

Developing and Commercializing Non-timber Forest Products: An
Anishinaabe Perspective from Pikangikum First Nation,
Northwestern Ontario

By

RYAN DAVID PENGELLY

A Thesis
Submitted to the
Faculty of Graduate Studies of the University of Manitoba
In Partial Fulfillment of the Requirements for the
Degree of

MASTER OF NATURAL RESOURCES MANAGEMENT (M.N.R.M)

Natural Resources Institute
Clayton H. Riddell Faculty of the Environment, Earth and Resources
University of Manitoba
Winnipeg, Manitoba

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Abstract

The purpose of this research was to understand an indigenous perspective on the development and commercialization of non-timber forest products, such as medicines and foods, in Pikangikum First Nation, Northwestern Ontario, Canada. Framed by a research agreement between Pikangikum First Nation and the University of Manitoba, this collaborative research included participant observation, field trips, semi-structured interviews, and community workshops. The appropriate development and commercialization of Anishinaabe *mushkeekkeh* (medicine) and *meecheem* (food) requires the guidance of community Elders, Anishinaabe knowledge, and traditional teachings. The community is cautiously interested in developing collaborative, diligent, and culturally respectful partnerships that interface knowledge systems. Benefit sharing means the joint ownership of intellectual property and financial benefits, developing employment and capacity-building opportunities for community members, and planning products for community use. This thesis offers a community perspective on how NTFPs might be researched, developed and commercialized in joint and mutually beneficial partnerships with a First Nation.

Acknowledgements

All of the material, interpretations, and knowledge presented in this thesis are the final product of my own iterative learning process, journeys, and interpretations. So I must personally take responsibility for the words, interpretations, and structuring of stories and arguments in this thesis. However, I must thank the many individuals who contributed to my learning, journeys, and interpretations from the community of Pikangikum First Nation, the University of Manitoba, and the gracious support of several financial contributions.

From the community of Pikangikum, I must say thank you to Mr. Paddy Peters (*Weehkwuhsuhtehg*), my research collaborator, translator, and friend. *Meenuhwah, keecheemeegwetch Keecheeyuhneesheenuhbay*: the Late-Elder Norman Quill, Elder Charlie Peters, Elder Mathew Strang, Elder Albert Hill, and many other Elders and younger community members. These Elders were my mentors, friends, and grandfathers. Throughout this thesis, I have directly cited these Elders and others research participants whenever possible to indicate and honour the exact source of teachings and knowledge. Thank you as well to Gerald Peters, Ronnie Suggashie, Larry Pascal and Marcella Kejick who each translated for me when Paddy was unavailable. And thank you Murray Quill for your friendship and help in the Whitefeather office.

From the Natural Resources Institute, I have taken many important lessons from my supervisor Dr. Iain Davidson-Hunt. He has had a great deal of patience to guide me through this research project, answer my questions whenever I needed, and let me learn at my own pace. Thank you Iain. Many thanks as well to my Committee members Dr. Bret Nickels, Dr. Michael O'Flaherty and Dr. Fikret Berkes. You have each helped and supported me along the way with your guidance, questions and suggestions.

Thank you to my parents and my wife, Alexandra, who have supported and encouraged me through my studies. Thank you as well to my friends and peers at the Natural Resource Institute who have provided me with the academic and conversational support at critical moments.

During the course of this research project, I also came to see, from an Anishinaabe perspective, that all knowledge comes concurrently from knowledge specialists, such as those mentioned above, the land and the Creator. In this sense, all the

knowledge that I have learned from others has its origins in my journeys on the land and the gifts of the Creator. I thank the Creator and all the individuals who have given me gifts of knowledge.

I would like to gratefully acknowledge the financial support that made this research possible including the University of Manitoba Graduate Fellowship, the Social Science and Humanities Research Council, and funding through the research project *Finding the Balance in the Bioeconomy: New Partnerships between Indigenous Socioeconomic Enterprises, Research Institutions and Corporations* (PI: Dr. Robert Anderson, University of Regina).

Dedication

This thesis is dedicated to the Late-Elder Norman Quill (October 14, 1931 – April 8, 2010). Norman contributed enormously to this thesis and my understanding of Anishinaabe non-timber forest products, values, teachings and knowledge.

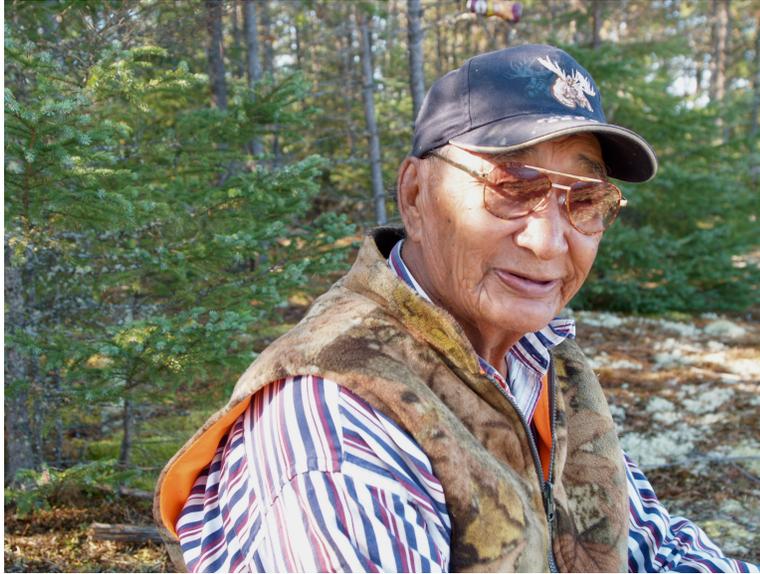


Photo: R.D. Pengelly

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A note on language

There is no standard orthography for the Anishinaabe language (*auhneesheenuhbaymooweehn*). While southern Anishinaabe communities use the double-vowel roman orthography system, Pikangikum First Nation uses a syllabic system as well as a locally developed roman orthography method. Throughout the thesis, I have primarily adopted Pikangikum's particular roman orthography method, except when using the common terms 'Anishinaabe' or 'Anishinaabeg' and when quoting other authors who subscribe to different systems. In the glossary, however, I simultaneously use Pikangikum's and the double-vowel roman orthography styles.

Glossary

ahbeetaytuhmuhn / ebiitantamaan – you have faith in that product or medicine for it to have an effect on you

ahkeepaykeetoochwahch / egiipegiidowaaj – they respected the medicine by handling it properly and keeping it clean.

ahsheeyuhwuhng mushkeekeeh / ejiaawang mashkikii – that the medicine works or benefits the user

auhauhgwahmehseeyuhng / jiiyangwamiziiyang – to be cautious from the Anishinaabe culture

auhbeenoochcheesh / abinoonjinz – child

auhbeenoochcheeshug / abinoojinzug – children

auhcheebooshkuhkahg / anjibushkagang – it creates a good fat in you and you become physically healthy and have a good physical appearance

auhkee / aki – land or earth

auhkeewaysee / akiwinzi – refers to an older man. In the context of medicine, older men possessed the knowledge of medicine

auhneenuhpeeh kayoohneesheesheehng / aniin apigeonizhishing – when it is time or the season to harvest plants; when they are ripe or ready

auhneehn ahnuhpuhtuhg mushkeekeeh / aniin enaabadag mashkikii – the particulars or purpose of a medicine is confidential and is not readily shared.

auhneepeemeenuhduhg / aniipimiinaanan – high-bush cranberry (*Viburnum opulus*)

auhneesheenuhbay / Anishinaabe – adjective referring to the Anishinaabeg

auhneesheenuhbay eenuhkoohneehkayweehn / Anishinaabe inaakonigewin – Anishinaabe traditional laws

auhneesheenuhbay kadodohg / Anishinaabe gedoodang – Anishinaabe instructions; how to do it properly

auhneesheenuhbaymooweehn / Anishinaabemowin – Anishinaabe language

auhneesheenuhbahg / Anishinaabeg – means “the people” in reference to the Anishinaabe people

auhsaymuh / asemaa – tobacco

auhsuhteeh / azaadi – toplar tree or trembling aspen (*Populus trembloides*)

auhteekuhmayg / atikameg – Lake Whitefish (*Coregonus clupeaformis*)

auhtuhs oogahweenahn / aadizookewinaan – legends

auhtuhway / adaawe – to purchase or engage in a transaction of importance (present tense)

auhtuhwuhgaah / adaawaage – a person gives notice or advertises by word of mouth that he/she has something for sale

beekahncheekahmeeng paymahteeseewahch / pikangikuming pemaadiziiwaaj -
Pikangikum People; living ones

cheeahnookeemukuhg / jianokiimaagaak – that a medicine works

cheeahnookeemukuhg oohmushkeekem / jianokiimaagaak o mashkiiki – observing that the medicine would work

cheekahnahwaydahmungk keetahkeemeenahn / jiigaanaawedaamang giidaagiimiinaan – Keeping the Land refers to Pikangikum's land-use strategy as well as Pikangikum's approach to keeping the land in a healthy state, maintaining Pikangikum's stewardship responsibility, and maintaining the practices and activities ensure the land's and Pikangikum people's future.

cheekeeahpuhtuheeneeg / jigiaabaadaainig – all that knowledge that was taught or shown in the past is still used today

cheekeechee ee nayhneemeeyuhn / jikiichiinimiiyan – honour and respect me as a person

cheekeechee ee nayhtuhmuhn / jikiichiinindamaan – honourable and respectful relationship or partnership or things

cheekeecheewehnuhmuhn / jikiichiwinimaan – to hold on and not let go; commitment to a relationship

cheekewayyuhng / jigiweang – to go back home

cheekuhnuhtaytuhng / jigaanaadendaago – you have to have a reverence over all of that *mashkikii*, plants, trees and vegetation.

cheemecheeneesheewuhnuhcheetoohgh / jimijinishiiwanajiitooj – to waste a resource when you pick or harvest too much

cheemuhnuhcheecheekuhtahg / jiimanajijigaadeg – medicine has to be carefully handled

cheemuhweetoohnuhg / jimaawindoonin – the activity or process of gathering medicine in smaller quantities

cheeoocheeyuhgoong / jiiionjiiangoong – to loose or disappear

cheeoohtuhbeenuhg / jiiodaabinang – to take or harvest things from the land with a reason.

cheeootuhteeseewuhch / jiondadizhiwaaj – where the Pikangikum people would physically sustain themselves from the *miichim* put on the land by the Creator

eekeeteepuhyuhmuhwuh / ingidipaaaamaawaa – I paid a person

eekeemeenuh / ingiimiinaa – I gave a present or gift

gwuhyuhnch / gwayanj – to have ready in one's possession

kaykoon / gegoon – this refers to things in general, but it was often used to refer to products or things from the land.

kaysheeyuhahnookemuhkuhg / gezhiianokiimaagak – how/if different knowledges would work together

kaysheeyuhtuhweeshkuhkooch / gezhaandaawaazhashgoj – plant or medicinal knowledge has been given to help other people for their well being, healing of that person, or for getting well.

keechekaykoohn oohnooh / gichigegoonono – these things or plants are important and valuable

keecheyuhneesheenuhbay / Gichii-Anishinaabeg - Big Anishinaabeg or Elders

keekaycheekuhtay ahkoohpaykuhg / gikenjiigaadeiidaag – knowledge of what a clean area is and its boundaries

keekaytuhmuhweehn / gikendaamaawin – Anishinaabe knowledge

keekaycheekahtayneeh / giigikenjigadeni – they had a knowledge of

keekenuhmuhkayweehn / gikinoamaagewinan – Elder teachings

keekuyuhkuhkwuhn / giigayendagwan – a clear knowledge, understanding or recognition

keecheekeenohshayseh / gichii-ginoozhe –Jack fish (*Esox lucius*)

keep ee sheemeeneekooweeshseh / giibiizhiimiinigowizi – they have a gift or special ability.

keepuhkeeteenuhng / gibagidinaade – the Creator had placed these on the land

keesheesaykway / giizizhekwej – to process food by frying or cooking

keeshuhkuhmeesekay / gizhaagamiziigej – boiling tea

keewehtuhmuhkay / giwiindaamaage – refers to spoken teachings that impart knowledge.

kuhkecheeenaycheekuhtahg / gaagiichiinenjiigaadeg – Anishinaabe values

kuhkeekaytuhsuohwuhch / ingaagiikendaasowaaj – Anishinaabe who have been traditionally educated and have Anishinaabe knowledge

kuhkeenuh / gaagiina – everything that you see on the land

kuhkeenuh kaykoon / gaagiina gegoon – everything or all things that you see on the land

kuhkeeshuhcheeooosheetoowuhch / gaagiizhaajjiozhitowaaj – to prepare the medicine before hand and store it for use at a later date

kuhkeetuhteeseewuhg / gaagidaadiziwaaj – Elders; knowledgeable individuals

kuhkuhcheesh kuhmeehcheech / zogaagaanjiish gaamijij – negligence of knowledge (which will result in you getting sick)

kuhmeecheekuhtaykeehn / gaamijigaadegan – edible plants

kuhmuhneesayuhng / gananiisiiyang – harvesting dry firewood

kuhmuhweehn maymwaych / gaawiin memwech – not really; don't have to follow a traditional process

kuhmushkeekeewuhng / gaamashkikiwang – anything that has to do with medicine

kuhohteenuhmoowahch / giiondinamowaaj – where or how they harvested the medicine

kuhoohtuhbeenuhg / gaaodaabinang – a form of taking or harvesting medicine from the land

kuhsheepaykuhg / gaajibegak – clean area

kuhshkeekwahsoonuhn / gashkigwaasinan – domestic products or crafts

kuhskeewuhg / gaatskiiwag – dried moose meat

kuhshuhkaywuhteeseeweehn / gaazhigewaadiziiwin – greedy eating

kuhsuhkeekeeg / gaazaagiigiiging – those plant growing on the land or out of the earth

kuhtaypuhkayneemooseech / gaadebagenimoosig – greedy; never enough

kuhteabaytuhg mushkeekkeh / gaadibendag mashkikii – keeper or owner of the medicinal plants

kuhtohtuhmoohwuhch oohmushkeekeemeewuhn / gaadoodomowaaj o mashkiikiimiwan – how Pikangikum people would practice medicinal processes and skills

kuhtuhseehng mushkeekkeh / gaadizing mashkikii – every known medicinal plant

kuhweehn buhbuhmaycheekuhtayseenohn / gaawiin baabaamanjidisiinooon – our people don't touch, gather or seek certain resources during the time of growing in the spring time (May to July)

kuhweehn cheeohneesheesheeng / gaawiin joonishing – a resource isn't good yet until after the growing time in the spring time

kuhweehn kuhkeenuh kaykoooncheewehtuhmuhweech / gaawiin gaagiina gegoon jiwendamawaagej – not everything should be told about the knowledge of the medicine plants.

kuhweehn mooshuhg / gaawiin monzhag – something will not always be available due to the seasonality of resources

kuhweehn ohkeegwuhyuhncheeyuhyuhseewuh / gaawiin ogiigwanojaayaasiwan – if someone came for medicine, I wouldn't have it in stock; they didn't get someone else to get or harvest the medicine

kuhweehn tuhmeenoosaysee / gaawiin daminosesii – it will not be good; you will not prosper or succeed

kuhweehn tuhyuhshyuhwuhtuhseenohn / gaawiin dayashawaadizinoon – it would not be the same, referring to how medicine would lose its power when the land is defiled

kuhyuhgoobeeshoog / gaayaagoobizoj – bandages

kuhyuhskooneeseech / gayaaskonizij – greedy; always wanting

kuhyuhtoohmushkwayhg / gayaandoomashgwig – a person who asks for medicine

manitoo / manidoo – God or Creator

meecheem / miijim – food

meecheemeeshkuhkahng / miijimishkagang – something (i.e. blueberry) created a good nourishment to the body

meehcheeoh tuhbeeneekahtaywuhn / bichiwodaabinidewin – you harvest or pick yourself without a specialist or offering tobacco

meenahn / miinan – refers to berries as a general category; also refers specifically to blueberries (*Vaccinium sp.*)

meeneek – enough

meeneekuhtay / minikwaade – to drink a liquid

meesuheh / miizay – Mariah or Burbot (*Lota lota*)

meeteehg / mitig – tree

meeteekoohg / mitigooog – trees

mehsheebesheewh / mishibiizhoo – Lion

meskoomeenuhn / miskwamiinan – raspberry (*Rubus idaeus*)

moosooohweeyuhsh / moozowiiyas – moose meat

moosooomeenuhn / moozomiinaan – moose berry (*Viburnum edule*)

muhkooseemeenuhn / maakonzomiinan – lignonberry (*Vaccinium vitis-idaea*)

mushkeekkeh / mashkikii – medicine

mushkeekkeh wuhbooh / mashkikii waabo – medicine water; the prepared medicinal infusion

mushkooseeh / mashkwaasiw – bulrush (*Scirpus lacustris*)

muhnoomeehn / maanomin – wild rice (*Zizania palustris*)

nahnahtookkaykoon kahohcheehshecheekahtayk eemah ahkeeng / nanadog gegoon gaaonjiiozhichiigadeg imaa aking – non-timber forest products

neesheehg / nishik – slowly

nuhmay / name – Lake Sturgeon (*Acipenser fulvescens*)

nuhmaybehn / namebin – White Sucker (*Catostomus commersonii*)

nuhmaykoos / namegos – Lake Trout (*Salvelinus namaycush*)

nuhmaytaykwuhg / nametegwag - smoked whitefish (*Coregonus clupeaformis*)

nuhmuhcheekooh / nimanjigo – I am not really sure

nuhseekuhmuhng / naskamaang – to go and retrieve something

obeemeeweetoohn / opimiiwiimitoon – medicine carrier

ocheenaywuhbeenayweehn / onjinewaabiinewin – a sickness that you bring upon yourself because you did something foolish or beyond normal expectation/behaviour.

