trials of selective logging techniques combined with prescribed burns, planting and pruning tested against control plots. Chief Fred Sampson expresses that this research combined with the continued community-level HTCP literally, “Secures their foothold on the land, the Siska approach starts from the people, to the land” and literally brings the people out onto the land along with Nl̓eʔkepmx knowledge and values. The strong foundation of Nl̓eʔkepmx knowledge and values will allow the people to integrate certain Western science tools without compromising an Nl̓eʔkepmx worldview.

5.2 Recommendations

- Further research should be supported to pilot and monitor outcomes from Siska Ethical Picking Practices. In this way, as other successful Indigenous science research has shown (Shebitz & Kimmerer, 2004; Townsend, Tipa, Teirney, & Niyogi, 2004), traditional management practices can be tested for effectiveness.
- HTCP needs to be expanded upon for both content and delivery and have a legitimized certification process with greater recognition for the participants’ achievements.
- Any BC government policy discussion regarding NTFR should include multiple First Nations representation and resources to participate in such dialogue.
- NTFR should create an opportunity for government to implement the “New Relationship” legislation, whereby First Nations determine how NTFR policy recognize Aboriginal title, rights, and self-governing territorial jurisdiction.
- Beginning with the harvesters themselves, policy should be created from a grassroots perspective and founded on Indigenous principles of stewardship and management.
- Since schools are now asking Indigenous communities for culturally relevant curricula, clear long-term provincial funding streams should be created to enable communities to create such curricula.
- Curricular funding focus on culturally relevant science education is integral to Nl̓eʔkepmx future land jurisdiction, stewardship and management.
- Recognizing the unanimous preference for hand-on learning, community-based on-the-land training is required in compliment to classroom based learning for the next generation to learn Nl̓eʔkepmx stewardship and management practices.

- HTCP and the Youth-Elder Interviews use a strength-based culturally relevant approach called for to improve Aboriginal Health. Provincial and Federal Health policy should allocate First Nations Health Transfer funding for programming specific to Aboriginal healing and wellness promotion practices, traditional food and medicines in British Columbia.
- While university behaviour research ethics boards review research involving humans, other types of research involving NTFR can also involve risk to humans, especially Indigenous peoples who depend on land based relationships (Castellano, 2004). Universities should establish a referral practice for research; currently researchers require a permit for doing research on crown land or in park land. Researchers should also require a permit from the First Nation of that territory where they are conducting research.

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Appendices

Appendix A: Siska Band Heritage Park Declaration



Siska Band Heritage Park Declaration for the Siska Watershed



June 21, 1997

Be it known to all people that we of the Siska Band of the Nlaka Pamix Nation, have lived in the Nxezimatkwa (Siska Valley) and at Kipchynalth (IR#) with our ancestors spirits since time immemorial.

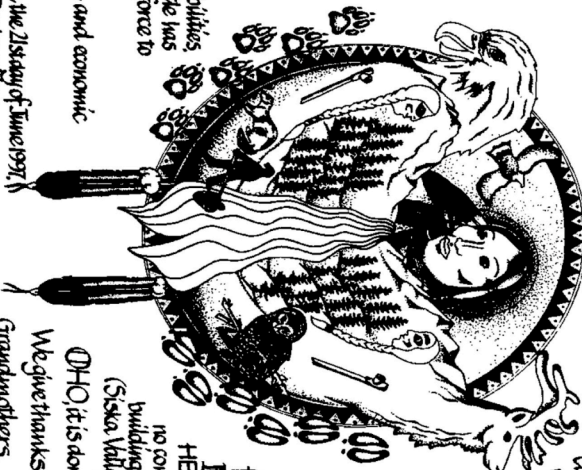
The creator entrusted the Sacred Duty of guarding and protecting this land to our ancient ancestors so that we in our time may live in love and harmony with their Spirits and nourish our Souls and bodies with the bountiful gifts of this land.

In those times past, it was our ancestors' tradition to protect all parts of the great interwoven circle of life and to wisely use without greed the gifts of this land, its water, plants, animals, fish, birds and all Spiritual Beings.

These traditions and values with their rights and responsibilities are embodied in our ancient and just Title to this land. Our Title has never been surrendered or extinguished, and remains in full force to this day and for always.

The Nxezimatkwa (Siska Valley) is the perpetual spiritual and economic homeland of our people.

Recognizing these inalienable rights and responsibilities on the 21st day of June 1997, we the Siska people do solemnly and justly reaffirm the Declaration made at the GREAT SSKA GATHERING held on the 17th day of September 1994 and notwithstanding our other comprehensive and specific land



claims that the entire Nxezimatkwa (Siska Valley) watershed and Kipchynalth (IR#) as shown on the map shall henceforth be known as the Siska Band Heritage Park.

It is in our Siska Band Heritage Park that the Siska people will, as did our ancestors and so with our future sons and daughters:

- Practice our traditional sacred and spiritual ways and utilize our traditional native medicine.
- Exercise our traditional rights of hunting, fishing, trapping and gathering the gifts of the land.
- Share our Siska Band Heritage Park with all peoples who are of a like mind and show respect for our ancient traditions, rights and values.

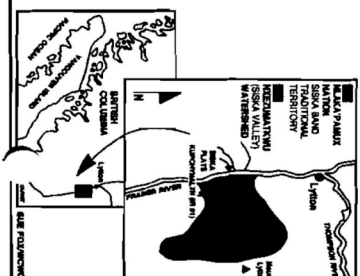
Let it also be known that within our Siska Band Heritage Park there shall be no roadbuilding, no commercial logging, mining, mining exploration, dam building or any other activities harmful to Nxezimatkwa (Siska Valley) watersheds.

OHQ, it is done.

We give thanks to the Grandfathers and Grandmothers.

"All My Relations."

Siska Indian Band, PO Box 59, Lytton, BC, V0K 1Z0



Appendix B: Traditional Knowledge Protocol



Box 519
Lytton, BC
V0K 1Z0
Phone: 250-455-2219
Fax: 250-455-2539
E-mail: siskaib@hughes.net

To: Whom it may concern

In the spirit of Aboriginal capacity and developing healthy research environments Siska Indian Band would like to share the Traditional Knowledge Protocol Agreement developed by Siska in collaboration with UBC. We feel that this protocol may give a strong grounding to other Aboriginal communities to begin respectful research relationships recognizing the rightful ownership and protection of traditional knowledge. As Aboriginal Peoples', we at Siska feel solidarity with other Aboriginal communities continuing to strengthen our cultural traditions for the health of our communities.

In this, we ask for the good faith of those who would like to use this protocol. Please contact Siska Indian Band and make a formal request introducing the research organizations and their objectives.

Thank you again,

Yours truly,

Chief Fred Sampson

TRADITIONAL KNOWLEDGE PROTOCOL
THIS AGREEMENT dated April 10, 2006 is AMONG:

THE SISKa BAND and SISKa TRADITIONS SOCIETY
(collectively, the “Siska Band”)

AND:

THE UNIVERSITY OF BRITISH COLUMBIA
(“UBC”)

BACKGROUND:

- A.** The Siska Band is comprised of members and is located in the Fraser River Canyon, approximately 11 kilometres south of Lytton. The Siska Band represents the Aboriginal rights, titles and interests of its members. The Siska Band is a member of the Nlha7kapmx (Nlaka’pamux) Nation. The Siska Band has extensive knowledge relating to the use of Non-Timber Forest Resources (the “NTFR”) within their culture and traditions. The Siska Traditions Society is a non-profit society with a purpose to manage and develop NTFR on behalf of the Siska Band.
- B.** UBC is the University of British Columbia, Canada.
- C.** The Siska Band and UBC have agreed to work in collaboration for the purpose of community health education and promotion through sustainable use of NTFR. Together, Siska and UBC have developed a Siska Traditional Knowledge Research Project (the “Traditional Knowledge Project”) with the purpose of enhancing aboriginal community health and education through intergenerational NTFR apprenticeship and contemporary translation, as described in the attached Schedule “A”.
- D.** The sharing, respect, understanding and use of Traditional Knowledge will be a key element of the Traditional Knowledge Project.
- E.** Traditional Knowledge is integral to the way of life of the Siska Band.
- F.** The Siska Band needs assurance that UBC will respect the guardianship interests of the Siska Band in Traditional Knowledge.
- G.** UBC acknowledges the importance to the Siska Band of maintaining the integrity of Traditional Knowledge.
- H.** The use of Traditional Knowledge in furtherance of the Traditional Knowledge Project will be governed by this Traditional Knowledge Protocol (the “Protocol”).