ocheenayh / onjiweyin – state of being sick that comes from foolish or abnormal behaviour that cannot be cured with mashkikii.

odoosheetoohn / oodooshiitoon – to make some (i.e. medicine)

ohbuhbeegoomuhkuhkee / obibigomagakii – toad

ohkeeweeneetoonahwuh / ogiiwiinitoonawaa – unclean or defiled places

ohkehg / okik – jack pine (*Pinus banksiana*)

ohmooduh / omodai - moose dewlap

Ohmuhkuhkee / Omakakii – the Frog

ohpuhkeeteenuhn / obaagiidinan – to give a token or gift when harvesting medicine

ohseekwuhkoomeehnuhn / ozigwaakomiinan – saskatoon berries (*Amelanchier alnifolia*)

ohtay / onde – to boil something

ohtayeemeehn / odeimiinan – strawberry (*Fragaria sp.*)

okeemushkuhweeshkuhkoonuhwuh / ogiimashkaawaashkaagonaawa – Anishinaabe *miichim* gave the Pikangikum people the strength that they needed

oodoonepe / oodoonibi – Tullibee (*Coregonus artedi*)

oohkuhseh / ogaas – Pickerel (*Sander vitreus*)

ookuhduhk / ogaadaak – wild parsnip (*Sium suave*)

oosheechekuhnuh / ozhichiiganan – things that can be made from the land

ooweemeenuhn / owiimiinan – to give to others when you harvest or pick too much of something; to give to another

paykuhnoohng / pekanong – clean area where medicine or food remains would be returned to the land.

peecheepoonahkuhn / piichipoonaagan – fish traps

peekoohyuhweehyuh / bigoawiiye – anyone

peesheewuhtehg / bizhiwaatig - lynx root (unknown scientific name)

puhkeeteenuhng or booneetoowuhg / bangidendang or bonitoowaaj – certain people have forsaken *mashkikii* and its use.

puhpuhmeetuhseehg / babaamidaazig – not to listen

puhtaynuhteehn kuhmuhnuhmeehcheekuhtayhg / paadenidinoon gaamaanaamiijiigaadegin – there are many edible plants that can't be touched

puhyuhsh / gwayizh – they went and harvested for the present

sheekoopehn / zhingobiin – refers to a small evergreen tree or shrub used for medicine.

shooneeyuh / shooniiye – money

suhkuhtuhkuhn / saagatigan – chaga mushroom (*Inonotus obliquus*)

teekeenuhkuhn / tikinaagan – baby cradle or baby board used during the daytime

tuhkoohcheecheekuhtayh / dagojigaade – to move forward, to exercise, to proceed

tuhmeenoysey / daminose – it will be good; it would be valuable

tuhoohneesheesheen / daonizhishin – it would be good

tuhsheekoocheecheekuhtayh / dajigochigaade – I would support to proceed to find out; let us begin to proceed

weehkwuhsuhtehg / wigwaasatig – white birch (*Betula papyrifera*)

weekaysh / wiikanzh - sweet flag (*Acorus calamus*)

weehmeenoohyuhyuhch / wiminoayaaj – to be healed; to get well

wuhnuhgahg / waanagek – edible inner tree bark

wuhshushkwaytoowuhg / waazhiskwedoowag – mushrooms

wuhshushkwaytowh weehkwuhsuhtehg / wazhishkwedoo wigwaasatig - bracket fungus (*Fomes fomentarius*)

wuhweesh / waawish – an acknowledgement; stressing the term 'yes'.

Chapter 1: Introduction

First Nation communities across the Canadian boreal forest region have relied on their traditional territories and resources for millennia. Caribou, moose, blueberries, pickerel, whitefish, and sweet flag are a few of the countless foods and medicines that have sustained these indigenous groups, communities and Nations. Some have referred to these traditional resources as *non-timber forest products* (NTFPs) (Davidson-Hunt, Duchesne & Zasada, 2001), while others have preferred the term *biogenetic resources* (Posey & Dutfield, 1996). Regardless of the term used, Posey and Dutfield (1996, p. 1) have observed that, “more and more, the traditional lifestyles, knowledge, and biogenetic resources of indigenous, traditional, and local peoples have been deemed by governments, corporations, and others to be of some commercial value and, therefore, to be property that might be bought and sold.” In this sense, the commercialization of NTFPs is often considered tantamount to the pressures of capitalism and the exploitation of indigenous peoples and their resources (Shiva, 2005) or the creation of livelihood opportunities for developing nations and peoples (Cotton, 1996, p. 314).

But what does ‘commercialization’ mean? While this question will be more easily answered by the conclusion of this thesis, for the time being, *commercialization* refers to the process by which “traditional knowledge, products, and resources, even genetic materials extracted from a donor organism, [...] become tradable goods. These may be bought and sold in markets or transferred directly to the purchaser” (Posey & Dutfield, 1996, p. 27). The basic assumption is that commercialization and commercial transactions differ from local economic exchanges and markets, even though commercial activities are not new to indigenous societies (Laird & ten Kate, 2002; Turner, 2001). However, Posey and Dutfield (1996, p. 49) explain that while “many indigenous peoples have traded with outsiders for centuries, [...] interest in and potential profits from knowledge and biogenetic resources are now increasing in modern markets.” In this sense, modern markets refer to a highly complex and distributed economic system, and legally structured as such, in which individuals or groups of individuals interact through the basic unit of the corporation, company or business.

While there are certainly many examples of the exploitation of indigenous peoples by governments, corporations and universities, some indigenous peoples are

choosing to engage with governments, non-governmental organizations, research institutions, and market economies in ways that build upon their cultural and economic traditions (Anderson *et al.*, 2006; Posey & Dutfield, 1996). As indigenous peoples consider and/or engage with markets, universities and/or governments, two primary concerns underlie the use of “traditional biological and cultural resources...whether such transformations are morally, ethically and politically acceptable, even in principle, and...if so, what mechanisms can be put into place to ensure at least some financial returns or benefits flow back to those who manage these resources” (Alexiades, 2003, p. 20).

In Canada, many First Nations are adopting indigenous models of development and community-based enterprise to gain greater control of development on their traditional lands, ensure community self-determination and self-sufficiency, preserve traditional values through economic development, and improve socio-economic conditions for individuals, families, and communities (Anderson *et al.*, 2006). Many First Nations are also proposing or engaging in *partnerships* with companies, governments and universities as one way of “working together now to build success for the future” (Anderson, 1997; Assembly of First Nations, 2011, p. 2). This approach emphasizes working with other organizations in mutually beneficial ways so that First Nations might increase their access to resources and economic opportunities and build capacity in economic development and environmental stewardship (Berkes & Davidson-Hunt, 2007). Consequently, partnerships imply the idea of *benefit sharing* between communities and their partners, such that expectations and goals are jointly defined for the mutual benefit of the First Nation and their potential partners.

As First Nation communities take an increasingly active, powerful and leading role in the development of their own natural resources by ‘opting-in’ to the global economy (Anderson *et al.*, 2006), the questions arise: Do First Nations accept the idea of development and commercialization of NTFPs and associated traditional knowledge? How do First Nations envision the development and commercialization of NTFPs and associated traditional knowledge? How does an indigenous worldview, system of knowledge, and values inform the process of developing NTFPs, partnerships and benefit sharing arrangements? This thesis explores these questions regarding culturally

appropriate development of NTFPs and associated traditional knowledge through a case study with the community of Pikangikum First Nation, Ontario, Canada.

1.1 Research purpose and objectives

The purpose of this research is to understand an indigenous perspective on the development and commercialization of non-timber forest products through a case study in community-based economic development. This exploratory research aimed to generate initial discussion regarding the development of community-based NTFPs, partnerships and benefit sharing. Specifically, my research objectives were:

- 1) To understand Elders' perspectives on culturally appropriate NTFP harvesting, processing, and sale from the Whitefeather Forest.
- 2) To understand Elders' and other leaders' perspectives on culturally appropriate partnerships and benefit sharing for NTFP development by the Whitefeather Forest Management Corporation.

1.2 Research approach

My research combined social constructivist and participatory philosophical approaches, and I adopted an ethnographic “strategy of inquiry” through a case study in community-based economic development. This qualitative, exploratory and collaborative research project involved two initial meetings with community members to discuss the research plan, a four-month fieldwork period (June – October 2009) in Pikangikum First Nation, and two follow-up community workshops. I used several methods including participant observation and field notes, semi-structured interviews of individuals and groups, and community workshops. In the context of interviews and community meetings, I used natural health care products, traditional medicinals and functional foods as a product elicitation device. In different ways, these qualitative methods facilitated an exploration of the appropriate development of NTFPs, partnerships and benefit sharing in Pikangikum First Nation.

1.3 Research setting

1.3.1 Pikangikum First Nation

Pikangikum First Nation is an Anishinaabe (Ojibway) community of approximately 2400 people in a geographically isolated area of Northwestern Ontario,

Canada (see Figure 1). In Pikangikum First Nation, hunting and fishing activities continue to form a fundamental part of community members' way of life. The customary use of plants as medicine, food, technologies and domestic necessities are equally important to the Pikangikum people, although their use has declined over the last decades. For the most part, these customary NTFPs continue to be used and exchanged locally within the customary system, except for wild rice, furs and fish, which have



Figure 1: Location of Pikangikum First Nation and the Whitefeather Forest. Pikangikum First Nation is a remote Anishinaabe community with a population of approximately 2400 located in the northern boreal forest region. Community-based research and planning has led to the Whitefeather Forest Planning Area including Dedicated Protected Areas, commercial forestry, and buffer zones.

differing histories of commercial production, harvest and export. Furs are the last remaining NTFP sold as a commercial product, mainly as a raw material of low economic value. Subsistence and commercial activities have significantly decreased over the last several decades due to cultural change and the economic decline of the fur economy. At present, government welfare and local jobs with the Band make up the

largest sources of individuals' income in Pikangikum (Mamow Sha-way-gi-kay-win, 2009). The serious lack of jobs and market opportunities in Pikangikum, as well as encroaching forestry and mining exploration from the south, has fueled the community's strong desire for economic revival through the Whitefeather Forest Initiative.

1.3.2 Whitefeather Forest Initiative

Over the last three decades, Pikangikum has experienced growing pressure from government agencies and development interests, such as mining and forestry, who seek access to resources on Pikangikum's traditional lands. This encroachment of the state and private corporations reflects the idea of an expanding resource frontier and exertion of state rights and title to lands and resources used and managed by the Pikangikum people since time immemorial. It was initially in the 1970s that forestry companies began logging in the southern portion of Pikangikum's traditional territory at which time, "the community chose to resist such an incursion and was successful in delaying development for close to 25 years" (Chapeskie *et al.*, 2005, p. 8). However, later in the mid-1990's, "timber harvesting operations in Northwestern Ontario associated with pulp and paper and lumber mills...reached into traplines held by members of Pikangikum First Nation" (Chapeskie *et al.*, 2005, p. 6).

In response, Pikangikum began the Whitefeather Forest Initiative (WFI), a community economic renewal and resource stewardship initiative of 1.3 million hectares of boreal forest, which seeks to develop economic opportunities while maintaining its "ancestral stewardship responsibilities for Keeping the Land (*Cheekahnahwaydahmunk Keetahkeemeenahn*) for the continued survival and well-being of Pikangikum people" (PFN & OMNR 2006, p. 1). In the 1990s, the community formed the Whitefeather Forest Management Corporation as the main agent of planning and development with the Whitefeather Forest Elders Steering Group playing a crucial role in terms of guidance and supervision of the WFI, community-based enterprise, partnerships and planning activities. Similar to other Canadian First Nations, Pikangikum First Nation is exploring how it might 'opt in' to the global economy on its own terms through community-based enterprise (Anderson *et al.*, 2006).

In 2006, Pikangikum First Nation and the Ontario Ministry of Natural Resources (OMNR) signed a land-use strategy, “Keeping the Land,” that outlines the particular terms, vision, and intents of future economic activities in the Whitefeather Forest, and which reflects the increasing success of this government-community working relationship (PFN & OMNR, 2006). Pikangikum’s land-use strategy outlines various land uses and activities including forestry, mining, ecotourism, customary activities and NTFPs (PFN & OMNR, 2006). Over the last several years, forestry planning has dominated the efforts of the Whitefeather Forest Management Corporation. Nonetheless, the Whitefeather Forest Management Corporation retains an interest in exploring their land-use strategy’s direction regarding commercial opportunities from NTFPs (PFN & OMNR 2006, p. 41).

1.3.3 Pikangikum’s customary activities and non-timber forest products

Customary activities and NTFPs are inherently related in Pikangikum’s land-use strategy and use of the land. In the land-use strategy, customary activities specifically refer to “traditional pursuits protected by treaty and Aboriginal rights, (including but not limited to trapping, hunting, fishing) and other historical livelihood activities” (PFN & OMNR, 2006, p. 37). These activities play a critical role in the cultural identity and livelihood of members of Pikangikum.

Although commercial NTFPs would draw on Pikangikum’s rich traditions, knowledge and practices, customary activities and NTFPs are separated for legal, production, and scale reasons. First, customary activities refer to the individual and collective activities that are historically important, protected, and generally un-regulated as Aboriginal rights under the *Canada Constitution, 1982*, Section 35, while community-based NTFP development would likely be regulated and licensed by the OMNR as a commercial activity, much like forestry operations and management. Second, customary activities refer to a subsistence production strategy while commercial NTFPs refer to a market-oriented production strategy. Finally, within the context of the Whitefeather Forest Initiative, customary activities occur at the level of the household while commercial NTFPs could occur at the level of the community and tribal enterprise.

At any rate, Pikangikum recognizes NTFPs as products and knowledge of historical and contemporary importance, both for customary and commercial use (PFN & OMNR, 2006, p. 41). In this way, the land-use strategy articulates potential NTFP development as:

The renewal of the economic value of non-timber forest products (NTFPs) for *Beekahncheekahmeeng paymahteeseewahch* [Pikangikum People], supported by a rich Indigenous Knowledge tradition concerning the significance and appropriate uses of NTFPs, where the forest, its diversity, cover and resource abundance is maintained over time. NTFPs harvested and processed from the Whitefeather Forest will provide primary economic benefits to *Beekahncheekahmeeng paymahteeseewahch* and will contribute to the forest economy of Ontario in a manner that respects the northern boreal forest character of the landscape (PFN & OMNR 2006, p. 41).

It should be pointed out, however, that the land-use strategy also states that these NTFPs “may include...resources...not customarily harvested by Pikangikum people or compounds that might be isolated from forest products” (PFN & OMNR, 2006, p. 41). Consequently, Pikangikum’s vision of NTFP development includes the idea that NTFPs include biological, intellectual and cultural resources.

1.3.4 Non-timber forest products in Canada

Within Canada, the development of NTFPs is an area of economic potential for primary and value-added products destined for regional, national and international markets (Duchesne, Zasada & Davidson-Hunt, 2000). In 1997, Canada’s estimated NTFP economic output, which only included maple syrup, mushrooms, berries, medicinal plants, ornamentals and essential oils, was CAD\$241 million with the potential to double or triple in size (Duchesne, Zasada & Davidson-Hunt, 2000). The Canadian Forest Service (CFS, 2009) has estimated the current NTFP industry at CAD\$1 billion, approximately 2% of the conventional forestry sector’s total value. In Canada’s boreal forest alone, the Pembina Institute estimated the economic value of NTFPs at \$79 million (Anielski & Wilson, 2005). Even more significant is the estimated economic subsistence value for Aboriginal peoples of \$575 million (Anielski & Wilson, 2005). Forestry companies are also recognizing the significant economic potential in managing, harvesting, and processing NTFPs (Mater Engineering, 1993; Titus *et al.*, 2004).

In some First Nation communities, however, the development and commercialization of NTFPs continues to be controversial because of its association with the intellectual property rights (IPR) of indigenous peoples who have often been exploited in the past for economic gain (Marles *et al.*, 2000; Posey, 1990). Capital, intellectual property, raw materials, and labour have often been appropriated and transformed by governments and private enterprises into economic value, which has flowed away from indigenous communities (Alcorn, 1995). Even though international protocols are essential to research and development of biogenetic resources (Soejarto *et al.*, 2005), they are insufficient mechanisms for maintaining the IPR of indigenous peoples and equitable benefit sharing in practice (Posey 1990). Instead, the respect of indigenous knowledge, IPR, and equitable benefit sharing appears to be founded on prior agreements between indigenous groups and researchers (Soejarto *et al.* 2005) and public and private institutions (Cameron & Stewart 2002) that consider moral and ethical concerns in the context of research, development and commercialization activities.

1.4 Contribution of the study

This research draws on literature from ethnobotany, non-timber forest products, First Nation economic development and moral economy to understand and give context to community members' values and perspectives on the development of NTFPs and associated traditional knowledge. Above all, this research addressed the growing need to understand the development and commercialization of NTFPs from a First Nation's perspective. However, by combining these "bodies" of literature, this research suggests the need for significant participation of indigenous peoples in the process of NTFP planning, research and development and commercialization that is shaped by indigenous institutions, values and knowledge.

Although there are significant opportunities for First Nation communities, researchers, and businesses in Canada, various issues remain unresolved regarding project development, product development, cultural and spiritual respect and benefit sharing (Howe, 2005). Thus, this research provides a place-specific understanding of *how* community-based NTFPs might be researched, developed and commercialized in *joint* and *mutually beneficial* partnerships with a First Nation. In this way, this research also

adds to the moral economy literature by demonstrating how moral economy is iteratively and collaboratively determined through the interaction between various actors within a political economy, rather than accepting the conventional, mutually exclusive positions of moral and political economy. Consequently, this research provides an important contribution to various disciplines such as ethnobotany, anthropology, natural resource management, and natural health product research.

It is important to note that it wasn't the intention of this research to provide direct economic development for the community of Pikangikum. Instead, this research was a cultural assessment of potential development of NTFP resources and knowledge in the community of Pikangikum, which supports the community's economic renewal initiative. In fact, this research provided the space for discussion and debate within Pikangikum First Nation, the Whitefeather Forest Management Corporation and Whitefeather Forest Elders Steering Group about the development and commercialization of NTFPs, partnerships and benefit sharing related to these resources.

1.5 Organization of the thesis

This thesis is divided into seven chapters. Chapter 1, the current chapter, provided an introduction to my Master's research project, the community of Pikangikum First Nation, and the concept of non-timber forest products. In Chapter 2, I discuss several distinct areas of literature that framed the research including ethnobotany, non-timber forest products, First Nation economic development and moral economy. Chapter 3 explains my research design, methods used for data collection, and issues related to the fieldwork and data analysis. In Chapter 4, I provide my research results in relation to Objective 1. Then, in Chapter 5, I provide my research results in relation to Objective 2. In Chapter 6, I move beyond my results into an analytical discussion of what I learned through the research in relation to the literature areas presented in Chapter 2. In Chapter 7, I summarize my research findings and describe Pikangikum's perspective on developing and commercializing NTFPs.

Chapter 2: The Development of Non-timber Forest Products

In this chapter, I review various areas of literature that frame my research of NTFP development and commercialization in an indigenous community and enterprise. To begin, I describe the discipline of *ethnobotany* and Anishinaabe plant use, knowledge and worldview. Then, I discuss the concept of *non-timber forest products* (NTFPs) as well as the implications of commercialization, economic development and collaboration between indigenous communities and researchers, corporations and governments. Economic development, however, includes institutional dimensions, so I review some of the literature regarding *community-based enterprise* and *partnerships*. Finally, I discuss the concept of *moral economy*, which holds theoretical potential in the context of indigenous economic development and commercialization of forest resources.

2.1 Ethnobotany, the Anishinaabeg and plant use

2.1.1 Ethnobotany

Over a century ago, Harshberger (1896) formally introduced *ethnobotany* as the study of people and plants. In particular, it was proposed that ethnobotany would study the cultural dimensions of “Indian” groups’ plant use, the geographic distributions of plants, historical trade routes, and potential new uses and products from plants (Harshberger, 1896). More recently, Cotton (1996) and Martin (1995) defined ethnobotany as the study of mutual relationships between plants and traditional, non-traditional and/or urban peoples.

Possibly because of its multidisciplinary roots, ethnobotany includes a diversity of perspectives, methodologies, and goals. So, while many contemporary ethnobotanists focus on the relationships between plants and people (i.e. Cotton, 1996; Martin, 1995) and traditional knowledge systems (i.e. Alexiades, 2003; Reyes-Garcia, 2010), others continue to focus on potential new uses and commercial products from traditional knowledge (i.e. Bussmann & Glenn, 2010; Soejarto *et al.*, 2005). Therefore, the diversity of approaches within “ethnobotany” appears to reflect a broader, more complex and heterogeneous discipline with paradigm splits, rather than paradigm change (Alexiades, 2003) even though ethnobotany has been described as a multidisciplinary, holistic and pragmatic discipline (Davidson-Hunt, 2000).

Since the 1960s, some ethnobotanists have become increasingly concerned with applied goals such as ecological conservation and community development (Martin, 1995). Then, in the 1990s, issues of collaboration, self-determination, ensuring intellectual property rights and equitable benefit sharing began to take precedent (Posey, 1990), which led the International Society of Ethnobiology to develop a formal code of ethics (1988; 2006). These concerns reflect, in the words of Alexiades (2003, p. 16), “conflicts over ownership, access, rights, control and representation of local knowledge and plant resources.”

As a practical approach to these ethical concerns, some ethnobotanists are developing community-based research relationships with communities. For example, Davidson-Hunt and O’Flaherty (2007) suggest the establishment of longer-term, collaborative and ‘place-based learning communities’ between researchers and community members. In a growing number of cases, community-researcher relationships involve prior informed consent and research agreements (Laird & Noejovich, 2002). While some of these research relationships are small scale and involve one community and a few researchers (i.e. Davidson-Hunt & O’Flaherty, 2007), others are large-scale, engage various institutions at multiple levels, use large amounts of funding, and involve various goals such as drug discovery, biodiversity conservation and economic development (Rosenthal, 2006; Soejarto *et al.*, 2005).

2.1.2 Anishinaabe plant use

The Anishinaabeg of the Great Lakes and boreal forest regions have a long history of managing, harvesting, preparing, and marketing various plants or non-timber forest products (NTFPs). At one time, domestic use of NTFPs made up the Anishinaabeg’s entire source of food, medicine, clothing, shelter and tools (Densmore, [1928] 1974). However, resource use, botanical knowledge and practices vary by community (Geniusz, 2009), region and historical period (Herron, 2002). This is an important point given the wide geographical distribution of the Anishinaabeg. In general, however, the Anishinaabeg have used an enormous variety of plants for food, medicine, storage containers, shelter, and clothing (Davidson-Hunt *et al.*, 2005; Densmore, [1928] 1974; Herron, 2002; Meeker, Elias & Heim, 1993).

With the arrival of European settlers, the expansion of the fur trade, and the growth of non-Aboriginal demand for certain wild foods, the Anishinaabeg became significant harvesters and suppliers of raw forest resources such as animal pelts, wild rice, and blueberries to non-Aboriginals (Davidson-Hunt, 2003). In this way, the Anishinaabeg have a long history of harvesting and supplying of NTFPs of commercial importance as well as for domestic use. However, Aboriginal economies remain largely unrecognized today in the south of Canada. Furthermore, Teillet (2005, p. 5) explains that “despite hundreds of years of pressure and lack of visibility, the traditional values and economy continue to shape the culture and lives of Aboriginal peoples.” Within these economies, various plants have played an important role at the level of the household, community and region.

2.1.3 Anishinaabe knowledge and worldview

Ethnobotanists have tended to focus on plant uses (Densmore, [1928] 1974; Herron, 2002; Meeker, Elias & Heim, 1993) or classification, nomenclature, and plant identification (Davidson-Hunt *et al.*, 2005; Kenny & Parker, 2004). However, Davidson-Hunt *et al.* (2005) argue that understanding Anishinaabe plant use and knowledge requires an ontological and holistic examination of the Anishinaabeg’s material, social and spiritual worldview. For example, Anishinaabe plant use, identification and nomenclature are contextual and culturally based, rather than an independent, abstract system of plant knowledge (Davidson-Hunt *et al.*, 2005). The Anishinaabeg emphasize an experiential system of knowledge that depends on songs, oral teachings, dreaming and apprenticeships rather than conventional methods of the Canadian school system such as lectures and books (Davidson-Hunt & Berkes, 2003; Geniusz, 2009). Some Anishinaabe plant specialists, however, use(d) personal notebooks and recording systems (Geniusz, 2009).

Plant use in Anishinaabe communities depends upon traditional botanical knowledge or *gikendaasowin*¹ (Geniusz, 2009), which exists within a particular

¹ *Auhneesheenuhbaymooweehn* varies between Anishinaabe communities. As such, Pikangikum Elders spoke of *keekaytuhmuhweehn*, which is a similar yet slightly distinct term for Anishinaabe knowledge. In this thesis, I use the term *gikendaasowin* when

Anishinaabe community of practice (i.e. social relations), landscape, and historical process involving different Aboriginal and non-Aboriginal groups (Davidson-Hunt & Berkes, 2003). In terms of social relations, Anishinaabe knowledge is maintained, adapted, or lost through knowledge networks, institutions and practice such as intergenerational learning, ethical action, and respect for experienced Elders in a position of cultural authority (Davidson-Hunt & Berkes, 2003; Davidson-Hunt *et al.*, 2005).

Social relations and networks also include relations with the ecological and spiritual environments (Ingold, 2000). For example, human persons, ‘other-than-human persons’, plants and animals, and all other things are interrelated agents in the Anishinaabe worldview (Hallowell, 1992). Hallowell (1992, p. 63-4) explains that

In the Ojibwa world view “persons” include beings of an additional class to the one they use for themselves (*anishinaabek*, connoting Indians or “human beings”). The category includes animate beings to whom the Ojibwa attribute essentially the same characteristics as themselves and whom I shall call “other than human” persons [which]...is more descriptively appropriate than labeling this class of persons “spiritual” or “supernatural” beings (Hallowell, 1992, p. 63-4).

Within a more inclusive set of social, ecological *and* cosmological relations, the Anishinaabeg maintain a moral responsibility and stewardship role towards the land that the Creator gifted to them (Davidson-Hunt *et al.*, 2005; Johnston, 1976; PFN & OMNR, 2006). It is within these socio-eco-cosmological relationships that customary institutions, knowledge, practices, and technology of plant selection, harvesting, preparation, use and/or marketing are embedded.

2.2 Non-timber forest products

2.2.1 What are non-timber forest products?

With origins in the 1980’s, the term *non-timber forest products* (NTFPs) is a relatively recent construct. It was in the 1980s and 1990s, according to Davidson-Hunt, Duchesne, and Zasada (2001), that the term NTFP came to encompass diverse disciplines including ethnographic studies, traditional ecological knowledge, economic botany,

referencing Geniusz (2009) and *keekaytuhmuhweehn* when drawing upon Pikangikum Elders’ teachings.

forest management and policy, forest biology and ecology, forest product research and business organization and marketing. And yet, this term is problematic precisely because it reflects this diverse group of stakeholders from research, conservation and development perspectives (Belcher, 2003).

In its original use, de Beer and McDermott (cited in Belcher, 2003, p. 161) referred to NTFPs as “all biological materials other than timber, which are extracted from forests for human use.” More recently, Davidson-Hunt, Duchesne, and Zasada (2001, p. 5) settled on a “broad definition of NTFPs as those biological organisms, excluding timber, valued by humans for both consumptive and non-consumptive purposes found in various forms of forested landscapes.” Unfortunately, this newer definition adds little more than expanding “human use” to include non-consumptive goods and services. The fundamental challenge, according to Belcher (2003, p. 161), is that the concept NTFP “is a negative term” that “includes, literally, all products other than timber that come from forests.” Thus, this term has come to hide various features of NTFPs such as the product source, function, means of production, scale of industry (Belcher, 2003; Davidson-Hunt, Duchesne & Zasada, 2001) and cultural meaning (Turner, 2001).

NTFPs might refer to products from various *sources* such as plants, animals, and other organisms as well as various ecosystems such as forests, grasslands, or cultivated fields. Alternatively, NTFPs might include various economic products of diverse *functions*. For example, NTFPs might refer to plants used for medicinal, ritual, nutritional, and technological purposes (Marles *et al.*, 2000; Turner, 2001), which is a useful typology for understanding the customary use of plants. On the other hand, Marles (2001) has also classified NTFPs according to the consumption of various types of products with the larger Canadian society such as pharmaceuticals, nutraceuticals, functional foods, cosmeticeuticals, traditional herbal medicines/natural health products, agrochemicals, and fine chemicals (Marles, 2001). This typology recognizes the diversity of “end-of-chain” consumer products that are entirely or partly sourced from forest ecosystems and/or traditional knowledge systems.

A broad definition of NTFPs also conceals and confuses significantly divergent *production* systems, such as subsistence, market or mixed systems (Belcher, Ruiz-Perez & Achdiawan, 2005; Davidson-Hunt, Duchesne & Zasada, 2001) as well as products

from ‘wild’ or cultivated systems (Belcher, 2003). Although it is true that “within the overall set of NTFPs (however defined), the vast majority of species/products are consumed directly by the people that collect them, or are traded in small quantities” (Belcher, Ruiz-Perez and Achdiawan, 2005, p. 1436), a production-to-consumption system approach, especially for the purposes of considering economic development, is very important (Belcher, 1998). A production-to-consumption perspective emphasizes the vastly different pathways, levels (i.e. local, regional, national and international), lengths, and networks of individuals and organizations between forest products harvested and used locally within a household, those harvested and marketed locally as a small scale, and those harvested at large scale for regional or international distribution, processing, value-adding, and marketing. In fact, the NTFP literature tends to overlook the value ‘chain’ or ‘network’ of actors and overwhelmingly emphasizes raw materials or products with minor processing (Belcher & Schreckenber, 2007, p. 361), such as mushrooms, berries (Duchesne, Zasada & Davidson-Hunt, 2000), or jams (Solano-Rivera, 2009). This is also evident from the separation between the literature on NTFPs and biogenetic resources, biodiversity and associated traditional knowledge.

Related to the idea of divergent production systems, NTFPs have been difficult to define based on the *scale* of a particular NTFP’s ‘industry’, which varies between small-scale production for household consumption, moderate production for household use with some sale within local markets, and large-scale industrial production and manufacturing for international markets (Belcher, 2003; Davidson-Hunt, Duchesne & Zasada, 2001). Finally, NTFPs are *culturally meaningful* sources of material, food and medicines for the survival, cultural identity and spiritual values of resource users, such as First Nations (Turner, 2001). On the other hand, NTFPs are destined for a variety of locations and/or markets because of the demand and value ascribed to them by a group of consumers. This idea of culturally important and meaningful products reflects anthropological thinking regarding the social embeddedness of economic objects (Appadurai, 1986; Mauss, 1967; Sahlins, 1976) within a contemporary global context. The bottom line is that the various NTFP definitions highlight that the term NTFP depends on who defines it and what objectives that individual or organization embraces (Belcher, 2003), which suggests that

its meaning should not be taken for granted and investigated within cross-cultural or cross-institutional contexts.

2.2.2 Research and commercialization of non-timber forest product

Wild biogenetic resources have been used to improve agricultural systems for centuries, however, the number of crops and the proportion of specific cultivars represented by wild genetic resources continue to increase (Prescott-Allen & Prescott-Allen, 1983). Moreover, these biological, chemical and genetic resources are often sourced from indigenous lands, resources, and knowledge by universities, corporations, governments and individuals. In 1985, approximately 120 pharmaceutical products were derived from plants, 75% of which were discovered through research of their traditional medicinal use (Farnsworth *et al.*, 1985). Posey and Dutfield (1996, p. 1) have also pointed out that “the traditional lifestyles, knowledge, and biogenetic resources of indigenous, traditional, and local peoples have been deemed by governments, corporations, and others to be of some commercial value and, therefore, to be property that might be bought and sold.”

The commercialization of NTFPs typically requires value adding and knowledge innovation. In this context, *value adding* refers to the use of various forms and combinations of intellectual, human, and financial resources to strategically transform a natural resource from a more raw and unprocessed state into a product or service that individuals and groups ascribe a greater economic and/or social value. From the perspective of an indigenous community more specifically, value adding is also a necessary step to ensure sustainable economic development (Belcher & Schreckenberg, 2007; Posey & Dutfield, 1996). Greater levels of value adding, however, imply significant technological and knowledge innovation through research and development, financial investment, and larger networks of knowledge specialists and institutions. Consequently, from a community’s perspective, intellectual property rights and benefit sharing become a serious concern with research and commercial development of NTFPs that builds on indigenous knowledge, practices and innovation (Belcher & Schreckenberg, 2007; Posey, 1990; Posey & Dutfield, 1996). In short, *who* is value

adding and benefiting from NTFP research and commercialization that borrows from indigenous knowledge, resources and land?

While some researchers are interested in biodiversity and traditional knowledge for reasons of scientific curiosity, obtaining educational qualifications, career advancement and publishing for non-commercial purposes, others are concerned with *biodiversity prospecting* or *bioprospecting* which is the search for “commercially valuable genetic and biochemical resources, with particular reference to the pharmaceutical, biotechnological, and agricultural industries” (Posey & Dutfield, 1996, p. 14). In some cases, bioprospecters are recognizing the rights of communities and the need to ensure a community’s intellectual property rights (IPR) and equitable benefit sharing (Rosenthal, 2006; Soejarto *et al.*, 2005). Nonetheless, some have used the term ‘biopiracy’ to refer to any commercial use of biogenetic resources and traditional knowledge viewing it as an inappropriate process of commodification, exploitation and even “theft” (Shiva, 2005). This anti-commercialization position argues that traditional resource use and knowledge are inseparable from communities’ spiritual, cultural, and ecological systems (Bavikatte & Jonas, 2009; Shiva, 2005), which makes economic development of biogenetic resources an even more contentious issue. For some Canadian First Nations, there is a specific concern about commercialization of traditional medicines because they are “considered sacred gifts, and many people do not even like the idea of selling them at all, as it contravenes cultural principles” (Turner, 2001, p. 47). Benefit sharing, however, is clearly another dimension for Canadian Aboriginal communities, within which there is a “great deal of concern...that pharmaceutical companies might seek to profit from the development of medicines based on remedies, without any recognition or financial compensation for the inventor of the remedy” (Marles *et al.*, 2000, p. 7).

It isn’t necessary to adopt an extreme, anti-commercialization position, however, to recognize that the distinction between non-commercial and commercial research can be blurry. According to Laird, Alexiades, Bannister & Posey (2002, p. 84) even the non-commercial publication of biocultural knowledge reflects “power relations between researchers and research participants, and raises a number of ethical, social and political questions with regard to representation and property rights.” For instance, university

technology transfer offices facilitate the uptake of supposed, non-commercial research of potential social and economic value by private institutions or enterprising researchers (Einsiedel & Smith, 2005). Also, commercial applications of biogenetic resources and traditional knowledge also arise when commercial actors survey and appropriate information from the “public domain” and databases, which are based on non-commercial research publications (Laird, Alexiades, Bannister & Posey, 2002). At any rate, commercialization of biogenetic resources is a complicated process including features such as:

the route by which material travels from countries of origin to the private sector, the many hands through which they pass from collection to commercialization, the fact that the product which is commercialized is frequently not physically linked to the original genetic resources collected, but may have been manufactured from scratch based on modifications of chemical structures originally found in nature, and the difficulty of tracking the exchange of genetic resources and their derivatives (Laird & ten Kate, 2002, p. 243).