THEREFORE THE PARTIES AGREE AS FOLLOWS:

1.0 DEFINITIONS

- 1.1 “Confidential Information” means all information, regardless of its form disclosed by UBC to the Siska Band and which is clearly identified in writing as "Confidential" either at the time of disclosure or within thirty (30) days thereafter, or disclosed by the Siska Band to UBC and which is clearly identified in writing as "Confidential" either at the time of disclosure or within thirty (30) days thereafter. Except that "Confidential Information" does not include information:
- 1.2
- a) possessed by the recipient (the "Recipient") prior to receipt from the disclosing party (the "Discloser"), other than through prior confidential disclosure by the Discloser, as evidenced by the Recipient's business records;
 - b) published or available to the general public otherwise than through a breach of this Agreement;
 - c) obtained by the Recipient from a third party with a valid right to disclose it, provided that the third party is not under a confidentiality obligation to the Discloser in respect of the same; or
 - d) independently developed by employees, agents or consultants of the Recipient who had no knowledge of or access to the Discloser's information as evidenced by the Recipient's business records.
- 1.2. “Inventory” means an inventory that may be held at the Siska Band containing Traditional Knowledge in written, audio, video or other digital or electronic form, including maps designating specific traditional land use and occupation within the Traditional Territory.
- 1.3. “Non-Timber Forest Resources Research Committee” or the “Committee” means the committee established by the Siska Band or the Siska Traditions Society for the purposes of overseeing and providing direction on the Traditional Knowledge Project and the implementation of this Agreement.
- 1.4. “Non-Timber Forest Resources” or “NTFR” means materials derived from living systems which are plant-based including but not necessarily limited to berries, herbs, mosses, fungi, ferns, leaves, resins, roots, sap, branches, bark, cones, and are utilized for food, health, social, economical, commercial and ceremonial use by Siska Band members, but does not include the timber of the tree.

- 1.5.** “Parties” means the UBC and the Siska Band and “Party” means one of them.
- 1.6.** “Research Thesis” is a written, academic publication of the theoretical framework, objectives, methods and findings of the research.
- 1.7.** “Project Report” means a written narrative that includes the nature and scope of the Traditional Knowledge Project including objectives, methods and findings, including all versions, editions and drafts thereof. It is written documentation co-developed by Siska community members in collaboration with UBC, and shall remain the intellectual property of the Siska Band. The Project Report is distinct from the UBC Research Thesis, and non-confidential findings contained in the Project Report may be used to create the Research Thesis.
- 1.8.** “Sacred Site” means a site used and/or identified by the Siska Band for sacred purposes since time immemorial, including but not limited to, burial sites and sites of ceremonial, social and/or cultural significance.
- 1.9.** “Siska Band” means the collective membership of the Siska Indian Band, and “Siska Band member” means a member of the Siska Band.
- 1.10.** “Traditional Knowledge” includes tradition-based literary, artistic or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information; and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields. “Tradition-based” refers to knowledge systems, creations, innovations and cultural expressions which have generally been transmitted from generation to generation; are generally regarded as pertaining to the Siska Band or its Traditional Territory; and, are constantly evolving in response to a changing environment. Categories of Traditional Knowledge could include: agricultural knowledge; scientific knowledge; technical knowledge; ecological knowledge; medicinal knowledge, including related medicines and remedies; biodiversity-related knowledge; “expressions of folklore” in the form of music, dance, song, handicrafts, designs, stories and artwork; elements of languages, such as names, geographical indications and symbols; and, movable cultural properties.
- 1.11.** “Traditional Territory” means that portion of the traditional territory of the Siska Band located within the Fraser Canyon and to the headwaters of the mountains, as set out in the map entitled “Siska Band’s Traditional Territory”, a copy of which is attached as Schedule “B” to this Protocol.
- 1.12.** “Traditional Knowledge-holders” means members of the Siska Band that have traditional knowledge and have been given the responsibility by elders to act as custodians of particular Traditional Knowledge to ensure the preservation of such Traditional Knowledge for future generations.

- 1.13. “Workplan” means the plan in effect from time to time for gathering, documenting and preserving Siska Band Traditional Knowledge and appended as Schedule “C” to this Protocol.

2.0 PRINCIPLES

The Parties agree to the following principles:

- 2.1 **Asserted Rights.** The UBC acknowledges that the Siska Band has asserted Aboriginal rights and title over the land, waterways and the natural resources within the Traditional Territory.
- 2.2 **Self-Determination.** The UBC acknowledges that the Siska Band has the right to self-determination regarding Traditional Knowledge.
- 2.3 **Traditional Guardianship.** The UBC acknowledges that the Siska Band has a holistic interconnectedness with the ecosystems within its Traditional Territory and the Siska Band’s obligation and responsibility to preserve and maintain its role as traditional guardian of these ecosystems through the maintenance of Siska culture, spiritual beliefs, and customary law.
- 2.4 **Active Participation.** The UBC acknowledges the crucial importance of the Siska Band to actively participate in all phases of the Traditional Knowledge Project and documentation, and in the integration, use and application of such Traditional Knowledge.
- 2.5 **Full Disclosure.** The UBC acknowledges that the Siska Band is entitled to be fully informed about the nature, scope and ultimate integration of the Traditional Knowledge (including methodology, data collection, and the dissemination and application of results) into the Research Thesis. This information is to be given in a form and style that has meaning to the Siska Band, including translated information where possible.
- 2.6 **Support of Siska Band Traditional Knowledge Research.** The UBC acknowledges the Siska Band’s need to develop capacity to undertake their own Traditional Knowledge research and publications and in utilizing their own collections and databases.
- 2.7 **Support of UBC.** The Band acknowledges the research assistance of UBC for the Traditional Knowledge Project.

3.0 PURPOSE OF THIS PROTOCOL

- 3.1 The purposes of this Protocol include the following:
- (a) documentation of Traditional Knowledge to ensure the continuity of Siska Band’s customs, practices and traditions from one generation to the next;

- (b) provide a process to gather, preserve and integrate the Traditional Knowledge with respect to the Traditional Knowledge Project;
- (c) set out the mutual understanding of the Parties about ownership, protection and use of such Traditional Knowledge;
- (d) set out a Workplan for the purpose of carrying out the Traditional Knowledge Project; and
- (e) commence research to enhance aboriginal community health and education through intergenerational knowledge apprenticeship and translation for the direct economic and social benefit of the Siska Band.

4.0 PHASES OF THE TRADITIONAL KNOWLEDGE PROJECT

4.1 The Traditional Knowledge Project will consist of five phases:

- (a) **Phase 1:** Community consultation meetings informing members of the Siska Band of the Traditional Knowledge Project and introducing the UBC researchers to Siska members and resource personnel.
- (b) **Phase 2:** Reviewing, gathering and documenting Traditional Knowledge from participating Traditional Knowledge-holders with the assistance of a Siska Research Coordinator and Research Assistants from the Siska Band.
- (c) **Phase 3:** Preparation of Traditional Knowledge Documentation by UBC in collaboration with the Siska Band.
- (d) **Phase 4:** Review by the Committee of the Traditional Knowledge Documentation.
- (e) **Phase 5:** Integrate Traditional Knowledge into:
 - (i) Community health and cultural education and promotion activities and resources;
 - (ii) Language preservation (Siska Nlaka'pamux language integrated into all documentation, education, and health programs);
 - (iii) NTFR Product Procedure manual for management, harvesting, processing;
 - (iv) Policy Documents for Siska management and stewardship of NTFR products; and
 - (v) Data for preparation of Research Thesis, containing Traditional Knowledge from the Traditional Knowledge Project (even if previously published) will be first approved by Siska Band and the NTFR Research Committee.

4.2 The particulars of the work to be performed, services to be provided and payment with respect thereto will be as established in the Workplan.