Within this continuum of commercialization and non-commercialization positions, various strategies or methods have been used or proposed regarding the appropriate use of traditional resources and knowledge. With the primary purpose of protecting, maintaining biocultural diversity, indigenous knowledge and practices, several non-commercial methods have been adopted such as bio-cultural protocols (Bavikatte & Jonas, 2009), defensive publication, community herbariums (Posey & Dutfield, 1996), and regional barter markets (Argumedo & Pimbert, 2010). A traditional knowledge commons has even been imagined to allow for the continued research of traditional knowledge and biogenetic resources, but with a regulatory framework that ensures only non-commercial use (Abrell *et al.*, 2009). As a last resort, political statements of moratorium on research and commercialization have also been used to draw attention to certain regions and ethnic groups (Chiefs of Ontario, 2008; Dehradun Declaration, 2009). It has been suggested that non-commercial approaches might better maintain biocultural integrity by avoiding the commodification and value transformation of biogenetic resources and traditional knowledge especially in the absence of reliable mechanisms to ensure indigenous participation and fair and equitable benefit sharing (Argumedo & Pimbert, 2010; Bavikatte & Jonas, 2009).

The commercialization of biogenetic resources, such as NTFPs, has been proposed through various avenues such as IPR, which includes patents, copyrights, trademarks, industrial designs, trade secrets, plant breeders' rights, cultural or geographical indicators, and certifications and labeling (Posey & Dutfield, 1996). Perhaps the most recognized and controversial form of IPR is the patenting of life forms, which was allowed with changes to United States' patent law in 1980, although it does not recognize traditional knowledge or collective property rights (Alexiades, 2003, p. 19). Despite the highly controversial nature of the commercialization of biogenetic resources and associated traditional knowledge, there is a perspective that accepts that fair and equitable benefit-sharing arrangements that address the interests of all stakeholders are possible within suitable legal and policy frameworks (Laird & ten Kate, 2002). Finally, there are various unique approaches such as community-based initiatives and community-controlled research (Posey & Dutfield, 1996) that might combine both non-commercial and commercial options.

The course of action adopted by a particular community – assuming that a community is in a position to make decisions in their best interests – regarding commercial and non-commercial options highlights the most important component of this debate: *community self-determination*. Communities must obtain or be provided with the necessary information and ability to decide “yes” or “no” to commercialization (Posey & Dutfield, 1996, p. 50). It is clear that a community's choice to enter into commercial relations depends on the objectives of the community such as maintaining knowledge and cultural practice, control and conservation of lands and resources, or generating employment, financial income, and social programs.

In the case that a community opts for research and commercialization, there are various things to consider including free, prior informed consent (FPIC) and access and benefit sharing (ABS) agreements, which raises the question of participation and benefits. The term FPIC refers to the “consent of a party to an activity that is given after receiving full disclosure regarding the reasons for the activity, the specific procedures the activity would entail, the potential risks involved and the full implications that can realistically be foreseen” (Laird & Noejovich, 2002, p. 189-90). This concept also raises the question of the degree of participation of indigenous communities: who, how and to what degree do

different actors, indigenous communities in particular, control the decision-making process regarding planning, research and development and commercialization? If we ask who might provide consent, the concept of FPIC also requires the consideration of indigenous governance and representation (Rosenthal, 2006; Vermeulen, 2007) through which researchers, governments and/or corporations interact with communities.

Although the concept of benefits might appear unproblematic, it is through the process of negotiation that stakeholders can identify how resources are accessed and what constitutes 'fair' and 'equitable' compensation or sharing of benefits (Tobin, 2002; Vermeulen, 2007). In other words, each stakeholder, including communities, will have its own perspective on the degree to which they wish to participate, the specific objectives of the ABS agreements (Tobin, 2002), the type, level and distribution of benefits from the NTFP research and development (Vermeulen, 2007), and the overall purpose of commercialization of resources. Through the process of negotiation, ABS agreements have the potential to lead to the inclusion of local values, objectives and decision-making. At least with Canadian First Nations, the willing participation communities in the research and commercialization of NTFPs, such as natural health care products, will require greater collaboration, spiritual and cultural respect, sustainability of resource use, community research capacity building, and benefit sharing (Howe, 2005).

Different types of agreements have been described and used in the case of relationships among communities, governments, universities, and corporations such as a letter of intent, contracts for the sale of raw material, material transfer agreements, memorandum of understanding and comprehensive ABS agreements (Tobin, 2002). In essence, however,

all contracts basically serve the same purpose: they identify the parties, define the subject matter, specify uses which may be made of it [*sic*], provide compensation of a monetary, technological or in-kind basis, regulate rights over intellectual property in the event of development and marketing of products, and define the period of the agreement and conditions for termination, as well as for breach of contract and the jurisdiction and law of the contract (Tobin, 2002, p. 287).

The principles of FPIC and the negotiation of ABS agreements are clearly articulated by the Convention on Biological Diversity (CBD, 1993) and The Bonn Guidelines (SCBD, 2002), which provide an international framework for the protection,

access, and use of traditional knowledge and biogenetic resources. Although the CBD is a legally-binding document for its signatories, the respect, preservation, maintenance, and access to traditional “knowledge, innovations and practices” is “subject to national legislation” according to Article 8(j) and Article 15 (CBD, 1993, p. 9 & 13). Canadian ABS law and policy, however, are also in a state of infancy as the federal government is currently in the process of consulting various stakeholders regarding its content and design (Environment Canada, 2010). In the province of Ontario, there are also no specific laws or policy governing the harvest, distribution, processing, and consumption of wild NTFPs (Hillyer & Atkins, 2004a; 2004b). In short, there are few legal and policy options for communities despite the presence of the CBD and The Bonn Guidelines besides “best practices” of researchers, government bureaucrats, and corporations.

The development of “best practices” in seeking FPIC, negotiating ABS agreements and even entering into joint partnerships with indigenous communities are still being developed on a case-by-case basis. In a large-scale bioassay project in Southeast Asia, Soejarto *et al.* (2005) demonstrate how research agreements between indigenous communities and researchers were crucial to framing research, recognizing IPR, and ensuring equitable benefit sharing. Also, the San and South Africa’s Council for Scientific and Industrial Research (CSIR) signed a benefit-sharing agreement regarding the commercialization and patenting of a chemical derivative of the Hoodia plant, which was traditionally used by the San as an appetite and thirst suppressant (Vermeyleen, 2007). In a post-hoc fashion, however, the CSIR started negotiations in 2001 with the San only after performing research and ‘discovering’ the Hoodia’s biological qualities in 1963, and patenting “P57” worldwide in partnership with Phytopharm and Pfizer by 1998.

The most comprehensive and collaborative project to date appears to be the Cree Anti-Diabetic Plant Medicines Project (CBHSSJB, 2009), which led to the signing of an agreement by four participating Cree Nations, the Cree Board of Health and Social Services of James Bay, and the Universities of Montreal, Ottawa, and McGill. This project’s objectives were to identify plants traditionally used by Elders and healers to reduce symptoms of diabetes, understand how the plants work against diabetes, and validate traditional medicinal use in order to integrate their use into the delivery of health services. This agreement is unprecedented by incorporating elements of FPIC to all

stages of the project, community control over knowledge, community review of scientific publications, acknowledgement of Elders in scientific publications, joint ownership of research and intellectual property, and benefit-sharing principles.

2.3 First Nation economic development

2.3.1 Indigenous development

Indigenous approaches to development are those that emerge from an indigenous community, draw on local social, cultural and natural capital in a holistic way, and seek the community's self-determination (Loomis, 2000). These indigenous approaches typically arise as local alternatives in response to conventional development models, which assume that external aid and intervention are necessary but fail in terms of local goals, participation, and consistency with local cultural values and social structure (Peredo & Chrisman, 2006). Indigenous community-based initiatives are even emerging in response to the rise in research and commercial demand for biodiversity and traditional knowledge (Posey & Dutfield, 1996).

2.3.2 Community-based enterprise

In Canada, some First Nations have adopted *community-based enterprise* (CBE) as a model of economic development and self-determination while “opting-in” to the global economy (Anderson *et al.*, 2006). This community-level development model is appealing to many First Nations because of its more holistic, communal and social approach to economic development. Peredo and Chrisman (2006, p. 310) define community-based enterprise as a “community acting corporately as both entrepreneur and enterprise in pursuit of the common good.” This occurs when a group of people from a common geographical location, collective culture and/or ethnicity acts “to create and operate a new enterprise embedded in its existing social structure” for both economic and social goals (Peredo & Chrisman, 2006, p. 310).

One of the defining characteristics of CBEs is their co-existence with a community of individuals. Although some community members might be more active than others, most members will participate to some degree in monitoring and decision-making (Peredo & Chrisman, 2006). In the case of Canadian First Nations, all members

of the Band, which is the political and community unit, are owners and stakeholders in the economic activities of the CBE (Anderson *et al.*, 2006). In other words, “CBEs are owned, managed, and governed *by the people* rather than by government or some smaller group of individuals *on behalf* of the people” (Peredo & Chrisman, 2006, p. 316). However, CBEs are often kept institutionally separate from political organizations (Anderson *et al.*, 2006), which is a success factor in indigenous economic development (Cornell & Kalt, 1992).

From a business administration perspective, a CBE utilizes its profit margins, or financial surplus, in different ways than conventional businesses. Unlike conventional businesses that are based on utilitarian economic models, CBEs have broader and more diverse goals – political, social, cultural, environmental and economic (Anderson *et al.*, 2006; Berkes & Davidson-Hunt, 2007; Peredo & Chrisman, 2006). So, rather than reinvesting its surplus into the corporation or paying out financial dividends to shareholders, a CBE invests more broadly in social and/or environmental programs or activities. In this way, a CBE invests in the broader community or local shareholders who more broadly define the objectives of the CBE. In other words, while conventional corporations “focus on providing growth in [financial] capital to shareholders,” CBEs provide financial and/or social dividends and benefits to community members based on their needs and desires (Berkes & Davidson-Hunt, 2007, p. 211). This means that the success of a CBE depends on its ability to meet the social mandate of a community.

Anderson *et al.* (2006, p. 46) explain how Canadian First Nation communities have adopted CBEs with a diverse focus on the “creation of employment with characteristics that ‘fit’ the interest, capabilities, and preferred lifestyles of community members; control of traditional lands and activities on these lands; and the creation of wealth to fund education, health and wellness, housing, and other social programs.” Communities might also adopt a CBE for reasons of cultural revitalization and protection of ecological and cultural sites (Peredo & Chrisman, 2006). For Canadian First Nations, however, the control of traditional lands, local resources, and livelihood opportunities is particularly important in terms of natural resource management and community self-determination (Berkes & Davidson-Hunt, 2007; Berkes & Davidson-Hunt, 2009). In fact, communities “use these enterprises to secure better access to their resources or

consolidate their land claims” (Berkes & Davidson-Hunt, 2009, p. 1). Thus, CBE is a form of institutional building in which rural communities try to gain control of local natural resources, cultural adaptation and the path of their social *and* economic development.

Rather than representing isolated entities, communities are embedded within larger political and economic environments at regional, national and global levels. Berkes and Davidson-Hunt (2007) argue that partnerships between CBEs and other institutions represent cross-level and/or cross-scale linkages between local governance structures and organizations within a broader system. So, although CBEs represent a local population with local values, goals and institutions, land and resource base, they tend to “operate in local, national and international markets...and require partnerships and networks to access knowledge, technology, capital and access to markets” (Berkes & Davidson-Hunt, 2007, p. 212). These linkages between local CBEs and other regional, national and international organizations are important for achieving local goals and values, and partnerships are one strategic approach to seeking out the resources required by a community. For example, Seixas and Berkes (2010) demonstrate how various community-based enterprises, which have been defined as “successful” under the UNDP Equator Initiative, achieve local goals and needs through a high number and diversity of partnerships (between 10 – 15 partners) and networks that span various scales and levels. As the “system evolves, the levels of organization within it, and the role of partners, may change” (Seixas & Berkes, 2010, p. 186). Berkes and Adhikari (2006) have equally demonstrated that successful indigenous enterprises with a strong focus on cultural values, control of traditional lands, and self-governance are characterized by extensive networks of partners. So, partnerships reflect crucial and dynamic relationships and networks between communities, CBEs and their surrounding regional, national and global environment.

2.3.3 Partnerships

Partnerships have been proposed, and adopted, by governments such as the Government of Ontario (2000) as well as the Assembly of First Nations (2011). For example, in Ontario “there is a renewed focus on partnerships, especially business

partnerships between Aboriginal and non-Aboriginal organizations that can foster Aboriginal development” (Government of Ontario, 2000, p. 1). The Assembly of First Nations (2011, p. 2) is similarly interested in partnerships as a means of “unlocking the economic potential of First Nations, supporting First Nation economies, new energy opportunities and affirming environmental responsibility.”

In the literature, partnerships have been defined in various ways from different disciplinary perspectives. In business administration, Mohr and Spekman (1994, p. 135) define *partnerships* as “purposive strategic relationships between independent firms who share compatible goals, strive for mutual benefit, and acknowledge a high level of mutual interdependence.” In natural resource and environmental management, on the other hand, Mitchell (2002, p. 182) more broadly defines partnerships as a “mutually agreed arrangement between two or more public, private or non-governmental organizations to achieve a jointly determined goal or objective, or to implement a jointly determined activity, for the benefit of the environment and society.” With a focus on Aboriginal-government partnerships, Teillet (2005, p. 48) considers partnerships as “an institutional arrangement whereby government and Aboriginal peoples, by means of a formal agreement, set out their respective rights, powers, and obligations with respect to the management of specific resources in a particular area.” The common denominator, however, is that partnerships are relationships between two or more institutions with mutual goals that each organization couldn’t achieve independently.

Partnerships might involve various institutions or sectors of society, such as government (Government of Ontario, 2000; Morsello, 2006), the private sector (Anderson *et al.*, 2006; Mohr & Spekman, 1994; Morsello, 2006), NGOs or other public institutions (Mitchell, 2002), and indigenous communities (Anderson *et al.*, 2006; Morsello, 2006; Teillet, 2005). Mohr and Spekman (1994, p. 135) suggest that partners tend to “join efforts to achieve goals that each firm, acting alone, could not attain easily.” Organizations develop partnerships to achieve mutual goals such as achieving a competitive advantage or an economy of scale, providing a wider range of products or services, sharing risks, and accessing resources, markets, knowledge and new technologies (Mohr & Spekman, 1994). For example, a partnership was formed between the Mohawk Council of Akwesasne, the Canadian Forest Service, and Domtar Specialty

Fine Papers with the purpose of collaboratively managing public and traditional lands and resources (Story & Lickers, 1997). More and more, Canadian Aboriginals are partnering specifically with corporate entities as a means of generating employment in their communities as well as accessing markets and resources (Anderson, 1997; Berkes & Davidson-Hunt, 2007).

Drawing on work by the Ontario Ministry of Natural Resources, Mitchell (2002) conceptualizes partnerships according to varying degrees of public participation in natural resource and environmental management including contributory, operational, consultative, or collaborative partnerships, which vary significantly according to purpose and level of power sharing. *Contributory* partnerships refer to organizational relationships involving sponsorship, support or resource contributions such as services or capital. These partnerships are typically weaker and reflect a lower degree of power sharing. *Operational* partnerships involve work, resource and information sharing which requires a higher degree of power sharing and decision-making. *Consultative* partnerships exist when partners seek advice or input in the formation of policies and strategies. These types of partnerships represent greater degrees of participation, but not necessarily an increase in the sharing of decision-making and power. Finally, *collaborative* partnerships involve the greatest degree of decision-making and power sharing in the form of joint participation and the sharing of ownership and risk.

The Government of Ontario (2000) has further identified different types of collaborative partnerships including strategic partnerships, comprehensive partnerships and joint ventures. *Strategic* partnerships occur when the partners commit to jointly collaborate in one key area, while each partner remains legally separate. These partnerships are common for the generation of employment, service provision, marketing, product development, or construction. *Comprehensive* partnerships, on the other hand, refer to partners' joint commitment to collaborate in multiple areas. In this case, each partner also remains legally separate as in strategic partnerships. Finally, *joint ventures* are a unique type of partnership in which the partners form a new legal entity with the purpose of fulfilling a specific purpose or set of purposes such as producing, manufacturing or marketing a product or service.

While governments and academics have explored the concept and characteristics of partnerships, Aboriginal perspectives on partnerships are rarely mentioned. The Assembly of First Nations (2011) has recently articulated its political objectives for First Nation development by means of a partnership model, while pass over any discussion of Aboriginal values and perspectives. Nonetheless, the Assembly of First Nations clearly sees partnerships as a means of “working together” with governments to encourage social, economic and environmental goals. As previously mentioned, Story and Lickers (1997) describe several Aboriginal values that guided the Mokawk of Akwesasne in partnership building and sustainable forestry development with government and industry which included a “zeal to deal,” or an approach to developing and solidifying positive relationships with partners, and “decision making by consensus or mutual agreement” (Story & Lickers, 1997, p. 151).

Finally, Turner (2010) offers the comprehensive exploration of the Gitga’at First Nation’s perspectives on bioeconomic development and partnerships. In short, this coastal First Nation emphasized the importance of maintaining and protecting local values and practices through community-controlled eco-tourism and economic development by means of increasing linkages between community enterprise and other local institutions. The community wasn’t interested, however, in forming partnerships or “working together” with businesses outside of the community, even though past institutional relationships had served to increase the community’s autonomy in tourism development. Beyond these examples, however, there is a general paucity of Aboriginal perspectives on partnerships despite their emerging importance in natural resource management and First Nation economic development in Canada.