- 4.3 The Parties agree that the Traditional Knowledge Research Project coordinator, UBC M.Sc. student Nancy MacPherson, will be co-authoring the final Project Report with the Siska Band. As well, Nancy MacPherson will be utilizing information contained in the final Project Report to the Siska Band for development of a Research Thesis for UBC. The Research Thesis is not to contain any Traditional Knowledge or Confidential Information disclosed to UBC by Siska Band that may be in the Project Report, and to ensure this the Research Committee will be given the opportunity to review the Research Thesis for any Traditional Knowledge or Confidential Information prior to finalization and publication of the Research Thesis by UBC. If any Traditional Knowledge or Confidential Information is found in the Research Thesis, it will be removed prior to publication of the Research Thesis by UBC unless the Siska Band provides authorization that the information can be included in the Research Thesis.
- 4.4 All publications arising from the Traditional Knowledge Project will be either authored, or co-authored by the Siska Band/Siska band members, except for the Research Thesis, which will be authored by student Nancy MacPherson, who will owns the copyrights in the Research Thesis.
- 4.5. This Protocol held between UBC and Siska Band shall remain in accordance with UBC policies regarding scholarly conduct (Policy #85) and Research (Policy 87), appended as Schedule **D**.

5.0 RESPONSIBILITIES OF THE UBC

- 5.1 For the purposes set out in Clause 3 of this Protocol, the UBC will do the following:
- (a) respect the privacy, dignity, cultures, practices, traditions and rights of the Siska Band;
 - (b) recognize that the Siska Band's rights to ownership, protection and custody of their Traditional Knowledge;
 - (c) ensure that the Traditional Knowledge Project occurs in an orderly, legal and respectful manner with due regard to the peaceable enjoyment of the Siska Band to the Traditional Territory;
 - (d) offer to, and if accepted, respect the anonymity of the Traditional Knowledge-holders;
 - (e) in the manner set out in the Workplan, assist the Siska Band to develop the capacity to carry out the Workplan; and
 - (f) take any reasonable action required to ensure compliance with this subsection as requested by the Siska Band.
- 5.2 The UBC will not, without the prior informed consent of the Siska Band:

- (a) use or permit the Traditional Knowledge to be used by any other person or body other than for the purposes of or incidental to the Traditional Knowledge Project;
- (b) knowingly undertake any collection of heritage or cultural materials;
- (c) disclose any aspect of the Traditional Knowledge which is not publicly available and which was communicated to or observed by the UBC pursuant to the Traditional Knowledge Project, except as set out in Clause 10;
- (d) seek to obtain any Traditional Knowledge of the medicinal and cosmetic properties of plants from a Traditional Knowledge holder which is not publicly available; and
- (e) sell or claim rights to sell plants as herbal medicines or cosmetic products that were obtained as a result of the Traditional Knowledge Project.

5.3 **Sacred Sites.** In the event of and upon becoming aware of any Sacred Site within the Traditional Territory, the UBC will adhere to the following procedure:

- (a) not undertake any activities which could reasonably be expected to damage or interfere with the Sacred Site;
- (b) disclose the location of the Sacred Site to the Siska Band or a designated representative thereof,
- (c) treat all information with respect to the Sacred Site as confidential to the benefit of the interests of the Siska Band, and
- (d) seek the advice of the Siska Band regarding the Sacred Site.

5.4 The UBC will not, without the prior informed consent of the Siska Band, knowingly enter upon any Sacred Site.

6.0 RESPONSIBILITIES OF SISKA BAND

6.1 For the purposes set out in Clause 3 of this Protocol, the Siska Band will do the following:

- (a) instruct and supervise the Traditional Land Stewards, Siska Research coordinator, and Siska researchers in their gathering, analyzing and documentation of Traditional Knowledge;
- (b) provide the Traditional Knowledge as described by the Workplan;
- (c) use reasonable efforts to secure the cooperation and participation of the Traditional Knowledge-holders;

- (d) in a timely manner, bring information, matters or issues of concern forward for discussion and resolution in order to assist the UBC in the planning and development of the Traditional Knowledge Project;
- (e) provide advice and assistance to the UBC, as necessary, to enable it to fulfill its responsibilities under this Protocol;
- (f) on a regular basis or when requested by the UBC, provide an update of progress on the Traditional Knowledge Project to the UBC; and
- (g) take any reasonable action to ensure compliance with this subsection as agreed to by the UBC.

7.0 PRIOR INFORMED CONSENT

- 7.1 **Prior Informed Consent.** The UBC acknowledges that the prior informed consent of the Siska Band must be obtained before the Traditional Knowledge or any work associated with the Traditional Knowledge Project is transmitted from Traditional Knowledge-holders to the UBC. Ongoing consultation is necessary to maintain the prior informed consent throughout the Term of the Traditional Knowledge Project. This principle will be satisfied by meeting the obligations set out in Clause 8 herein.
- 7.2 **Siska Band's Responsibilities and Obligations to the Siska Band Members.** Pursuant to internal Siska Band protocols and for the purposes of the Traditional Knowledge Project, the Siska Band must seek, obtain and maintain the prior informed consent of the Siska Band members with respect to the protection, preservation and maintenance of Traditional Knowledge, which may include the recommendations of the Committee.
- 7.3 The Siska Band responsibilities and obligations to the Siska Band member with respect to the gathering, collection, integration and use of Traditional Knowledge are further elaborated in the Workplan.
- 7.4 **The UBC Responsibilities and Obligations to the Siska Band.** The UBC recognizes and respects that the Siska Band's Traditional Knowledge is collectively owned, managed and controlled by the Siska Band.
- 7.5 Unless authorized by the Siska Band, the UBC will not approach individual Traditional Knowledge-holders in an effort to obtain Traditional Knowledge.
- 7.6 When requested by the Siska Band, the UBC will explain the potential benefits and outcomes associated with the Traditional Knowledge Project to Siska Band members.
- 7.7 For clarity, the Parties acknowledge that ongoing consultation and provision of information will be required throughout the duration of the Traditional Knowledge Project to maintain prior informed consent.

- 7.8. For further clarity, the UBC acknowledges that the Siska Band may withdraw their prior informed consent in writing or by termination of this Protocol. All information and Traditional Knowledge documented prior to withdrawal of the Traditional Knowledge Project will be returned to the Siska Band and no information arising prior to withdrawal will be used in any way by UBC.

8.0 BENEFIT-SHARING

- 8.1 **Benefits to the Siska Band.** As agreed to by the Parties and for the purposes of the Traditional Knowledge Project, benefits relating to the Traditional Knowledge Project may include, but are not limited to, the following:

- (a) training of community members;
- (b) equipment;
- (c) production of procedure manuals;
- (d) video/audio recordings;
- (e) contribution to the Siska Band by cultural, commercial or community-based undertakings related to the Traditional Knowledge Project;
- (f) remuneration, including honoraria, as set out in the Workplan and
- (g) any other matters set out in the budget of the Workplan.

- 8.2 **Benefits to the UBC.** The benefit to the UBC includes, but is not limited to, the following:

- (a) Siska Band assistance and advice to the UBC for the purpose of original research education experience and scholarly contribution in the form of an interdisciplinary Research Thesis;
- (b) opportunities to establish positive engagement of the Siska Band; and
- (c) the authenticity and evidentiary value of the Traditional Knowledge contributions will be enhanced through Siska Band participation in the development of the Traditional Knowledge Project.

- 8.3 **Mutual Benefits to the Parties.** Mutual benefits to the Parties include, but are not limited to, the following:

- (a) protection and enhancement of the Siska Band's cultural pursuits and traditional activities;
- (b) protection of areas of traditional use and sites of cultural importance to the Siska Band;

- (c) preservation, access, control and regeneration of Traditional Knowledge; and
- (d) furthering the development of positive, beneficial and harmonious relationships between the Parties.

9.0 CONFIDENTIALITY

- 9.1 The UBC acknowledges that the Siska Band has information concerning their Traditional Knowledge, including particular aspects of their culture, traditions, spiritual beliefs and customary laws that must be maintained and treated as confidential by the UBC. This principle will be satisfied by meeting the obligations set out in Clause 9 herein.
- 9.2 Unless otherwise agreed by the Parties, neither Party will disclose, divulge, or otherwise communicate to a third party any Confidential Information received from the other party as a result of this Traditional Knowledge Project nor use such Confidential Information for any purpose.
- 9.3 Where Traditional Knowledge that is confidential is required or requested by a third party, the Parties will make reasonable efforts to engage, negotiate and conclude an agreement with the third party that will safeguard that Traditional Knowledge from public disclosure.

10.0 OWNERSHIP

- 10.1 **Siska Band Exclusive Ownership of the Traditional Knowledge.** The Siska Band shall remain the exclusive copyright owner of the Traditional Knowledge. The UBC acknowledges and agrees that it has no interest whatsoever in the ownership of the Traditional Knowledge, including any intellectual property rights there under. The UBC hereby waives any intellectual property and/or any other rights that the UBC may have with respect to the Traditional Knowledge. If, notwithstanding the foregoing, rights to Traditional Knowledge are recognized by a third party as residing in the UBC, the UBC will take all reasonable efforts to waive or transfer all or any such rights to the benefit of the Siska Band.
- 10.2 **The UBC Use of Traditional Knowledge.** For the consideration provided under this Protocol, the UBC will be able to use the Traditional Knowledge for the purposes set out in the Traditional Knowledge Project and Workplan, subject to terms and conditions set out by the Committee. For clarity, the Parties do not intend that this use of the Traditional Knowledge includes any grant of ownership to the UBC.
- 10.3 The UBC shall retain ownership of the intellectual property contained in the Research Thesis, and shall retain the right to publish all or portions of the Research Thesis after a maximum of 12 months from termination of the project, or submission of the Project Report to Siska Band, whichever is later, according to UBC Policies. The Siska Band shall be given the opportunity to review the

Research Thesis, for any Confidential Information and Confidential Traditional Knowledge information, before publication of the Research Thesis by UBC.

11.0 PROCESS MATTERS

- 11.1 **Review of the Traditional Knowledge Documentation by the Committee.** Prior to the release of the Traditional Knowledge documentation to the UBC for the purpose of writing the Research Thesis, a draft report of the Traditional Knowledge documentation will be distributed to the Committee for its review and approval.
- 11.2 **The UBC Comments on the Traditional Knowledge Documentation.** The UBC shall have the opportunity to review and provide comment on the Traditional Knowledge documentation before it is finalized by the Siska Band for the use of Siska Band.
- 11.3 **Communications.** All external communications with respect to this Protocol or initiatives pursuant to this Protocol will be undertaken by joint communiqué, as authorized by the Parties.
- 11.4 **Communities Information Strategy.** The Parties, by their designated representatives, will collaborate in the development and implementation of a Siska Band community information strategy with respect to the Traditional Knowledge Project and any and all agreements, including the preparation of a summary thereof.

12.0 DISPUTE RESOLUTION

- 12.1 **Notice.** In the event that the Siska Band or the UBC finds a conflict with the fulfillment of the terms, conditions or responsibilities set forth in this Protocol, that Party shall give written notice to the other Party.
- 12.2 **Meeting.** The Parties shall convene a meeting within 15 days of receiving the notice and shall attempt to reach a mutually acceptable resolution within 7 days.
- 12.3 **Appointment of a Third Party.** If the Parties cannot resolve the dispute within 7 days they shall agree to designate a third party mediator to mediate the dispute.
- 12.4 **Resolution by Third Party.** The parties shall attempt to reach a resolution with the assistance of the third party mediator. If a resolution cannot be reached within 30 calendar days of the designation of the third party mediator, the third party shall provide recommendations on how to resolve the dispute.

13.0 TERM, EXPIRY, AMENDMENT AND ASSIGNMENT

- 13.1 The Parties agree that this Protocol is a document of a “living nature” and may be amended from time to time to continue to achieve the purposes of this Protocol or such other objectives as may be agreed upon by the Parties from time to time.

- 13.2 This Protocol and the Workplan may be amended by agreement of the Parties in writing.
- 13.3 Unless the Parties agree otherwise in writing, the term of this Protocol is indefinite. If the Parties do agree to terminate this Protocol, the specific conditions and covenants that survive termination must be specifically agreed. For clarity, section 9 – Confidentiality and section 10 – Ownership, will survive termination of this Protocol.
- 13.4 This Protocol may not be assigned without the express written consent of the other Party.

14.0 MISCELLANEOUS

- 14.1 **Implementation of this Protocol.** The UBC and the Siska Band acknowledge that a serious ongoing commitment by both Parties and the dedication of necessary resources to implement this Protocol will be required to meet its objectives in a timely and complete way.
- 14.2 **Non-Derogation.** Nothing in this Protocol does or will abrogate, derogate and/or prejudice any of the Siska Band's Aboriginal rights, titles and interests in the Traditional Territory.
- 14.3 **Third Party Consultation.** Nothing in this Protocol does or will limit the Parties ability to participate in consultations, discussions and agreements with any third party.

14.4 The Parties agree that this Protocol may be executed in separate counterparts, each of which so executed shall be deemed to be an original. Such counterparts together shall constitute one and the same instrument and, notwithstanding the date of execution, shall be deemed to bear the effective date set forth above.

TO EVIDENCE THEIR AGREEMENT each of the Parties has executed this Protocol on the date appearing above.

UBC

By: _____

Barbara M. Campbell

Title: **Associate Director**

**University-Industry Liaison
Office**

Date: **April, 21, 2006**

SISKA BAND

By: _____

Fred Sampson

Title: **Chief- Siska Indian Band**

Date: **April, 21, 2006**

By: _____

Betsy Munro

Title: **Councillor- Siska Indian Band**

Date: **April, 21, 2006**

By: _____

Angela Phillips

Title: **Councillor- Siska Indian Band**

Date: **April, 21, 2006**

SCHEDULE “A”

The Traditional Knowledge Project has been initiated for the purpose of enhancing aboriginal community health and education through intergenerational NTFR knowledge apprenticeship and contemporary translation.

This partnership is based on Siska’s proactive approach to protecting and continuing their relationship with their traditional foods. The research team will be community-based and organized through the Siska Traditions Society, a non-profit organization currently involved in NTFR research and contemporary economic initiatives. The overall goal of this research is to enhance aboriginal community health and education through intergenerational knowledge apprenticeship and translation for the direct economic and social benefit of Siska Band. This research addresses the current economic environment, potential for degradation of resources, as yet unregulated NTFR management and policy options that give an opportunity for First Nations meaningful involvement in the non-timber forest resource industry.

The UBC researcher who has collaboratively developed this research project with Siska Band is Dr. Shannon Binns, Faculty of Land and Food Systems. Dr. Binns was approached by Siska Band Chief Fred Sampson on behalf of Siska Band. UBC researchers Binns and her student Nancy MacPherson then met with Siska Traditions Society to further develop this research potential. Together with Dr. Binns, M.Sc. student Nancy MacPherson will collaboratively conduct the research project with Siska Band, and the project will serve as part of Ms. MacPherson’s Research Thesis document for UBC as partial completion of the requirements in the graduate degree program “Integrated Studies in Land and Food Systems”. Nancy MacPherson has posed the following research question:

Research Question:

How can Siska traditional cultural knowledge of NTFR (including health uses as foods and medicines, as well as spiritual and linguistic practices) be used in contemporary contexts to create health benefits for Siska community members?

The research objectives of the Traditional Knowledge Project include:

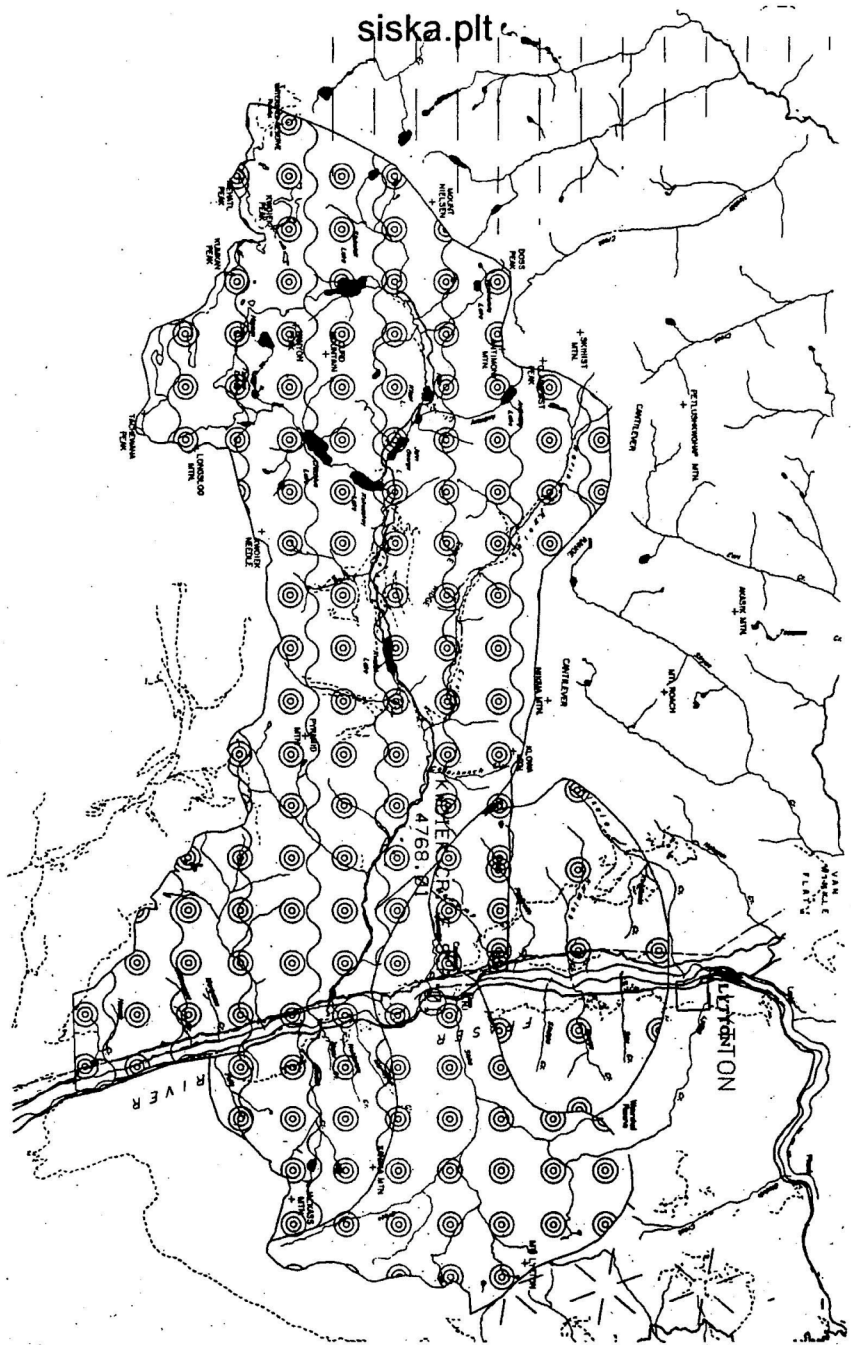
- a) Education and health creation through contemporary practice of Nlaka’pamux knowledge systems pertaining to ecological, spiritual and cultural values, including the local research and control of community health through continued, sustainable and secured use of food and medicine;
- b) Create increased Siska community health and capacity by generating culturally-relevant and ethical knowledge and practices for non-timber forest resources (NTFR) management, and use towards local health goals;
- c) Engage community members of all ages in the process of cyclical generation of Nlaka’pamux knowledge systems based on traditional values, and contemporary methods;
- d) Promote self-determined control and application of such knowledge systems to create increased economic diversity for Siska community

Traditional Knowledge data from the research will be used as determined by the Non-Timber Forest Resources Research Committee. Expected uses of this data include creation of a Siska management plan for NTFR, GIS mapping, community resources for health and education (integrated with existing programs), archival purposes, evidence for Aboriginal Title, community and academic publications (including a UBC Research Thesis – which is not to contain any confidential Traditional Knowledge owned by Siska Band), and continued research initiatives by the Siska Band. The Project outcomes may include direct economic and social benefit of Siska Band, including research capacity-building and cultural relevance of knowledge systems and contemporary technologies.

SCHEDULE "B"

SISKA BAND'S TRADITIONAL TERRITORY

This map is for the purposes of this Agreement only and may be amended by agreement of the Parties to address implementation of the agreement as more information is obtained. This map is not intended to define, limit or interpret the aboriginal rights and title of any First Nation.



SCHEDULE “C”
WORKPLAN

Schedule C- Workplan

Community Health Education and Promotion Through Sustainable Use of Non-Timber Forest Resources: Community-Based Co-Development of Research Environment to Increase Aboriginal Research Capacity in Siska Band, Nlaka'pamux First Nation, B.C.

1. Creation of Non-timber Forest Resources Research Committee (Committee)- By June 30, 2006
 - Will comprise of Siska Traditions Society Board Members and Nlaka'pamux elders that agree to participate.
 - UBC academic researchers may take an advisory role but will not sit on the Committee.
 - UBC academic researchers shall attend and provide updates, guidance and proposals for early phases of the Committee upon request.
2. Presentation of Traditional Knowledge Project (TK Project), Draft Goals and Objectives to Siska Band- By May 30, 2006
 - Meeting for Siska Band Members:
 - Presentation of research structure, draft goals, objectives and outcomes, to all,
 - Recommendations from Siska Band members for structure, goals, objectives and outcomes of project are addressed.
 - Invitation to Siska Band Members for participation in the TK Project.
 - Postings/Advertisements to participate in TK Project in various roles, including Siska Band research coordinator, researchers, and participants.
3. Structure of Project Management- By June 30th, 2006
 - Structure for communication, meetings, and activities.
 - Committee approval of goals, objectives and outcomes incorporating recommendations from Siska Band Members.
 - All project volunteers will give fully informed consent before participating
 - Identify organizations and social programs/protocols in Siska community in which the TK Project will be integrated. Integration into already existing processes in the community enables ongoing sustainability.
4. Research Methods Training- By July 30th, 2006
 - Assessment of research strengths and skills for project.
 - Research methods training for research coordinator, and researchers.
 - Dialogue about worldview related to research.
 - Nlaka'pamux and Indigenous Research Methods, Western Research Methods.

- Interview methods, facilitation methods, survey methods, video and audio taping methods, GPS & GIS training, herbarium plant specimens, interpretation of research results.
 - Ethics & protocols and informed consent process.
5. Research Planning- By July 30th, 2006
 - Research schedule for all researchers and coordinator and all research activities.
 - Information Strategy to keep all Siska Band members directly or indirectly involved in the project informed.
 - Clear process for recommendations, and feedback from Siska Band members.
 6. Committee Meeting- By August 7th, 2006
 - Assessment of research to date.
 - Recommendations, suggestions and revisions of research activities and workplan.
 7. Research Activities: By August 30th, 2006.

All research activities will have Nlaka'pamux values and language as a common theme. Values may be embedded in stories and oral history, and are equally important. All research activities will include contextual cultural processes involving experience and application of knowledge. All research activities involve planning, doing, reflecting, documenting and recommendations for future activities.

I. Siska Band's relationship with Traditional Foods

Facilitated open meeting to address the question: What are the strengths of traditional food use within Siska Band?

- Sharing of stories and knowledge (traditional and contemporary).
- Identifying what current relationship is with traditional foods and future goals.

II. Asking the experts

Younger members of the Siska Band and the family of elders will interview elders about traditional foods and management practices.

- Inviting elders to participate as recommended by the Committee,
- Setting dates and places to meet for interviews,
- Audio/video taping for future educational uses by community.

III. Documenting harvesting and processing of traditional foods

Including current management practices (may include GPS, GIS and coordination with Tmix^w research).

IV. Traditional Plant Resource Protection Methods

Creating procedure manuals for harvesting, documenting, processing and conservation management practices.

V. Working with Traditional Foods: Youth Education

Integrated with youth programming (before school starts). Using traditional food harvesting, management and feasting as a way to discuss Nlaka'pamux science related to western science, introduction to research methods.

VI. Working with Traditional Foods: Health Promotion

In cooperation with existing health providers open to all ages:

- Traditional food harvesting and feasting,
- Exploring the health benefits of eating traditional foods (Include literature review, primary scientific investigations of select traditional foods not yet reported for nutritional and/or phytochemical content),
- Comparisons with “fast” foods and contemporary/other dietary practices,
- Integration of traditional foods into contemporary diets.

8. Committee Meeting - Including Siska Band researchers and coordinator, and UBC researchers- By September 30th, 2006
 - Discussing research activities, identifying successes and weaknesses, evaluating, monitoring and giving recommendations for documentation and future activities.
9. Reflection and Further Integration- By November 30th, 2006
 - All research activities will be documented including the recommendations and evaluations of the Committee in a participatory feedback process and be presented as the Siska Band Research Report to the Committee.
10. Planning for 2007- through to March 31, 2007
 - Committee will continue to meet to assess Siska Band Research Report, assess “pilot” findings and results, and generate further objectives based on resources for the research (financial, other) and any other potential collaborations identified by the Committee.