2.4 Moral economy

2.4.1 Origins of moral economy

The concept of *moral economy* has its origins in cultural history (Thompson, 1971) and political economy (Scott, 1976), but most recently it has been applied in anthropology (Edelman, 2005; Griffith, 2009; Tradwick, 2001), geography (Goodman, 2004; Neumann, 1998), political science (Booth, 1994), and women’s studies (Mies, 1997). In its initial use, Thompson (1971) used moral economy to give an alternative

explanation to the frequent protests, “mobs” or “riots” of the poor or working class over food price changes in 18th century England. It was argued that these were purposeful and disciplined expressions of the poor’s popular consensus regarding the legitimacy of the economic actions of farmers, bakers, millers, and marketers. Furthermore, this popular consensus was founded in the “traditional view of social norms and obligations, of the proper economic functions of several parties within the community, which, taken together, can be said to constitute the moral economy of the poor” (Thompson, 1971, p. 79). In this context, moral economy described a normative perspective of the “poor” or working class of English society regarding the expected roles and duties of other sectors of society, especially during periods of dearth, in the case of inappropriate hoarding, exporting, price raising or lack of price regulations.

While Thompson sketched out the moral economic reasoning of a poor consumer-working class, Scott (1976) applied the concept of moral economy to a subsistence- and production-based class of peasants in his study of peasant rebellion in Southeast Asia. Based on a materialist explanation, Scott proposed the “subsistence ethic,” which refers to the conservatism of peasants due to experiences of subsistence food shortages, environmental stochasticity, and state taxes or land rents. Furthermore, because of their roots in an agricultural mode of production, peasant communities demonstrated adaptive and culturally embedded technological and social arrangements, such as local plant varieties and planting techniques, patterns of reciprocity, forced generosity, communal land, and work sharing. Based in a locally generated subsistence ethic, the peasants viewed the claims made upon his resources by fellow villagers, landowners or state officials in terms of their effect on the procurement of material needs (i.e. subsistence) and cultural norms of reciprocity (Scott, 1976).

2.4.2 Contemporary moral economy

By linking the moral economy solely to subsistence peasants and embedded economies, however, Scott contributed to what Griffith (2009, p. 433-4) calls the “false dichotomy between a moral and a political economy, the former ruled by propriety and the latter by [amoral] market forces,” impersonal exchanges, and the absence of values. Furthermore, the term “subsistence” itself erroneously suggests an entirely “self-

provisioning, autarchic” unit of subsistence farmers or peasants (Edelman, 2005, p. 335). In this sense, moral economy has typically been used to portray marginalized, rural peoples with “traditional views” (i.e. Thompson, 1971), rather than expressing the moral positions of various parties – elites, landlords, state officials, and peasants – towards resource production, distribution, and consumption. This juxtaposition of precapitalist and capitalist societies reflected a broader debate in economic anthropology between formalists and substantivists regarding embedded and disembedded economies (Booth, 1994; Polanyi, 1957; Sahlins, 1976). So, as Booth (1994, p. 662) argues “all economies, including the near-to-pervasive-market economies, are moral economies embedded in the (ethical) framework of their communities.”

With changing political and economic circumstances, the intensification, interconnectedness, and globalization of local, regional and national entities have signified new challenges and opportunities for the conventional moral economy argument. While Scott and Thompson assumed that moral economies were based in ecological and physiological realities, respectively, more recent literature focuses on how moral claims are produced sociologically, politically and economically in relation to goods and services (Edelman, 2005; Goodman, 2005; Griffith, 2009). In this way, these contemporary cases deviate drastically from the initial use with collective, place-based groups while usefully challenging the dichotomization of moral and political, embedded and disembedded, and precapitalist and capitalist economies.

Goodman (2004), for example, shows how general “moral economic” principles guide fair trade economics as ethically minded consumers connect with geographically distant and economically marginalized coffee farmers through a global value chain. Fair trade economics is an ethical *and* capitalist solution to global social inequalities of production, distribution, and the sharing of benefits. Also, Edelman (2005) describes how the emergence of Via Campesina, a transnational organization, exemplifies the conventional “protest” element of moral economy in opposition to capitalist institutions, such as the World Trade Organization and nation states’ agricultural policy, that seemingly puts profit and efficiency over social and moral objectives. Although Edelman (2005) maintains the moral and political divide, his research with Via Campesina is unique in showing how place-based “collectives” from around the world rooted in

agricultural livelihoods can scale-up to forge a transnational social movement. Finally, Griffith's (2009) analysis of the American tobacco industry shows how the elite and poor alike frame the production, distribution and state regulation of tobacco in moral-economic terms.

The uncritical use of moral economy, as well as dependency theory (Anderson & Bone, 1995), creates the danger of re-essentializing moral and political economies as well as precapitalist and capitalist constructs. For example, Mies (1997) advocates for a radical restructuring of the global economy towards greater subsistence, decentralization, an "ethics of care", voluntary reductions in one's standard of living, and consumer liberation. By overemphasizing either the economic autonomy or dependency of marginalized societies at times, this debate often forgets Scott's and Thompson's initial argument that peasants or the "poor" actively adopt moral economic positions within a complex and interdependent political economy towards their landlords, elites or state official or farmers, millers, bakers and marketers, respectively. In other words, the reaction of marginalized peoples to undesirable shifts away from a certain set of institutional norms of reciprocity and distribution of the benefits reflects elements of customs developed *within* a particular community and *between* a community and other actors or classes in a larger political economic context.

Perhaps the most important contribution of many of the contemporary usages of moral economy has been their emphasis on rights to land, livelihood, identity and resources. This is an "older and more fundamental discourse about rights" to livelihood, such as farming, and "just price" or appropriate benefits for production (Edelman, 2005, p. 341). Overlooking the interrelated issues of rights to land, livelihood and identity, Scott (1976, p. 176) merely acknowledged the right to subsistence as the right to material needs. Equally so, Thompson (1971) painted a historical picture in which the working class reacted when their physical survival was threatened through decreased access to food. In the case of Via Campesina, conversely, peasant farmers insist not only on the right to subsistence but also the right to their agricultural livelihood, which includes access to the natural, social and cultural resources that ensure agricultural production (Edelman, 2005). Griffith (2009, p. 439-40) succinctly summarizes these interrelated issues of moral economy as encompassing

a shared sense of propriety. Moral-economic actors, collectively, over time, develop ideas about proper economic behaviour from which flow other sentiments, beliefs, and behaviors associated with moral economies: achieving economic security; encouraging a proactive state during crisis; insisting on just prices, taxes, and rents; exercising some control over the market; insisting on access to resources; emphasizing production as socially beneficial; paying attention to quality.

This understanding of moral economy reflects the interests of indigenous peoples who also draw attention to interdependent issues of rights to land, livelihoods and a cultural identity (Berkes & Davidson-Hunt, 2009).

2.5 Chapter Summary

This chapter has introduced various areas of literature of relevance to my research on the development of community-based NTFPs, partnerships and benefit sharing in Pikangikum First Nation. An ethnobotanical perspective is useful by giving a broader cultural context to NTFP commercialization by considering issues of indigenous plant use, knowledge and perception. However, this research draws upon the NTFP literature and policy that considers issues of development and commercialization of traditional and non-traditional forest products for the purposes of economic development. The section of First Nation economic development broadens this discussion of economic development to include issues of institution building through contemporary mechanisms such as community-based enterprise and partnerships. Finally, the section on moral economy returns to consider economic development from an anthropological perspective, but this time by introducing ideas of the role of values, morals and livelihood in product development, engagement with markets and commercialization in a “capitalist” world. These areas of literature are meant to be complementary in nature given that each area approaches the topic of community-based NTFPs and First Nation economic development from distinct but overlapping perspectives. In the next chapter, I review ideas related to research design and process.

Chapter 3: Research Design

Research design refers to the “plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis” (Creswell, 2009, p. 3). Based on a researcher’s planning and decisions, a research design consists of the interconnections of the particular philosophical worldviews, strategies of inquiry, and methods, which results in a qualitative, quantitative or mixed methods research design (Creswell, 2009, p. 5). This qualitative research was grounded in a social constructivist philosophical approach with elements of pragmatic and collaborative research. In terms of a research strategy of inquiry, or methodology, I carried out ethnographic research of community-based planning and development in Pikangikum First Nation. Within this research design, I utilized various data collection procedures or methods including participant observation, field trips, semi-structured and unstructured interviews of individuals and groups, product elicitation, and community workshops or meetings. In distinctive ways, these methods facilitated an exploration of the cultural dimensions of potential NTFP development and commercialization, partnerships, and benefit sharing in Pikangikum First Nation.

3.1 Philosophical approach

In the words of Creswell (2009, p. 6), a researcher’s philosophical approach, or worldview, refers to the “general orientation about the world and the nature of the research that a researcher holds [which is] shaped by the discipline area of the student, the beliefs of the advisors and faculty in a student’s area, and past research experiences.” From this perspective, my research orientation was based in a social constructivist perspective, which means that I assumed that meaning, beliefs and ideas vary between individuals and groups such that the research participants socially negotiate and construct their worldview, meaning, beliefs, and ideas within a particular social and historical context, rather than existing *a priori*. Also reflecting a social constructivist perspective, I approached this research with the objective of interpreting or making sense of the research participants’ meaning or worldview. Rather than starting with a theory and working deductively, I worked inductively to develop a framework or intellectual understanding of the research participants’ narratives and actions (Creswell, 2009, p. 8).

In a non-exclusive fashion, however, I also adopted a participatory or collaborative philosophical approach. This approach was necessary given the research partnership and agreement between the Natural Resource Institute and Pikangikum First Nation (WFRC, 2004), which is discussed below. My research was conducted within this long-term, research relationship and partnership, which required a collaborative and problem-centered research design. In terms of collaboration, I met with community leaders and Elders three times to discuss the research design, questions, and methods before beginning the research. The collaborative nature of the research also required that I rely upon a community researcher and Elder advisory committee for advice, logistical support, and translation. In terms of being a problem-centered research approach, I conducted research that was relevant to the community's land-use planning and development initiative. In fact, my research questions addressed one particular section of the community's land-use plan (PFN & OMNR, 2006, p. 41).

3.2 Research strategy of inquiry

3.2.1 Ethnography

My research strategy of inquiry, or methodology, consisted of a qualitative and ethnographic research approach. Rooted in the discipline of anthropology, ethnography is a research strategy that seeks to describe and provide a cultural interpretation of events, social interaction, material culture and language of a particular group of people in a natural setting for prolonged periods of time (Creswell, 2009). Fundamentally, however, ethnography is a "way of seeing" that explores the meaning, beliefs, and perspectives of a particular group of people (Wolcott, 2008). Although it has roots in positivism and naturalism, ethnography is based in a philosophical orientation of social constructivism and reflexivity (Hammersley & Atkinson, 2003). Ethnographic research is fundamentally qualitative, emergent and adaptive to the research context and participants.

The ideas of *place* and *community* are important in ethnographic research, which the ethnographer gives precedent to guide and shape research questions (Wolcott, 2008) in an iterative adaptive fashion (Nelson, 1991). Even though a literature review, research questions, and methodological approach are important to ethnographers, these aspects are allowed to change and emerge from the place and particular group of people after

research commences. A preoccupation with place is related to the ethnographic approach such that a researcher is typically immersed in the day-to-day lives of the people (Creswell, 2009; Wolcott, 2008).

Ethnographers are interested in participants' meaning and beliefs, which are determined through careful observation and participation in the daily lives of a group of people. At least in its final written form, ethnography generates a description and interpretation of shared patterns of human behaviour of a socio-cultural nature (Wolcott, 2008). Ethnographers also assume that the researcher functions as a research tool through processes of socialization and enculturation, but that the researcher brings his or her own personality, set of assumptions, and cultural background to the ethnographic research (Wolcott, 2008).

3.2.2 Whitefeather Forest Research Cooperative

The research was conducted under the Whitefeather Forest Research Cooperative agreement (WFRC, 2004), which is a research partnership between Pikangikum First Nation, the University of Manitoba, and several other universities. It states that the agreement's "goal is to bring together a partnership of supports and participants in the development of the Whitefeather Forest Initiative in the form of a knowledge network where Pikangikum people are in the driver's seat regarding the research programme" (WFRC, 2004, p. 1). This research partnership provided the space for and required an alternative research approach to typical ethnographic research.

In the field of anthropology, critical collaborative ethnography has recently emerged as a response to various critiques of ethnography and social constructivism (Bhattacharya, 2008). This ethnographic approach provides space for local people to collaborate and incorporate their perspectives into various stages of the research process including the research design, definition of research questions, and verification of results in order to develop research questions and outcomes of greater practical benefit to the research participants. In the field of natural resource and environmental management, "place-based learning communities" (Davidson-Hunt & O'Flaherty, 2007), "learning communities" (Robson *et al.*, 2009), and research partnerships (Stephenson & Moller, 2009) are also emerging to address ethical, methodological and practical issues while

generating knowledge for both the participating community and external researchers. This approach is not without its own set of challenges, however, including complex power relations between and within different groups involved in the research, larger time and financial requirements, and overcoming the researcher's cultural assumptions (Davidson-Hunt & O'Flaherty, 2007).

3.3 Methods

3.3.1 Participant observation

Participant observation was one of my principal methods of data collection. Participant observation is usually the foundation of ethnography and cultural anthropology and consists of using the researcher's participation and experience as a method of data collection (Bernard, 2006). Participant observation complemented my other methods and served to increase research validity by reducing reactivity; opening up opportunities for data collection; increasing the cultural sensibility and sensitivity of research questions; providing a more holistic perspective and understanding of the research site, participants and data; and serving as a tool of relationship building with research participants (Bernard, 2006). Moreover, my use of participation observation increased the validity of results through triangulation of data collection (Creswell, 2009). This method was particularly appropriate and conducive to research with Pikangikum First Nation given that knowledge, from an Anishinaabe perspective, is revealed to individuals through direct experience with the land, mentors, and community of people (Davidson-Hunt & Berkes, 2003). Consequently, participant observation permitted observational learning of activities, participation in important cultural events, and developing cultural capital and understanding.

Effective participant observation depended on the reliable and consistent production of field notes (Bernard, 2006). I followed Bernard's (2006) basic system of field note production, which involves jottings, a diary, a log, and field notes. Over the period of fieldwork, I documented my own experience, reactions and impressions, and analysis of events, people, and cultural issues through the field notes.

Despite some overlap, participant observation differs conceptually from "field trips" (see method below). While field trips included activities that were intentionally

created as research events, participant observation included my participation in and observation of “naturally” occurring events in and around the community. In this manner, I conducted participant observation in public spaces in Pikangikum and Red Lake. These places included the hotel, Whitefeather Forest Management Corporation office, meetings with the OMNR in Pikangikum and Red Lake, and throughout the town site.

3.3.2 Field trips

I made various field trips on the land with several Elders to learn about places, land knowledge, resource harvesting and use, and the ecological abundance and distribution of plant and animal species (see Figure 2). In particular, I spent a significant amount of time with the Late-Elder Norman Quill who accepted to teach me about the land, his traditional knowledge, and customary activities. Similar to Patrick De Leon and Cohen (2005), I conceptualized field trips as “walking probes” which served various research purposes. Over the research fieldwork period, I conducted over ten field trips of various lengths (several hours to several days).

These field trips were initially important to gain an understanding of the ecological context, plant abundance and distribution, and customary resource use, and potential NTFP opportunities. Learning about the land, traditional knowledge and resource use also contributed to more relevant interview questions regarding NTFPs and elicited discussion about certain topics, resources, or places. These field trips also served to build a relationship with the Elder, gain cultural capital, and respect from other community members and Elders. The Whitefeather Forest Management Corporation’s Land-use Coordinator pointed out that it was important that I learn from Late-Elder Norman Quill even though I spoke almost no *auhneesheenuhbaymooweeh*. Traveling with and learning from the Late-Elder Norman Quill reflected a respectful learning method from an Anishinaabe perspective. Although I initially planned and attempted to conduct these field trips with a skilled translator, this was only possible during one field trip.



Photos: R.D. Pengelly

Figure 2: Field trips as data collection. Clockwise from top left: mooseberry (*Viburnum edule*); netting whitefish (*Coregonus clupeaformis*); picking blueberries (*Vaccinium sp.*); snaring snowshoe hare (*Lepus americanus*); water arum (*Calla palustris*); edible inner bark of trembling aspen (*Populus tremuloides*); smoked moose meat (*Alces alces*); butchering a moose on a family trapline.

3.3.3 Interviews

While field trips facilitated a personal understanding and knowledge of customary activities and resource use, individual and group interviews permitted an in-depth exploration of issues, themes, and concepts (Dunn, 2005) related to NTFP development. In fact, individual interviews served the imperative role of investigating Elders’ knowledge, preferences, and opinions about appropriate NTFP development, partnerships, and benefit sharing. Group interviews allowed for discussions between several Elders and small-scale consensus in response to my questioning. Interviewing complemented participant observation, field trips, and workshops.

During the fieldwork period I conducted a total of thirteen semi-structured individual interviews with seven different individuals². Four of these individuals were Elders and three were community leaders occupying positions at the Whitefeather Forest Management Corporation including the President, Land-use Coordinator, and Training Program Director. Two Elders were interviewed multiple times. In terms of individual interviews, I only interviewed men. The only women interviewed came for a group

² I interviewed an additional six Elders in group interviews.

interview. Many other women, however, attended the two community meetings with the researcher.

Semi-structured interviews with individuals were typically tape recorded, unless the interviewee chose differently, and ranged from 30 minutes to 152 minutes with an average of 67 minutes. Longer interviews were separated by a one-hour lunch break. Interviews were always conducted in the Anishinaabe language through one of four different translators. In addition to semi-structured interviews, I engaged in numerous unstructured interviews and conversations.

3.3.4 Group interviews

I opportunistically employed four group interviews, or focus groups, consisting of small groups of two to four individuals. Although group interviews can include up to seven individuals (Berg, 2004), I was not able to coordinate larger group interviews. These group interviews used an emergent design (Morgan *et al.*, 2008) and were adapted in the field to particular research questions and goals depending on the participants and stage of data collection. In general, however, group interviews served as a platform for exploring the collective opinions of Elders regarding customary activities, NTFP development and commercialization. Each group interview was tape recorded, conducted in *auhneesheenuhbaymooweehn* through a translator, and ranged from 60 minutes to 314 minutes with an average of 165 minutes. The two longer group interviews were separated by a one-hour lunch break.

3.3.5 Workshops

Workshops were larger gatherings of individuals that served the purpose of introducing my presence and purpose in the community, data collection, and results verification (see Figure 3). Since the Whitefeather Forest Management Corporation is advised and guided by the Whitefeather Forest Elders Steering Group and consensus-based decision making, workshops provided an opportunity to direct my research questions to a broader audience, which included individuals I didn't have the opportunity to interview, and verify my results at various stages of the research.

For the duration of my research, community leaders and Elders were very busy



Photos: R.D. Pengelly

Figure 3: Community meetings as research location, data collection and verification tool. Community meetings are regular opportunities for community members, especially Elders and senior trappers, to discuss, plan and make decisions with partners such as the Ontario Ministry of Natural Resources regarding land-use planning.

with community-based planning with the OMNR, Woodland Caribou Provincial Park, and other corporate and political actors. For this reason, it was challenging to schedule community workshops, which led me to opportunistically give a five-minute introductory presentation to the Whitefeather Forest Elders Steering Group during a community-OMNR meeting on July 27th, 2009. The purpose of this presentation was to briefly introduce my research approach, research questions and elicitation products (see following section) to the community. At a later stage in the research, I again opportunistically accepted a one-hour period of time during a community meeting with staff from Woodland Caribou Provincial Park on December 17, 2009 to speak to the Whitefeather Forest Elders Steering Group. The purpose of this presentation was to inform the community of the status of my research, present some basic research results, and ask several research questions with the intention of generating some discussion at the level of the Whitefeather Forest Elders Steering Group. Finally, on March 9th, 2011, I conducted one final community workshop to verify my understanding of the research

data.

3.3.6 Product elicitation

During field trips, individual interviews, focus groups, and workshops, I utilized various NTFPs as elicitation tools. Elicitation methods have been intensively used in marketing to determine product attributes related to consumer choice using product elicitation (Breivik & Supphellen, 2003), photo elicitation, and video elicitation (Sayre, 2006). Patrick De Leon and Cohen (2005) have more generally referred to these elicitation tools as “object probes”. This research used various natural health care products, nutraceuticals, cosmetics, and functional foods to elicit discussion among Pikangikum Elders regarding appropriate products and procedures for a community-based NTFP production system rather than consumer preference (see Figure 4). Specific ethnobotanical knowledge and plant properties fell outside the scope of this research in

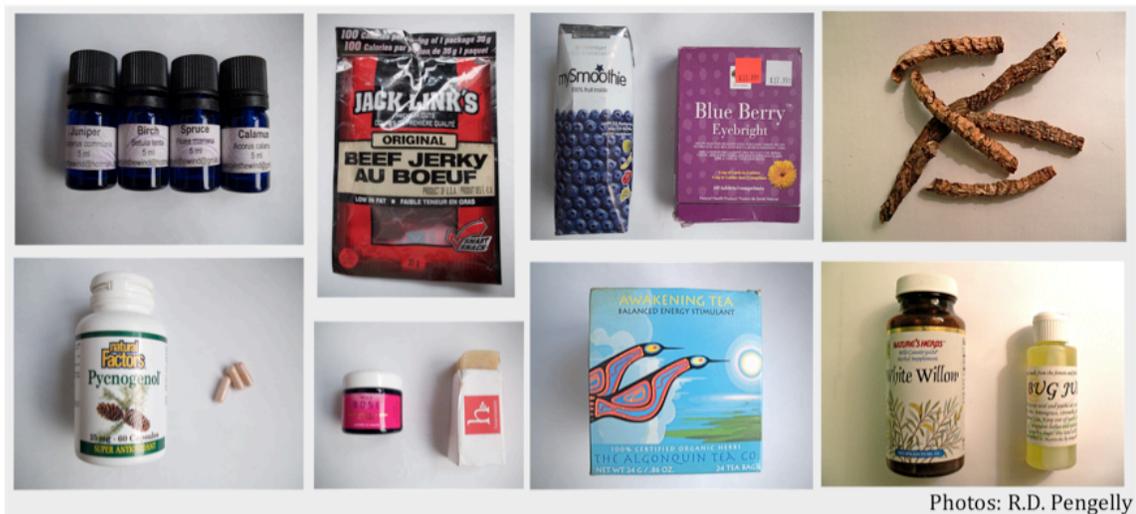


Figure 4: Elicitation Products. Clockwise from top left: essential oils, meat jerky, blueberry beverage and nutraceutical, *wekaysh* (sweetflag; *Acorus calamus*), mosquito repellent and White Willow bark medicine (*Salix sp.*), traditional herbal tea, birch-scented soap and wild rose facial cream (*Rosa sp.*), and Pycnogenol.

recognition of Pikangikum’s intellectual property rights.

I used a total of thirteen natural health care products such as nutraceuticals, cosmetics, functional foods and beverages, and botanical medicinal products (see Table

Table 1: Elicitation Product Specifications. NTFPs represented low, moderate and high levels of processing, research and value adding. Products of low transformation are raw plant materials harvested, used and/or sold as botanical medicines or foods. These NTFPs tend to have a relatively short production-to-consumption chain and low levels of research. Products of moderate transformation included plants that have been processed using less technical technology, some research (i.e. nutritional analysis), and some product development and value adding. Products of high transformation included very specialized biotechnology, biochemical processing and research, and complex value chains.

Non-timber forest product	Company	NTFP type	Store purchased	Level of transformation	End-of-chain value (CAN\$)
Pycnogenol	Natural Factors	Nutraceutical	Thrive Nutrition & Wellness	High	\$33.99
Various Essential Oils	Hollow Reed Holistic	Botanical Medicine	Hollow Reed Holistic	Moderate	\$5 - \$7
Sweet Flag Root	Hollow Reed Holistic	Bulk Botanical Medicine	Hollow Reed Holistic	Low	\$0.50/root stick
Blueberry Juice	mySmoothie	Functional Food	Thrive Nutrition & Wellness	Moderate	\$2.99
Wild Blueberry Wine	D.D. Leobard	Functional Food	Fenton's Wine, The Forks	Moderate	~\$12
Wild Rose Intensive Facial	Weleda	Cosmetic	Thrive Nutrition & Wellness	Moderate	\$28.99
Birch Pure Natural Plant Juice	Salus	Botanical Medicine	Hollow Reed Holistic	Moderate	\$19
Beef Jerky	Jack Link's	Functional Food	Gas Station	Moderate/High	~\$5

Non-timber forest product	Company	NFTP type	Store purchased	Level of transformation	End-of-chain value (CAN\$)
Blue Berry Eyebright	New Nordic	Nutraceutical	Thrive Nutrition & Wellness	High	\$37.99
White Willow Bark	Nature's Herbs Wild Countryside	Botanical Medicine	Thrive Nutrition & Wellness	Moderate	\$13.99
Various Medicinal Teas	The Algonquin Tea Co.	Botanical Medicine	Hollow Reed Holistic	Moderate	\$7
Birch Soap	Hearstse	Cosmetic	Hearstse (Small Soap Store)	Moderate	\$6
Insect Repellent	Hollow Reed Holistic	Botanical Medicine	Hollow Reed Holistic	Moderate	\$6

1). All products were purchased in Winnipeg from various natural health care stores, herbalists, and specialty food stores. The criteria of selection were as follows:

- 1) Product of whole or partial boreal origin
- 2) A range of products representing different functional categories or NTFP types including nutraceuticals, cosmetics, botanical medicines, functional foods and beverages.
- 3) A range of products representing differing degrees of plant transformation – processing, research and value adding.

Given the collaborative nature of this research, I presented these products to two Elders and the Whitefeather Forest Management Corporation's Land-use Coordinator prior to commencing research³ to assess the appropriateness of the products and their receptiveness to my overall methodological approach. In this way, the specific NTFPs explored during this research project were determined through a process of negotiation between the researcher, the Whitefeather Forest Management Corporation, and Pikangikum Elders.

3.4 The research process

3.4.1 Research participants

Given the nature of this partnership research, my research was conducted with certain individuals and Elders within the Whitefeather Forest Management Corporation and Whitefeather Forest Elders Steering Group. In this way, I interviewed a selective group (N=13) of individuals for practical, cultural and institutional reasons. Practically speaking, my research could not address the community as a whole due to time constraints and the qualitative nature of the research. More importantly, however, institutional and research protocols guided the research (WFRC, 2004). Because my research was applied and served the purpose of supporting Pikangikum's land-use planning process, I necessarily worked with an Advisory Committee⁴ and individuals from the Whitefeather Forest Elders Steering Group who were knowledgeable in NTFPs. My Advisory Committee identified and suggested various Elders for

³ This meeting occurred in Kenora, Ontario on May 25-26th, 2009.

⁴ This Advisory Committee included Elder Oliver Hill, Elder Charlie Peters, and Mr. Paddy Peters.

interviewing. Also, the Late-Elder Norman Quill was asked and agreed to take me on field trips to teach me about customary activities and traditional resource use.

3.4.2 Research procedure

The Whitefeather Forest Research Cooperative agreement (2004) provided clear partnership principles and research protocols. Under this agreement, my supervisor Dr. Iain Davidson-Hunt and I initiated this research through initial meetings with Whitefeather Forest Management Corporation's President and Elder Liaison. In this manner, I sought prior informed consent for my research on commercial NTFP development in accordance with the community's land-use strategy. A second meeting with Whitefeather Forest Management Corporation's Land-use Coordinator and two Elders established a community Advisory Committee as per the research protocol. These meetings provided the opportunity for community members to review and provide feedback for my research proposal, purpose and objectives, design and methods. During the data collection phase, I followed community research protocols, worked with the Land-use Coordinator, and occasionally met with members of my Advisory Committee. The Land-use Coordinator was consulted with respect to all research activities and logistics. In fact, the Land-use Coordinator identified interviewees as well as arranged and translated the community workshop and most of the interviews. I presented my research findings and conclusions at a final community workshop for the purpose of feedback, verification, and consent.

3.4.3 Translation

Ahneesheenuhbaymooweehn, an Algonquian language, is the primary language spoken in Pikangikum (INAC, 2009). Furthermore, English proficiency varies within the community with many Elders speaking little or no English. Consequently, I required the support and participation of a skilled translator. Mr. Paddy Peters, the Whitefeather Forest Management Corporation's Land-use Coordinator, was my primary translator for ten of the thirteen interviews and all community workshops. In three other interviews, three other individuals from the community assisted me.

The use of a translator in anthropological research has been identified as

potentially problematic in terms of access to cultural information, communication and rapport with informants, the process of translation, and broader fieldwork processes (Borchgrevink, 2003). However, many of these problems exist in all ethnographic research, and several key strategies served to mitigate these potential barriers such as researcher reflexivity, rapport building with the translator, occasional use of alternative translators when the primary translator wasn't available, and strategies of cross-validation and information triangulation (Borchgrevink, 2003). It is important to note, however, that Mr. Paddy Peters supported my research as a cultural broker, advisor *and* linguistic translator. As such, Mr. Paddy Peters contributed significantly to the co-creation of the ideas presented in this thesis.

3.4.4 Transcription and data analysis

Interview audio recordings were stored and listened to using iTunes. Subsequently, the interview audio recordings were transcribed verbatim using Microsoft Word. These electronic transcriptions and field notes (.rtf files) were then transferred to the computer software program Textual Analysis Markup System (TAMS), which I used to code the transcriptions into themes related to my research objectives. Specifically, I coded sections of text according to primary code groups included customary NTFPs, novel NTFPs, partnerships, and benefit sharing. Codes were simultaneously sub-classified according to more specific themes. These secondary themes were used to generate sections and an outline when writing Chapters 4 and 5.

Although I explicitly analyzed the research data during the process of coding, I also engaged in forms of analysis during the processes of data collection, member checking, reading and reviewing pieces of literature, discussing ideas with peers and my supervisor, writing the thesis, and community verification. Consequently, data analysis occurred in an iterative fashion at each stage of research given its qualitative nature. Finally, it should be noted that the specific transcription excerpts used in this thesis have been edited in a way that improves their readability while not compromising their content.

3.4.5 Validity, reliability and generalization

Qualitative validity refers to the “accuracy of the findings by employing certain procedures” (Creswell, 2009, p. 190), which I managed by means of several research strategies throughout the process of data collection including data source triangulation, careful observation and descriptive field notes, researcher reflexivity, prolonged time in the field, and most importantly member checking (Creswell, 2009). For example, during interviews I reiterated my understandings or phrased questions differently to verify the interviewees’ statements. Also, if responses were unclear I requested clarification through the translator. The final community workshop and verification meeting was critical in ensuring the validity of the research results.

Qualitative reliability refers to the extent to which “the researcher’s approach is consistent across different researchers and different projects” (Creswell, 2009, p. 190). Reliability is determined by means of clear documentation of the research procedures and steps of case studies. Accordingly, I took various steps to increase the consistency of data collection and research results such as relying on an interview schedule (see Appendix I), conducting consistent transcription and coding, and documenting the particular events and steps taken during the data collection process (Creswell, 2009). To a certain degree, however, the reliability of this research project was compromised due to its iterative, adaptive and collaborative nature, which subsequently increased the unpredictability of the research process. On the other hand, the iterative, adaptive and collaborative nature of the research led to greater community participation and legitimacy. In this sense, it should be recognized that the research design and researcher’s decisions resulted in trade-offs and balancing conflicting needs instead of solely seeking high reliability.

Because of the qualitative nature of this research, I never intended to generate research results or principles that might be used to make generalizations beyond the community of Pikangikum even though I expect my research results to serve as a means of comparison between case studies in the tradition of social science and qualitative research. In essence, however, my research was an in-depth exploration of particular issues related to the community of Pikangikum First Nation. On the other hand, I often generalize my findings to the level of the community by referring to the “community of Pikangikum First Nation” even though the number of individuals who directly

participated in individual and group interviews was limited relative to the total community population. In total, I interviewed ten Elders (eight men and two women) and three middle-aged male community leaders. However, certain research procedures, such as verification steps, participant observation, and community workshops with the Whitefeather Forest Management Corporation and Whitefeather Forest Elders Steering Group, provided the ability to generalize and validate my research findings and conclusions at the community level. The Whitefeather Forest Management Corporation and Whitefeather Forest Elders Steering Group represent the community and hold local legitimacy as the community's land use planning, development and management institution. Although a relatively small percentage of community members work or participate in planning and research, a relatively large and crosscutting group of Elders attend and participate in the Whitefeather Forest Elders Steering Group. This authority and legitimacy flow from the traditional role of Elders who are consulted for guidance, knowledge and decision-making. This is the foundational premise of the Whitefeather Forest Elders Steering Group's role in the decision-making process and guidance of the Whitefeather Forest Management Corporation.

3.5 Giving back to the community

My research “gives back” to the community of Pikangikum in two ways. First, I plan produce a research product for the community in the form of a radio broadcast in *auhneesheenuhbaymooweehn*. I have initiated this project with Whitefeather Forest Management Corporation's land-use coordinator and I plan to complete it in the following months. When played on the community radio station, this broadcast will present key Elder teachings that I received during the research interviews with respect to Anishinaabe *meecheem* and *mushkeekkeh*. Second, I provided deer and elk meat for a community meal during the verification workshop based on my own understanding of two Anishinaabe values: reciprocity and healthy food that comes from the land.

Chapter 4: Anishinaabe non-timber forest products, knowledge and teachings

The first objective of this research project was to identify the culturally appropriate means of developing and potentially commercializing NTFPs originating from indigenous knowledge and use of vegetation of the boreal forest. While I began with the intention of exploring the appropriateness of commercial NTFPs, Pikangikum

Box 4.1 Elder's teaching about NTFPs

A long time ago, the Creator put our people in this land. At that time the Whiteman was not even here yet. Only the Anishinaabe people were here. The Creator created everything on the land and this is where our people were put to live on these lands. We were put here to know everything growing on the land, for it was the Creator who taught our people to know. Our people had the knowledge for the medicine, just like the Whiteman has their medicine. This medicine is not bad. It came from the Creator. All the medicinal plants are there for every type of sickness. The Creator also gave us traditional processes. When we harvest medicine you have to cut for the person in charge, meaning the Frog. This was the teaching that was passed down. So our people followed these processes that were taught. We were given these as instructions. For instance, you have to harvest medicine from a clean area. After you were done using the medicine you would return it to a clean area. This was the instruction. They respected these teachings. *Kuhkeenuh kaykoon*, or everything that you see, is what our people were given. And not everyone had this knowledge. It was only some who were gifted to give medicine away or to distribute medicine. You had to be gifted to do that. You had to have the knowledge. But when you wanted medicine from that person that possessed the medicine, you had to give gifts in exchange. This was before money was around. Our people had their own ways of transaction. I guess you call that a transaction. You give away in exchange to buy the medicine. So you could use a gun, if you had a good gun, clothes or something of value. It could be snowshoes or moccasins that were used to purchase the medicine. So everything you see on the land that grows that is medicine. When our people traveled, when they moved from area to area, they needed medicine. They had ailments or sicknesses so they needed medicine, so they bought from people who had medicine. They had to purchase the medicine. It was not just given to them. They had to ask for the kind of medicine they wanted, so they bought that. This is the reason why the medicine worked. Sometimes they had more than one medicine; they had several medicines. One person would carry several types of medicine. So what I see with these new products, I think it is good. It is good that new products can be made from our medicine and to sell and to buy them. I think that [NTFPs] will work. This is what I think, but we will have to start off *neesheehg* (slowly) (Elder Mathew Strang, interview, Aug. 19, 2009, translated by Paddy Peters).

Elders were adamant that it was necessary to understand Pikangikum's customary products (*kaykoon*), values (*kuhkecheeeenaycheekuhtahg*), knowledge (*keekaytuhmuhweehn*), and teachings (*keekeenuhmuhkayweehn*). Thus, in this chapter, I describe and discuss Anishinaabe cultural meaning, knowledge, values and teachings provided by various Pikangikum Elders in response to my questioning regarding novel products (such as Box 4.1).