Supplies

Budget Item: **Education and Databasing Materials** Amount: **\$500.00**
Interview and educational materials (multimedia images, laptop presentations), multimedia equipment rentals

Budget Item: **Supplies** Amount: **\$1500.00**
Plant collection supplies (secutors, clean sample bags, gloves, notebooks, paper, writing/drawing supplies, identification guidebooks), herbarium sheets and plant mounting equipment, safety equipment, food/medicinal preparations (cookware, containers, clean sample vials, food grade ethanol for tinctures), batteries (handheld recorder, other equipment)

Budget Item: **One desktop computer** Amount: **\$1000.00**
Siska Band has a local information technology provider who will source this equipment.

Honoraria, Salaries and Wages

Budget Item: **Wages/Compensation-related expenses** Amount: **\$10,000**
The Siska Traditions Society, through the Siska Band office, will administer the honoraria, salaries and wages paid to Siska Band members. Determination of the number of Siska Band research coordinator, researchers, participants, clerical employees and guest lecturers for the duration of this 1-year pilot project will be determined by the Committee. It will be based on a) actual funding awarded, and b) requirements determined by research methods for short term (1 yr).

- a) **Participation honoraria** for sharing of knowledge, expertise, participation or other resources (proposed \$7/hour for youth under 18 and \$10/hour for adults)
- b) **Salary for Siska Band Research Coordinator** (stipend to be determined)
- c) **Salary for Siska Band Researchers** (stipend to be determined)
- d) **Honoraria** for elders, guest lectures in the Siska community (or externally, as determined by the Committee) (workshops, skill-sharing).

SCHEDULE “D”
UBC POLICY #85 AND #87

Please See UBC Intellectual Property Policies:

<http://www.grad.ubc.ca/students/ipguide/index.asp?menu=003,000,000,000>

Appendix C: Jurisdictional Approval

To: Shirley Thompson, Manager
UBC Behavioural Research Ethics
6190 Agronomy Road
Vancouver, BC V6T 1Z3

From: Chief Fred Sampson
Siska Indian Band
PO Box 519
Lytton, BC V0K 1Z0
Fax: 250-455-2539
Telephone: 250-455-2219

March 20, 2005

Dear Shirley Thompson,

With this letter the jurisdiction of the Siska Indian Band indicates the approval of the research project titled:

Community Health Education and Promotion Through Sustainable Use of Non-Timber Forest Resources: Community-Based Co-Development of Research Environment to Increase Aboriginal Research Capacity in Siska Band, Nlaka'pamux First Nation, British Columbia.

This project is a collaborative initiative with principle investigator, Dr. Shannon Binns, UBC Faculty of Land and Food Systems. As a co-investigator and Chief of the Siska Indian Band I represent the Siska Indian Band's decision to approve this project. The Siska Indian Band supports this research and the methodologies indicated in the Application for Behavioral Research Ethics Review. The Band Council and members of the Research Committee of the Siska Indian Band have reviewed the application in detail and approve of it in full.

The Siska Indian Band is currently finalizing a Traditional Knowledge Protocol which will guide the research under the direction of the Research Committee. We are confident that this research will be a model for how community-based research by and for indigenous people should proceed ethically.

Sincerely,

Chief Fred Sampson, Siska Indian Band

Appendix D: Behavioural Research Ethics Approval



The University of British Columbia
Office of Research Services
Behavioural Research Ethics Board
Suite 102, 6190 Agronomy Road, Vancouver, B.C. V6T 1Z3

CERTIFICATE OF APPROVAL - AMENDMENT & RENEWAL

PRINCIPAL INVESTIGATOR: Shannon Cowan	DEPARTMENT: UBC/Land and Food Systems	UBC BREB NUMBER: H06-80253
INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:		
Institution UBC Other locations where the research will be conducted: N/A		Site Point Grey Site
CO-INVESTIGATOR(S): Nancy Macpherson Darwin Hanna Fred Sampson		
SPONSORING AGENCIES: UBC Internal Grant - "Community Health Education and Promotion through Sustainable Use of Non-Timber Forest Resources: Community-Based Co-Development of Research Environment to Increase Aboriginal Research Capacity in Siska Band, Nlaka'pamux First Nation, British Columbia"		
PROJECT TITLE: Community Health Education and Promotion through Sustainable Use of Non-Timber Forest Resources: Community-Based Co-Development of Research Environment to Increase Aboriginal Research Capacity in Siska Band, Nlaka'pamux First Nation, British Columbia		

CERTIFICATE EXPIRY DATE: July 20, 2008

AMENDMENT(S):	RENEWAL AND AMENDMENT APPROVAL DATE: July 20, 2007	
Document Name	Version	Date
Protocol: Traditional Knowledge Protocol	N/A	July 19, 2007
Consent Forms: Consent for interview	N/A	May 28, 2007
Parent Consent for interview	N/A	May 28, 2007
Assent Forms: Youth Assent Form	v3	July 18, 2007
Advertisements: Invitation for interview	N/A	May 28, 2007
<p>The application for continuing ethical review and the amendment(s) for the above-named project have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.</p> <p style="text-align: center;">Approval is issued on behalf of the Behavioural Research Ethics Board and signed electronically by one of the following:</p> <hr style="width: 50%; margin: auto;"/> <p style="text-align: center;">Dr. Peter Suedfeld, Chair Dr. Jim Rupert, Associate Chair Dr. Arminee Kazanjian, Associate Chair Dr. M. Judith Lynam, Associate Chair Dr. Laurie Ford, Associate Chair</p>		

Appendix E: Adult Consent Form

TRADITIONAL KNOWLEDGE FOR HEALTH

Community Health Education through the Sustainable Use of Non-Timber Forest Resources: Community-Based Research Project of the Siska Band in collaboration with the University of British Columbia

INTERVIEW PARTICIPANT CONSENT FORM

Principal Investigator: Shannon Binns, Assistant Professor, Land and Food Systems, University of British Columbia ("UBC"), Phone: 604-822-2941 or email: binns@interchange.ubc.ca
Co-investigators: Chief Fred Sampson, Darwin Hanna, Nancy MacPherson
Research Team: Maurice Michell, Glen Michell, Nancy MacPherson Phone: 250-455-2219

Non-Timber Forest Resources Research Project:

This research focuses on how traditional knowledge and the use of foods by members of the Siska Band contribute to community health. The goal of the research is to strengthen community health and education through the sharing of knowledge. The Siska Band and the Faculty of Land and Food Systems, UBC, are working together on this research project. Funds supporting this research are from the B.C. Aboriginal Capacity and Development Research Environment. Information documented in the interview will provide a valuable contribution to the project, and may be integrated into:

- (i) A documentary about traditional knowledge for health
- (ii) Community health and cultural education and promotion activities and resources;
- (iii) Nlaka'apmux / Nlha7kapmx language preservation;
- (iv) Non Timber Forestry Resources Product Procedure manual for management, harvesting, processing;
- (v) Policy Documents for Siska management and stewardship of NTFR products; and
- (vi) Data for preparation of Research Thesis by Nancy MacPherson, Masters of Science candidate, UBC. Any traditional knowledge from the research project that is incorporated into the Research Thesis must first be approved by the Research Committee and Siska Band.
(together the "NTFR Project")

Interview Procedure:

You have been selected for this project because of your interest and knowledge. You will be asked to tell about traditional knowledge for health and about how traditional foods are related to health. A family member or community member will interview you. The interview will take approximately one hour. If you agree the interview will be tape and/or video recorded.

Review of transcripts and data:

You will receive a copy of the interview transcript and any tape and/or video recordings. You may edit the information as you wish. All edits will be taken into account and the research team will revise the interview transcript taking into account any edits. The revised interview transcript will then be provided to you for further review and approval. You may identify any information that should not be disclosed to the general public.

Storage and Access to Recordings, Transcripts, and Data:

Copies of all data, including audio/video recordings, will be stored at the Siska Band office and Dr. Shannon Binns' office, UBC. Access will be restricted to the Chief and the research team for

purposes associated with the Research Project. Shannon Binns will return all data to the Siska Band, including audio/video recordings, after five years. Access by anyone other than the project research team to the information that was shared by yourself will require your permission.

Use of Recordings, Transcripts, and Data:

This material (recordings, transcripts and data) is being collected for the NTFR Project, which may be made available to the Siska community and the general public. Recordings, transcripts, or data collected that relates to information you shared will not be reproduced or distributed without your prior consent.

Thesis:

With the consent of yourself, the research committee and the Siska Band, some of the recordings, transcripts and data may be used for Nancy MacPherson's master's thesis for the UBC. The thesis is a public document owned by UBC, including all intellectual property of the thesis. Siska Band will review the thesis and will ensure that no confidential traditional knowledge is included.

Confidentiality:

You will not be identified by name in any reports or articles produced unless you provide consent. The research will be identified as taking place in the Siska Band.

Traditional Knowledge Protocol:

The Siska Band, Siska Traditions Society and the University of British Columbia have entered into a Traditional Knowledge Protocol to address confidentiality, ownership, protection and use of traditional knowledge of community members.

Contact:

If you have any further questions or would like more information about this project, please contact Dr. Shannon Binns or Chief Fred Sampson. If you have concerns in your role as a participant, please contact the Research Participant Information Line at Research Services, UBC at 604-822-8598.

Remuneration:

In recognition of your contribution for information sharing during the interview an honoraria of \$50 will be paid to you.

Consent:

I, _____, understand that my participation in the Traditional Knowledge for Health Research Project is entirely voluntary and I may refuse to participate or withdraw at anytime throughout the project without any penalty.

I give my consent to participate in the Traditional Knowledge for Health Research Project as described in this consent form.

I wish for my name to be recognized for all of my contributions: yes no

Participant's signature

Name of Participant

Date

Appendix F: Youth Consent Form

TRADITIONAL KNOWLEDGE FOR HEALTH

Community Health Education through the Sustainable Use of Non-Timber Forest Resources: Community-Based Research Project of the Siska Band in collaboration with the University of British Columbia

YOUTH PARTICIPANT CONSENT FORM

Principal Investigator: Shannon Binns, Assistant Professor, Land and Food Systems, University of British Columbia ("UBC"), phone 604-822-2941 or email: binns@interchange.ubc.ca

Co-investigators: Chief Fred Sampson, Darwin Hanna, Nancy MacPherson

Non-Timber Forest Resources Research Project:

This research focuses on how use of plant foods by members of the Siska Band contribute to community health. The goal of the research is to enhance community health and education through the sharing of knowledge. The Siska Band and the Faculty of Land and Food Systems, UBC, are working together on this research project. Funds supporting this research are from the B.C. Aboriginal Capacity and Development Research Environment. Information documented in the workshop will provide a valuable contribution to the project, and may be integrated into:

- (vii) Community health and cultural education and promotion activities and resources;
 - (viii) Nlaka'apmux / Nlha7kapmx language preservation;
 - (ix) Non Timber Forestry Resources Product Procedure manual for management, harvesting, processing;
 - (x) Policy Documents for Siska management and stewardship of NTFR products; and
 - (xi) Data for preparation of Research Thesis by Nancy MacPherson, Masters of Science candidate, UBC. Any traditional knowledge from the research project that is incorporated into the Research Thesis must first be approved by the Siska Band.
- (together the "NTFR Project")

Research Procedure:

To participate in this workshop you need your parent or guardian to give written consent. During this workshop you will be asked to participate in gathering traditional foods, and a traditional feast. Learning about traditional food plants will give an opportunity to explore Nlaka'pamux approaches to science and how use of traditional foods is associated with health. You will have an opportunity to contribute through art, poetry, music and story in creating a record of the learnings from the workshop. The workshop is six hours in length and lunch will be provided. The proceedings from the workshop will be compiled for the NTFR Project and will inform future research activities related to the NTFR Project. The workshop may be recorded by digital, tape and/or video recording. You will be informed if the discussion is being recorded. Also, you may be photographed during the workshop proceedings.

Review of transcripts and data:

You will receive a copy of the workshop proceeding documentation (e.g. report), including transcripts of any recordings that relate to any discussion that you shared information. You and your parent /guardian may edit the information as you wish. All edits will be taken into account and the research team will revise the workshop proceedings taking into account any edits. The revised workshop proceedings will then be re-circulated to you for further review and approval. You and your parent/guardian may identify any information that should not be disclosed to the general public.

Storage and Access to Recordings, Transcripts, and Data:

Copies of all data, including audio/video recordings, will be stored at the Siska Band office and Dr. Shannon Binns' office, UBC. Access will be restricted to the Chief and the research team for purposes associated with the Research Project. Shannon Binns will return all data to the Siska Band, including audio/video recordings, after five years. Access by anyone other than the project research team to the information that was shared by yourself will require your permission.

Use of Recordings, Transcripts, and Data:

This material (recordings, transcripts, data and photographs) is being collected for the NTFR Project, which may be made available to the Siska community and the general public.

Recordings, transcripts, or data collected that relates to information you shared will not be reproduced or distributed without your prior consent.

Thesis:

With the consent of participants and the Siska Band, some of the recordings, transcripts and data may be used for Nancy MacPherson's master's thesis for the UBC. The thesis is a public document owned by UBC, including all intellectual property of the thesis. Siska Band will review the thesis and will ensure that no confidential traditional knowledge is included.

Confidentiality:

Participants will not be identified by name in any reports or articles produced unless you provide written consent. . The research will be identified as taking place in the Siska Band.

Traditional Knowledge Protocol:

The Siska Band, Siska Traditions Society and the University of British Columbia have entered into a Traditional Knowledge Protocol to address confidentiality, ownership, protection and use of traditional knowledge of community members.

Contact:

If you have any further questions or would like more information about this project, please contact Dr. Shannon Binns. If you have concerns in your role as a participant, please contact the Research Participant Information Line at Research Services at the University of British Columbia: 604-822-8598.

Remuneration:

If you agree to participate in the workshop you will be paid an honourarium at the rate of \$7 per hour.

Consent:

I, _____, understand that my participation in the NTFR Research Project is entirely voluntary and I may refuse to participate or withdraw at anytime throughout the project without any penalty.

I give my permission for participation in the NTFR Research Project as described in this consent form.

I wish for my name to be recognized for all of my contributions: yes no

Participant's signature

Name of Participant

Date

Appendix G: Parent/Guardian Assent Form

TRADITIONAL KNOWLEDGE FOR HEALTH

Community Health Education through the Sustainable Use of Non-Timber Forest Resources: Community-Based Research Project of the Siska Band in collaboration with the University of British Columbia

PARENT/GUARDIAN CONSENT FORM

Principal Investigator: Shannon Binns, Assistant Professor, Land and Food Systems, University of British Columbia ("UBC"), phone 604-822-2941 or email: binns@interchange.ubc.ca
Co-investigators: Chief Fred Sampson, Darwin Hanna, Nancy MacPherson

Non-Timber Forest Resources Research Project:

This research focuses on how use of plant foods by members of the Siska Band contribute to community health. The goal of the research is to enhance community health and education through the sharing of knowledge. The Siska Band and the Faculty of Land and Food Systems, UBC, are working together on this research project. Funds supporting this research are from the B.C. Aboriginal Capacity and Development Research Environment. Information documented in the workshop will provide a valuable contribution to the project, and may be integrated into:

- (xii) Community health and cultural education and promotion activities and resources;
- (xiii) Nlaka'apmux / Nlha7kapmx language preservation;
- (xiv) Non Timber Forestry Resources Product Procedure manual for management, harvesting, processing;
- (xv) Policy Documents for Siska management and stewardship of NTFR products; and
- (xvi) Data for preparation of Research Thesis by Nancy MacPherson, Masters of Science candidate, UBC. Any traditional knowledge from the research project that is incorporated into the Research Thesis must first be approved by the Siska Band.
(together the "NTFR Project")

Research Procedure:

During this workshop your child will be asked to participate in gathering traditional foods, and a traditional feast. Learning about traditional food plants will give an opportunity to explore Nlaka'pamux approaches to science and how use of traditional foods is associated with health. Youth will have an opportunity to contribute through art, poetry, music and story in creating a record of the learnings from the workshop. The workshop is six hours in length and lunch will be provided. The proceedings from the workshop will be compiled for the NTFR Project and will inform future research activities related to the NTFR Project. The workshop may be recorded by digital, tape and/or video recording. Youth will be informed if the discussion is being recorded. Also, youth may be photographed during the workshop proceedings.