After first discussing the meaning of NTFPs, food, and medicine from the view of Pikangikum Elders, I consider some important elements of Pikangikum's traditional knowledge that is directly relevant to the development of NTFPs. In the final section, I present the core teachings and traditional protocols provided by Pikangikum Elders about the harvesting, processing, and commercialization of NTFPs, such as foods and medicines.

4.1 What are non-timber forest products?

4.1.1 Nahnatookkaykoon kahohcheeohshecheekahtayk eemah ahkeeng (Non-timber forest products)

Before the development of Pikangikum's land-use strategy, there was no term in *auhneesheenuhbaymooweehn* equivalent to the English term non-timber forest products. It was during community discussions in the 1990s and the production of Pikangikum's land-use strategy that several members from Pikangikum developed the term *nahnatookkaykoon kahohcheeohshecheekahtayk eemah ahkeeng* to represent the introduced idea of NTFPs that is used in academic, policy, and forestry circles, but in a way that equally reflected Pikangikum's vision of developing community-based NTFPs for commercial sale based on Pikangikum's cultural practices and knowledge (PFN & OMNR, 2006, p. 41). From the perspective of Pikangikum's land-use planners and Elders, this term refers to different (*nahnatook*) things (*kaykoon*) that might be (prefix *kah-* indicates the future tense of the verb) made, gathered or produced (*ohshecheekahtayk*) from (prefix *-ohchee-*) there on (*eemah*) the land (*ahkeeng*), which require the knowledge, skills, and expertise of Elders who have grown up on the land (meeting, Feb. 23, 2009, Mr. Paddy Peters).

This local definition cleverly maintains a level of ambiguity so that it might encompass Pikangikum customary resources, such as blueberries or *weekaysh*, harvested for personal or household use as well as potential, novel resources and activities, such as natural health care products or pharmaceuticals, produced from natural and intellectual resources of the Whitefeather Forest in partnership with corporations or universities. For this reason, Pikangikum's land-use strategy reads "potential enterprise developments may include those based on resources that were not customarily harvested by Pikangikum people or compounds that might be isolated from forest products" (PFN & OMNR, 2006, p. 41). So, this Anishinaabe term refers to customary activities and uses of plant and non-plant products for medicine, food, and domestic necessities, but in a way that appreciates the adaptive nature of cultural practices and knowledge that build on traditions within a contemporary world.

The term *nahnatookkaykoon kahohcheehshecheekahtayk eemah ahkeeng* must also be understood within the context of Pikangikum's land-use strategy and the multiple land-use activities proposed for economic renewal. In particular, Pikangikum's current focus on forestry planning, operations, and management is of primary importance to our understanding of this term. In the same way that the English term NTFPs was created in contrast to timber harvesting and management, Pikangikum has adopted this Anishinaabe term to signify commercial activities that are distinct from timber harvesting and management. Thus, the term *nahnatookkaykoon kahohcheehshecheekahtayk eemah ahkeeng* must be understood as a very recent concept that reflects the changes in land-use and economic development under the Whitefeather Forest Initiative.

On the other hand, Pikangikum Elders maintain a traditional Anishinaabe understanding of the land, resources and the place of the Anishinaabeg within that world. This more holistic view must frame our understanding of this quite recent dichotomization of forest resources into timber and non-timber resources. Within this more holistic view, Pikangikum Elders perceive the land and the resources according to their historic and contemporary occupation, use of, and survival in the Whitefeather Forest. It is from this perspective that Pikangikum Elders understand these resources, or "things from the land", as significant for various purposes including *meecheem* (food), *mushkeekkeh* (medicine), and *ooshecheekuhnuh* (things that can be made from the land)

or *kuhshkeekwahsoonuhn* (domestic products or crafts). In fact, the term *nahnahtookkaykoon kahohcheeohshecheekahtayk eemah ahkeeng* was rarely used in conversations between the researcher, the land-use coordinator, and Elders. Instead, the translator preferred to use these other, more specific, Anishinaabe terms – *mushkeekkeh*, *meecheem* and *ooshecheekuhnuh* –when specific NTFP types or domains were discussed. In this research, however, I exclusively explored Anishinaabe *mushkeekkeh* and *meecheem* as analogues to natural health care products and functional foods.

In the context of this research, *meecheem* and *mushkeekkeh* are important Anishinaabe concepts for understanding differences in approaching, appropriating, and correctly commercializing NTFPs. So, in the following subsections, I describe the nature and meaning of *meecheem* and *mushkeekkeh* as well as customary and commercial activities related to plant use in Pikangikum First Nation. This information serves to contextualize and give meaning to prospective NTFP development, partnerships and benefit sharing that, according to Pikangikum Elders, will have to be informed by Pikangikum’s traditional resource use, knowledge, Elders and community.

4.1.2 Meecheem

There are two ways that it was given on and from the land: *mushkeekkeh* and *meecheem*. *Mushkeekkeh* is where we got our healing from the land. *Meecheem* is where we received our nourishment from the land (Elder Charlie Peters, interview, Feb. 23, 2009, translated by Paddy Peters).

Anishinaabe *meecheem* is Anishinaabe food. In this regard, *meecheem* has a very distinct cultural meaning for the people of Pikangikum as healthy food that comes from the land and nourishes the body. Elder Charlie Peters gave a succinct description of *meecheem*:

Meecheem is food that is edible where we received our nourishment from the land. *Keepuhkeeteenuhng* meaning the Creator had placed these *meecheem* on the land. *Cheeooteeseewuhch* means where they would sustain themselves physically from the *meecheem* put on the land (interview, Feb. 23, 2009, translated by Paddy Peters).

Perhaps the most defining feature of Anishinaabe *meecheem* is its ability to nourish the body, which distinguishes it from store bought foods. In this regard, Elder Charlie Peters continued to describe Anishinaabe *meecheem*:

Okeemushkuhweeshkuhkoonuhwuh means this Anishinaabe *meecheem* gave our people the strength that they needed. The food off the land is Anishinaabe *meecheem*. They ate the food and meat right away in comparison to store bought food or products that you buy in the store (canned food and goods). We don't even know when this was canned or how long it was there in the can (interview, Feb. 23, 2009, translated by Paddy Peters).

Elder Oliver Hill also explained how *meecheem* comes from the land, which gives it the unique ability to provide good health and well-being:

Every plant that grows on top of the ground is born out of the land. Blueberries were a favourite food for our people because a blueberry *meecheemeeshkuhkahng*. In other words, a blueberry created a good nourishment to the body. The Anishinaabeg, our people, would eat that. And also *auhbeenooohcheeshug* (children) would eat that. And another word, *auhcheebooshkuhkahg*, means it creates a good fat in you and you become physically healthy with a good physical appearance (interview, Feb. 23, 2009, translated by Paddy Peters).

It is important to understand, however, the relationship between *meecheem* and *mushkeekkeh*. These concepts are separate but not mutually exclusive categories.

According to Elders, everything that grows on the land is *mushkeekkeh* whereas only particular plants that grow from the land are edible. For example, Elder Alec Suggashie spoke about one of the Late-Elder Whitehead Moose's teachings:

The moose eats branches, sticks, and Whitehead pointed out that in these branches there is medicine. Whenever the moose ate these sticks and our people killed a moose, they would eat the moose meat and all the medicine. So what the moose ate is what our people ate, even the aquatic plants. The partridge, or the pine grouse, too. They all eat what grows on the earth. The beaver also eats what grows on the earth, the poplar [trembling aspen] and the tree plants. This is why our people were strong and healthy. This is where our people got their healing from. Today it is canned products that we eat, but we don't know what is in these foods. Years ago our people knew what they ate, what they were eating, what they got from the land. Today our people are sick because of all the commercial food that they eat (interview, July 30, 2009, translated by Paddy Peters).

In this sense, from an Anishinaabe perspective, *meecheem* and *mushkeekkeh* are separate concepts based on their respective purposes, but are interrelated concepts because they both grow out of the land and were placed there by the Creator for the health and survival of the Anishinaabeg.

4.1.3 Mushkeekkeh

While *meecheem* provides health and nourishment, the purpose of *mushkeekkeh* is to heal and remedy sickness. Healing is also the purpose of medicinal knowledge, which is intricately linked with *mushkeekkeh*. As Elder Mathew Strang pointed out, medicinal knowledge is given or taught by others for the purpose of healing, helping, and improving the well being of others.

I know ten plants and these plants that I was taught about are to help other people. *Kaysheeyuhtuhweeshkuhkooch* means that knowledge that has been given with these plants is to help other people for their well being, healing of that person, or for getting well (Elder Mathew Strang, interview, July 30, 2009, translated by Paddy Peters).

Because of its functional value or purpose of healing, *mushkeekkeh* is most readily translated into the English language as “medicine”. Although *mushkeekkeh* has been considered a functional group (O’Flaherty, Davidson-Hunt & Miller, 2009, p. 22), it is important to recognize the broader meaning of the concept *mushkeekkeh* in addition to this classification by function or use.

Elder Charlie Peters has pointed out that “the real meaning of the term *mushkeekkeh*, long ago, is the name that our people gave to every plant” (interview, Aug. 12, 2009, translated by Paddy Peters). In fact, there is no exact term for “plants” in *auhneesheenuhbaymooweehn*, such that during discussions with Pikangikum Elders about plants, this concept is often translated as *mushkeekkeh* or assumed that the conversation refers to *mushkeekkeh*. In this sense, *mushkeekkeh* is a fundamental category, concept and term that encompasses specific Anishinaabe medicines and plants, but also all things that grow from the land in a general sense. Thus, the concept of *mushkeekkeh* is best understood in relation to other Anishinaabe domains such as *auhkee* (land) and functional categories such as *meecheem*, rather than categories founded in Euro-Canadian, scientific and naturalistic understandings of “nature,” “animals,” and “plants.”

Mushkeekkeh is very culturally valuable to Pikangikum Elders. In one interview, Elder Mathew Strang declared how

we have to know just how important that is, the *mushkeekkeh*. *Cheekuhnuhtaytuhng* means that you have to have a reverence over all of that *mushkeekkeh*. All trees are *mushkeekkeh*, all plants (interview, Feb. 23, 2009, translated by Paddy Peters).

Despite the cultural importance of *mushkeekkeh* to Pikangikum Elders, it is used much less today, which Elder Charlie Peters alludes to:

Mushkeekkeh is what our people used. They had names for all the plants that grew out of the earth. They used all of these plants for a lot of purposes. Today very few use the *mushkeekkeh*. *Puhkeeteenuhng* or *booneetoowuhg* means that they have forsaken the *mushkeekkeh* or its use. They used every living plant on the earth, even what you see along the road. Those were all used (interview, Aug. 12, 2009, translated by Paddy Peters).

Although *mushkeekkeh* primarily refers to plants, trees and vegetation, it might also come from other non-botanical sources. For example, muskrat or rabbit fur are/were⁵ used in certain medicinal remedies. Similarly, Geniusz (2009, p. 55) has pointed out that *mushkeekkeh* refers to more than just “plants,” which has no direct translation in the Anishinaabe language, and might include animals and water. In fact, *mushkeekkeh* must be understood within the broader context of Anishinaabe ways of life, knowledge and culture. *Mushkeekkeh* is one part of what “one learns within the context of izhitwaawin [Anishinaabe culture], and these various things require learning about how to use, work with, and ask for the assistance of plants and trees. To make certain objects, such as shelters and canoes, or to prepare foods and medicines requires a certain amount of knowledge about working with plants and trees” (Geniusz, 2009, p. 53). I will return shortly to the important topic of Anishinaabe knowledge.

Mushkeekkeh also cannot be reduced to merely the botanical or chemical substance from a reductionist, scientific perspective. *Mushkeekkeh* is not considered an entity found in the plants or trees that acts within the human system. *Mushkeekkeh*, to the contrary, corresponds more closely to a particular plant, or group of plants, that is inherently embedded and connected to all of creation and life force (within a system). This acknowledges the trans-disciplinary nature of *mushkeekkeh*, which spans various

⁵ I simultaneously refer to Pikangikum’s customary activities in the past and present tense for several reasons. This verb use respects the adaptive and changing nature of customary practices that form an integral part of Pikangikum’s present identity as both historic and/or contemporary activities, even if they have been discontinued. This verb use also shows that it is difficult to say with certainty whether or not certain customary practices have been discontinued.

academic disciplines of medicine, botany, religious studies, anthropology and psychology. For example, Elders emphasize the importance of faith or mental state when using *mushkeekkeh*. Elder Charlie Peters makes mention of this:

Even though you can use *mushkeekkeh* to make you feel better, sometimes that doesn't help and you can't get well using *mushkeekkeh* because that sickness is in your mind. *Ocheenaywuhbeenayweehn* is a sickness that you bring upon yourself whether you did something foolish or something beyond normal expectation/behaviour. That creates *ocheenayh*. There is no healing or medical medicine for this. No *mushkeekkeh*. *Ocheenayh* brings up sickness and bondage. So no medicine can heal that. *Meecheem* is of no use (interview, Feb. 23, 2009, translated by Paddy Peters).

In this regard, certain illnesses require more than *mushkeekkeh*, such as belief and the intention to lead a good life, which are important corollaries of *mushkeekkeh* to Pikangikum Elders.

4.1.4 Customary activities and plant uses

Since time immemorial, Anishinaabe *meecheem* and *mushkeekkeh*, such as mammals, fish, avian and botanical species, have sustained the Anishinaabeg. The people of Pikangikum are/were predominately moose hunters and fisher people; however, plants have also been important sources of food, medicine and domestic necessities. In fact, the Elders of Pikangikum emphasize how *kuhkeenuh kaykoon* (everything) from the land was used or can be used. In this view, everything that grows from the land has a purpose and is inherently valuable. For example, Elder Mathew Strang instructs that

kuhkeenuh means everything that you see on the land; that means all the trees, all the plants, all the shrubs, all the vegetation, low-lying vegetation. *Kuhsuhkeekkeeg* means every plant that you see growing on the land has its purpose whether it's a special purpose or whether these plants are just growing on the land (interview, July 30, 2009, translated by Paddy Peters).

Elder Oliver Hill also pointed out that it has been during the lifetime of contemporary Elders that the Pikangikum people used plants not only as foods and medicines, but all their essentials such as diapers, baby cradles (*teekeenuhkuhn*), blankets, house materials, and even fish traps (*peecheepoonahkuhn*) (interview, May 26, 2009).

There are many different edible plants (*kuhmecheekuhtaykeehn*) or foods (*meecheem*) that grow in different habitats in the Whitefeather Forest. Some plants are

edible in early spring and summer including birch sap and the inner bark (*wuhnuhgahg*) of the various trees (see Table 2). Other edible plants ripen in late summer and fall. While the people of Pikangikum eat various berries (see Table 2), *meenahn* (blueberries; *Vaccinium sp.*) are likely the most important. The root of the wild parsnip (*ookuhduhk*; *Sium suave*) and the crown of the bulrush (*mushkooseeh*; *Scirpus lacustris*) are also occasionally eaten. *Muhnnoomeehn* (wild rice; *Zizania palustris*) grows in the Whitefeather Forest, but hasn't been harvested and consumed in recent years. Some lichens were/are utilized, such as one particular lichen that grows on sun-exposed rock banks along lakes and rivers and was/is combined with soups as a thickener comparable to soup crackers (Elder Charlie Peters, Feb. 23, 2009, translated by Paddy Peters).

Table 2: An ethnobotanical list of several traditional foods and medicines of Pikangikum First Nation

Anishinaabe Name	Plant Name	Scientific Name	Purpose
<i>Auhsuhteeh</i>	Poplar Tree; Trembling Aspen	<i>Populus trembloides</i>	Edible inner bark
<i>Ohkehg</i>	Jack Pine	<i>Pinus banksiana</i>	Edible inner bark
<i>Weehkwuhsuhteeg</i>	White Birch	<i>Betula papyrifera</i>	Edible inner bark
<i>Auhnneepeemeenuhduhg</i>	High-bush Cranberry	<i>Viburnum opulus</i>	Edible berry
<i>Muhkooseemeenuhn</i>	Moose Berry	<i>Viburnum edule</i>	Edible berry
<i>Muhkooseemeenuhn</i>	Lignon Berry	<i>Vaccinium vitis-idaea</i>	Edible berry
<i>Meskoomeenuhn</i>	Raspberry	<i>Rubus idaeus</i>	Edible berry
<i>Ohseekwuhkoomeehnuhn</i>	Saskatoon	<i>Amelanchier alnifolia</i>	Edible berry
<i>Ohtayeemeehn</i>	Strawberry	<i>Fragaria sp.</i>	Edible berry

Various fungi are/were used such as *suhkuhtuhkuhn* (chaga; *Inonotus obliquus*), which is/was added when smoking to keep the tobacco light, and *wuhshushkwaytowh weehkwuhsuhteeg* (bracket fungus; *Fomes fomentarius*) as a fire carrier. As a food or medicinal product, mushrooms (*wuhshushkwaytowh*) were not well known to the Elders interviewed. Mushrooms were actually perceived as a “Whiteman’s” food given conversations Elders have had with non-Aboriginals interested in edible boreal mushrooms such as lobster, chanterelle, and morel mushrooms. Elders stated, however,

that the Pikangikum people might have possessed knowledge about mushrooms in the past. It is clear that other Anishinaabe groups have knowledge of mushrooms as medicine, food, and utility products (Keewaydinoquay, 1998).

The people of Pikangikum use a diversity of *mushkeekkeh*. Like the Anishinaabeg in other regions (Davidson-Hunt *et al.*, 2005; Densmore, [1928] 1974; Meeker, Elias & Heim, 1993) and boreal Cree peoples (Marles *et al.*, 2000), the Pikangikum people use/used many plants independently and in combination to treat a wide variety of illnesses. It is not my desire, nor objective, however, to list various medicinal plants used by the Pikangikum people. This list is long and has been provided elsewhere (for example Davidson-Hunt *et al.*, 2005; Densmore, [1928] 1974). Furthermore, as I discuss below, medicines and their particulars are confidential for Pikangikum Elders.