Review of transcripts and data:

You will receive a copy of the workshop proceeding documentation (e.g. report), including transcripts of any recordings that relate to any discussion that your child shared information. You and your child may edit the information as you wish. All edits will be taken into account and the research team will revise the workshop proceedings taking into account any edits. The revised workshop proceedings will then be re-circulated to participants for further review and approval. You may identify any information that should not be disclosed to the general public.

Storage and Access to Recordings, Transcripts, and Data:

Copies of all data, including audio/video recordings, will be stored at the Siska Band office and Dr. Shannon Binns' office, UBC. Access will be restricted to the Chief and the research team for purposes associated with the Research Project. Shannon Binns will return all data to the Siska Band, including audio/video recordings, after five years. Access by anyone other than the project research team to the information that was shared by your child will require your and your child's permission.

Use of Recordings, Transcripts, and Data:

This material (recordings, transcripts, data and photographs) is being collected for the NTFR Project, which may be made available to the Siska community and the general public. Recordings, transcripts, or data collected that relates to information your child shared will not be reproduced or distributed without your prior consent.

Thesis:

With the consent of you and your child and the Siska Band, some of the recordings, transcripts and data may be used for Nancy MacPherson's master's thesis for the UBC. The thesis is a public document owned by UBC, including all intellectual property of the thesis. Siska Band will review the thesis and will ensure that no confidential traditional knowledge is included.

Confidentiality:

Participants will not be identified by name in any reports or articles produced unless you provide written consent for your child. The research will be identified as taking place in the Siska Band.

Traditional Knowledge Protocol:

The Siska Band, Siska Traditions Society and the University of British Columbia have entered into a Traditional Knowledge Protocol to address confidentiality, ownership, protection and use of traditional knowledge of community members.

Contact:

If you have any further questions or would like more information about this study, please contact Dr. Shannon Binns or Chief Fred Sampson. If you have concerns about your child's role as a participant, please contact the Research Participant Information Line at Research Services at the University of British Columbia: 604-822-8598.

Remuneration:

If you agree to your child's participation in the workshop they will be paid an honourarium at the rate of \$7 per hour.

Consent:

I, _____, understand that my child's participation in this NTFR Research Project is entirely voluntary and my child may refuse or I may refuse on their behalf to participate or withdraw at anytime throughout the project without any penalty.

I give consent for my child to participate in this project as described in this consent form.

I wish for my child's name to be recognized for all of their contributions: yes no

Name of child

Parent / Guardian signature

Name of Parent / Guardian

Date

Appendix H: Harvest Training And Certification Program Follow-Up Interview Guide

Harvest Training and Certification Program Follow-Up Interview Guide

I would like to interview you about the harvest trainings that Siska Traditions Society held during the spring and summer of 2006. I am really interested in what you learned in the training and whether the training is useful or not. I have about 15 questions that will help to answer these questions. The interview will probably last about twenty minutes. Do you have any questions before we begin?

1. What Siska Traditions harvest training did you take part in?
2. How did you learn to harvest traditional foods?
3. Had you ever harvested that plant before the STS harvest training?
4. What did you like most about the harvest training?
5. What do you remember most from the training?
6. What did you learn at the harvest training?
7. How did you judge a teacher's knowledge is true or fact, or worth knowing?
8. How do you think is the best way to learn?
9. What is the best way to test whether learning has occurred?
10. How have you used the knowledge you learned at the harvest training?
11. Have you used those foods more since the training?
12. Did you change the amount of time you spend on the land base?
13. How could the Siska Traditions Harvest training be improved?
14. What barriers are there for you to get out on the land?
15. What other kind of workshops would you like to see?
16. Do you think this is an effective way for knowledge to be passed on to the next generation? If not what do you suggest?
17. What knowledge matters for access to power and rights of what the land provides? Or What do you need to know to have the power to and the rights to what the land provides?

Appendix I: Youth-Elder Interview Guide

1. Hello My name is _____ and I will be interviewing you about traditional foods.

Youth presents a gift to the elder.

2. What is your name and where do you come from?
3. Do you harvest and use traditional foods?
4. If you don't mind me asking where do you harvest and how much do you harvest?
5. Who do you harvest for?
6. Do you think that traditional foods are better than the store bought foods and why?
7. How much of these traditional foods do you can yourself and how long does it last you?
8. How often do you eat the foods?
9. Thank you for sharing, I am sure this will help our youth get back into traditional foods.

Following the interview segment, the Elder is invited to tell any stories that they may want to tell. All of the youth present gather in a circle around the Elder to listen.

Appendix J: Elders And Knowledgeable Community Members Biographies

Horace Michell (Sla)

Horace is from Sísqəʔ, Siska Flat and the oldest of seven siblings his parents are Mildred Michell (Whalinak), from the Okanagan Nation, and (Kanustkin) from the Nl̓eʔkepmx Nation. His paternal grandparents are Austkwu, from the Sto:lo Nation, and Balutkan from the Nl̓eʔkepmx Nation. Horace grew up in Nahaminak across from Siska on the west side of the Qʷuʔuy (Fraser River). He also spent much time growing up with his Aunt Julie and Uncle Jimmy White in Kanaka Bar (South of Siska). He is married to Josephine Thomas, from the Secwepemc Nation. Together they raised two sons and have 4 grandchildren. Horace worked for many years as an orchardist and is now a director on Siska Traditions Society Board, member of the Siska Research Committee, language instructor, caretaker, Elders' fishery coordinator and traditional food gatherer, Sla is one of the most active Siska community members as well as the oldest.

Ellen Spinks (K'əłpetkʷu)

Ellen lives in Spápiye'm on the west side of the Qʷuʔuy and across from ʕq'əmcin (Lytton). She is the younger sister of Horace Michell and the eldest woman sibling in her family. Ellen spends considerable time gathering and preparing traditional foods for her family.

Ina Dunstan (Timitetkʷu)

Ina Dunstan is Horace Michell's younger sister. Ina enjoys attending family and community gatherings and always enjoys going out gathering Nl̓eʔkepmx traditional foods. She does beadwork, cedar root baskets and many Nl̓eʔkepmx arts and textiles.

Rita Haugen

Rita is from ʕq'əmcin (Lytton). She is active in the Nl̓eʔkepmx community and has been repatriating Nl̓eʔkepmx cedar root baskets to Nl̓eʔkepmx territory with her son John for over 20 years.

Mary Williams

Mary is married to Wesley Williams and had three children, now she has two, she has four grandchildren and one great grandchild. Mary grew up with Jimmy Charlie, and Leena Charlie. From a young age Mary learned to assist Leena Charlie who was a mid-wife. Mary went on to be a community health worker for over thirty years in Nt̓eʔkepmx territory. Now retired she serves on the Siska Research Committee, shares her wisdom and enjoys traveling and visiting family.

Chief Fred Sampson

Fred is from Sísqe and grew up with his parents as well as his maternal grandparents Suzanna and Richard Swartz. Together with Tina Edwards, he has two children, Holly Edwards and Forrest Sampson and one grandchild, Rhiannon. Fred learned to hunt and gather from his grandparents and is known to be an excellent hunter and fisher for the community. He is also renowned for his sandstone carvings. Fred is serving his second term as elected Chief at Sísqe and is active in land and resource stewardship and management issues important to the Nt̓eʔkepmx people.

Freda Loring

Freda is from Meyxʷetm (Snakehead Flat) near ʔqʷəmcin (Lytton). Her parents were from Boothroyd, but they moved to Meyxʷetm. She also spent a lot of time with Noxʷanek (*Running on the ridge of the mountain*) while growing up and with Hilda Austin her stepmother. Freda is an educator and teaches at Kumsheen Highschool. One of her passions is cedar root basket making, continued on from her Mother.

Charlie Michell

Son of Ernie and Pauline Michell. Together with Angie Isaac they have one son Justus. Charlie is a role model to other youth in his community, is a fisher and works with Siska's fisheries program. He is a drummer and dancer and is an active contributor to the Lytton Remembrance Day Powwow. Charlie is also the youth representative on the Siska Research Committee.