4.1.5 Commercial activities

The people of Pikangikum have gifted and exchanged medicine, food and crafts for as long as they have used these things from the land. At the present time, some Elders and younger individuals complement their wage income with land-based activities such as selling products generated from fish, mammals, and plants. About three individuals sell *nuhmaytaykwuhg* (smoked whitefish) within the community for \$5 - \$10 per fish. Sucker and pickerel are also sold occasionally. In terms of mammal meat, cooked moose meat is often sold as stew (\$10/plate) or burgers (\$4 - 5/burger). In this sense, women generate value-added food products for commercial sale within the community. Raw moose meat was readily gifted to family members and friends, but it was apparently not sold.

Anishinaabe *mushkeekkeh* is also traded or sold by individuals who have experience with certain medicines and plants. In turn, individuals purchase or trade for *mushkeekkeh* if they know of it, trust its use, and respect the “medicine carriers” who provide it. However, many individuals, and possibly the majority of the people of Pikangikum, typically use allopathic medicines from the Nursing Station. The validity and trust in *mushkeekkeh* has been severely undermined over the last few generations and many people under the age of 60 years old entirely use allopathic medicines. So these individuals would not trust or have interest in *mushkeekkeh*, or they may lack the

knowledge of how to access *mushkeekesh* even though it continues to be harvested, traded and used in the community.

In Pikangikum, as well as in other Anishinaabe communities, there is a long history of selling commercial products outside of the community including fish, wild rice, and fur-bearing animal pelts. All of these commercial activities, however, have ceased in Pikangikum except for some trapping for commercial purposes. This global fur economy was of central importance to the Anishinaabeg (Peers, 1994) and the people of Pikangikum for several centuries as a livelihood and commercial activity (Dunning, 1959). Some trappers still hold Registered Trapline Licenses in the Whitefeather Forest and commercially trap fur-bearing animals that fetch a higher financial return, such as pine marten. These trappers typically sell their furs to local fur collectors who subsequently sell furs to regional wholesalers.

The people of Pikangikum also participated in the non-Aboriginal commercial fishing industry of the Lake Sturgeon earlier in the century. More recently, community members commercially fished walleye, but this economic activity no longer occurs. A few community members produced wild rice under commercial licenses, which were subsequently transferred to Pikangikum First Nation. The Band maintains these wild rice licenses for various lakes in the Whitefeather Forest even though wild rice isn't managed or harvested at present for customary use or commercial sale due to the industrialization of wild rice production and decline in commodity prices.

Mushkeekesh has never been sold commercially outside of the community, however, a small amount of regional trade between Anishinaabe communities continues to this day. Several individuals still gift or trade one particular medicine with members of Poplar Hill and Paungassi First Nation. Because this particular plant doesn't grow in Poplar Hill's or Paungassi's traditional territories, a resident of one these communities might call a friend in Pikangikum to trade for or purchase some quantity of this particular medicine. The Late-Elder Norman Quill offers this anecdote as an example:

The example is that I get a call from Paungassi, Manitoba from people there. They ask me to send them the *sheekoopehn*. So I harvest it and I send it to them because they know that they want to use the *sheekoopehn* for health reasons (interview, Oct. 4, 2009, translated by Paddy Peters).

In the 1930s, Pikangikum was shown to have important connections with several communities such as Lac Seul, Little Grand Rapids (Hallowell, 1992), Paungassi, and what is now Poplar Hill. Today, the trade or sale of this medicine reflects the maintenance of kinship ties to other northern communities through plant trade.

4.2 Anishinaabe knowledge, Elders, and institutions

4.2.1 Anishinaabe knowledge

A long time ago, the Creator put our people in this land. At that time the Whiteman was not even here yet. Only the Anishinaabe people were here. The Creator created everything on the land and this is where our people were put to live on these lands. We were put here to know everything growing on the land, for it was the Creator who taught our people to know. Our people had the knowledge for the medicine, just like the Whiteman has their medicine. This medicine is not bad. It came from the Creator. All the medicinal plants are there for every type of sickness. The Creator also gave us traditional processes (Elder Mathew Strang, interview, Aug. 19, 2009, translated by Paddy Peters).

You have to possess *keekaytuhmuhweehn*, which is knowledge, in order for you to understand how you can use and obtain all of these things on the land (Elder Mathew Strang, interview, July 30, 2009, translated by Paddy Peters).

From an Anishinaabe perspective, knowledge isn't just information. Anishinaabe *keekaytuhmuhweehn* (knowledge) is sacred because it comes from the Creator and land. In the act of creation, Pikangikum Elders say that the Creator gifted the land, the resources, and Anishinaabe knowledge of the land for the survival and well being of the Anishinaabeg. Elder Charlie Peters explains this idea, specifically in relation to *mushkeekkeh*:

The knowledge that our people had of our medicine was given to them by the Creator. In other words, *keep ee sheemeeneekooweehseeh* or they have that gift and the knowledge of those plants. This is a term that is used if a certain person has a certain gift, whatever that may be (interview, Aug. 12, 2009, translated by Paddy Peters).

The Creator, however, gifted all Anishinaabe knowledge, not just medicinal knowledge. In the same way, O'Flaherty, Davidson-Hunt and Miller (2009, p. 27) explain that the "Creator is described by Pikangikum Elders as the ultimate source of life, including being the provider of direction and purpose of all life." But Elder Charlie Peters alluded to another element of Anishinaabe knowledge, namely the skill, knowledge or particular gift

an individual has gained or been endowed with *at a particular moment in time*. So, the Anishinaabeg obtain specific knowledge through individual gifts or skills; however, this knowledge is also cultivated through personal experience on the land and depends on knowledge specialists.

Table 3: Anishinaabe knowledge, Elders and institutions.

Anishinaabe knowledge, Elders and institutions	Characteristic	What does this mean?
Anishinaabe knowledge	Source and nature of knowledge	The Creator gifted Anishinaabe knowledge and all things on the land with the intention that they would be used, shared and exchanged under proper conditions for the health and well being of the Anishinaabeg. As a sacred gift from the Creator, it is not “owned” by anyone.
Anishinaabe Elders	Knowledge specialists	Anishinaabe knowledge is obtained through experience on the land and is maintained by Pikangikum Elders who teach and guide the correct use of Anishinaabe knowledge and products.
Common and special knowledge	Type of knowledge	Common knowledge is collective and general knowledge about things on the land. Special knowledge is held privately by gifted individuals for healing.
Access to and use of Anishinaabe knowledge	Protocols and institutions	Common and special knowledge are shared or exchanged under different conditions. Edible food knowledge is the least confidential. Common medicine knowledge is moderately confidential. Special medicine and knowledge is highly confidential.
Anishinaabe knowledge innovation	Customary knowledge attainment	Special knowledge is acquired through Anishinaabe methods of dreaming, fasting and relationships with other-than-human beings.
Anishinaabe knowledge in land-use planning, research, and development	Collaborative knowledge generation	Elders collaborate with university academics and natural resource managers to create contemporary solutions for Pikangikum’s land-use strategy, planning, development and management of the Whitefeather Forest.

4.2.2 Anishinaabe Elders

Although the ultimate source of Anishinaabe knowledge is the Creator, individuals obtain and cultivate Anishinaabe knowledge through personal experience on the land, instruction and teachings from other experienced individuals, and experiences and dreams with other-than-human persons. These beings have been considered so-called “supernatural” or “spiritual” beings, but Hallowell (1992, p. 64) describes other-than-human persons as a more appropriate label to refer to “animate beings to whom the Ojibwa [Anishinaabeg] attribute essentially the same characteristics as themselves,” but “have more power at their disposal than human beings, and this is why the humans need the help of other than human persons.” So, Anishinaabe knowledge depends on a greater set of social, ecological and cosmological relations, but is centered within the community’s knowledge networks, specialists, and Pikangikum Elders (*Keecheeyuhneesheenuhbay*).

Pikangikum Elders are the community’s experts, advisors and traditional authority. Elsewhere, Anishinaabe Elders have been considered key actors in traditional knowledge networks or institutions (Davidson-Hunt & Berkes, 2003). Historically, older generations have always played a crucial role in teaching, guiding, and ensuring the future survival and well-being of the Pikangikum people. This role is particularly important in the realm of Anishinaabe *meecheem* and *mushkeekkeh*. The Late-Elder Norman Quill explains that the

auhkeewaysee was the older man that possessed the knowledge of medicine and prescribed that medicine. *Keekeekaycheekahtayneeh* means that the people learned from or observed [the older man] who taught the knowledge. The example is his grandfather Birchstick. *Keewehtuhmuhkay* is how he taught or he spoke the knowledge. This is spoken knowledge. That is how he taught. There came a time when Birchstick died, but that knowledge of his teaching continued. Even the medicinal knowledge continues today. *Cheekeeahpuhtuheeneeg* means that all that knowledge that I was taught or shown is still used today (interview, Oct. 4, 2009, translated by Paddy Peters).

Certain Elders have gained the essential, authoritative knowledge and skills regarding the practice and use of natural resources through experience on the land and knowledge networks and institutions.

However, each Anishinaabe person knows what he or she has been taught by his or her Elders and the time spent on the land. As the Late-Elder Norman Quill reminded me, his knowledge is not “all” knowledge, but that which he had learned from his Elders over his lifetime (meeting, May 29, 2009, translated by Paddy Peters). Similarly, Densmore ([1928] 1974, p. 323) writes that Anishinaabe remedies and knowledge are “individual, not general, and an individual when questioned invariably replies, “I can tell you about my own medicines. I do not know about other peoples’ medicines nor their uses of the same plants.” Nonetheless, knowledge of things that come from the land is also considered collective or shared because of lateral and vertical knowledge exchange, transmission and learning. This means that most Elders of the community share a large degree of knowledge, while certain individuals hold other specific or special knowledge. So, Anishinaabe knowledge is unevenly distributed and shared within Pikangikum but with greater concentrations among community Elders.

To this day, Pikangikum continues to be strongly traditional in their respect and deferral to their Elders’ expertise and knowledge. On the one hand, Elders continue to significantly influence and teach customary land uses, although this varies between families and individuals. Knowledge continuity also varies between traditional foods, medicine, and crafts since food procuring activities such as moose hunting and walleye fishing remaining the most important contemporary subsistence activities. On the other hand, the Elders have adopted a novel role in the formal guidance of the Whitefeather Forest Management Corporation and planning activities. Thus, Pikangikum Elders are crucial leaders at the household level in customary activities *and* at the community-level in planning and advising.

4.2.3 Common and special knowledge

Kuhweehn kuhkeenuh kaykoohncheewehtuhmuhweech. This is what I understood when we [Pikangikum Elders] had discussions in this area [NTFPs]; not everything should be told about the knowledge of the medicine plants (Elder Alec Suggashie, interview, July 30, 2009 translated by Paddy Peters).

If “not everything should be told,” what knowledge might be shared or used for the purposes of developing community-based NTFPs? Although Pikangikum Elders never directly answered this question, they distinguished between *common* and *special*

Anishinaabe knowledge, which is associated with various underlying cultural issues that might inform potential planning, development and commercialization of Anishinaabe *meecheem* or *mushkeekkeh*. Common knowledge refers to knowledge, practices and skills that are freely shared and widely known within the community of Pikangikum and/or in other Anishinaabe communities of the boreal forest. Furthermore, Anishinaabe common knowledge typically includes experience and knowledge related to *meecheem*, *kuhmeecheekuhtaykeehn* (edible plants), crafts, and some *mushkeekkeh*.

Special knowledge, on the other hand, corresponds completely with knowledge, practices and skills related to Anishinaabe *mushkeekkeh* and healing. In essence, Anishinaabe special knowledge is very confidential, held privately by gifted individuals, and may never be shared with anyone, including close family members, friends, or community members. If this type of knowledge is shared however, it would occur only under certain conditions, such as monetary payment, exchange of valuables, or apprenticeships. Payment, trade or the exchange of valuables, however, is not a defining feature of special knowledge since foods and common medicines are also paid or traded for outside of family and friend relationships.

The Late-Elder Norman Quill describes common medicine and knowledge relative to special knowledge:

There is common medicine that anybody can harvest. *Peesheewuhtehg* [lynx root] was used for headaches or stomachs. Another one is *weekaysh* [sweet flag]. Anyone can harvest and prescribe it. It is used for colds and earaches. But there is other medicine only harvested by the one who was gifted and had the knowledge to prescribe the medicine (interview, Oct. 4, 2009, translated by Paddy Peters).

According to Elder Oliver Hill, special knowledge and experience exists at a “higher level,” and is often held by skilled medicine men or women and associated with ceremonial healing such as the Wabano (meeting, Jan. 9, 2009, translated by Alex Peters). This “higher level” medicinal knowledge entails more complex recipes, combinations of ingredients, and specific remedies for a variety of illnesses. Also, as the Late-Elder Norman Quill alluded to above, only gifted individuals have special knowledge that is cultivated through apprenticeships, special training from a young age, and traditional methods of knowledge innovation, such as personal experiences, fasting, dreaming and/or relationships with other-than-human persons.

Almost one century ago, Densmore ([1928] 1974, p. 328) similarly mentioned the distinction between common and special knowledge among the Anishinaabeg of Minnesota: “In addition to the special knowledge of plants held by the Mide, there was a general knowledge of the simpler remedies, each household having a supply of such herbs for common ailments.” More recently, Geniusz (2009) also referred to the basic dichotomy between “public” and “guarded” knowledge in Anishinaabe communities. In fact, special Anishinaabe knowledge “is more guarded, [...] not commonly held by everyone, and is only given to specific individuals who have gone through certain ceremonies and degrees of training” (Geniusz, 2009, p. 65). When dreaming and fasting are involved, other-than-human persons or the Creator may reveal new knowledge during specific cultural practices such as sending individuals away at a young age (see section 4.2.5). However, older individuals might fast and dream for specific purposes if this is the individual’s practice. At the present, it is likely that there still are some Elders who have some degree of special knowledge.

It should be emphasized that this conceptual difference between common and special knowledge is a matter of degree rather than categorical difference. For example, knowledge related to edible plants is not very confidential whereas common medicinal knowledge is moderately confidential. Special medicinal knowledge, on the other hand, is highly confidential and rarely shared. In this regard, Elder Mathew Strang points out that

I would tell a lot of everything else, but when it comes to medicine, medicinal plants, or anything that has to do with medicine (*kuhmushkeekeewuhng*) that is confidential. *Auhnnehn ahnuhpuhtuhg mushkeekkeh*, in other words, the particulars are confidential. That knowledge is not readily shared even amongst our people. I can say the same thing in the doctor’s world. Even the doctor doesn’t share his knowledge of medicine, so it the same thing with this. But the doctor does sometimes share the information just with his patients. So this is the same practice that we have (interview, Sep. 15, 2009, translated by Paddy Peters).

Thus, even medicinal knowledge or medicinals that are considered common knowledge are confidential and not freely shared.

4.2.4 Access to and use of Anishinaabe knowledge

Perhaps the most critical issue for the access to and use of Anishinaabe knowledge and products, from the perspective of Pikangikum Elders, is access through

Anishinaabe institutions, guidance of Anishinaabe knowledge experts (i.e. Pikangikum Elder), and respect of Anishinaabe protocols. Elder Mathew Strang describes the origin of Anishinaabe protocols or *traditional processes*:

[Anishinaabe *mushkeekkeh*] came from the Creator. All the medicinal plants are there for every type of sickness. The Creator also gave us traditional processes (interview, Aug. 19, 2009, translated by Paddy Peters).

Anishinaabe protocols were also gifted by the Creator to govern the access to and use of Anishinaabe knowledge and products. In that same conversation, Elder Sam Quill also spoke adamantly about the role of Pikangikum's knowledgeable and gifted Elders as well as Anishinaabe traditional processes, especially in the case of NTFP development:

The main topic is for the medicine to work (*cheeahnookeemuhkuhg*). Individuals didn't just go and harvest the medicine. It would have to be someone that was gifted to do that. There was a reason why they followed that traditional process. It was a way of having the medicinal plants work as medicine.

Cheeahnookeemuhkuhg oohmushkeekem means observing that the medicine would work. The other thing is that the Elders (*Keecheeyuhneesheenuhbay*) were given a sign for the medicine to work. They were given certain gifts. That is the only way that these medicines would work (interview, Aug. 19, 2009, translated by Paddy Peters).

So, traditional Anishinaabe processes or protocols, such as seeking out knowledgeable individuals, are important for the correct access to and use of Anishinaabe products and the development of NTFPs. According to Elders, commercial NTFPs won't work just because they are sourced from bioactive plants and processed into food or medicinal products. These products function, from an Anishinaabe perspective, because Elders produce them or guide their production by following traditional processes.

Except for possessing the "gift" or knowledge of medicines, access to Anishinaabe knowledge and products, especially *mushkeekkeh*, is analogous to gaining access to a community member's trap line, which requires that an individual follow traditional protocols and institutions. For example, if you need certain resources, such as moose hunting grounds or medicinal knowledge, you must ask another individual who maintains a stewardship responsibility over that biophysical or intellectual resource. In this regard, Elder Gideon Peters makes the point that all medicines, including common medicines such as *weekaysh*, require the guidance and knowledge of traditional experts:

It would have to be the person who is knowledgeable to harvest that and you would have to harvest it in a way in which your knowledge plays a role in how you harvest it [*weekaysh*] (community meeting, Dec. 18, 2009, translated by Paddy Peters).

In this regard, even common medicines must involve expert guidance and knowledge because Anishinaabe children or non-Anishinaabe individuals don't even have the basic knowledge to harvest, prepare or sell common medicines in a proper Anishinaabe way.

When Elders were asked if they or others would share medicinal knowledge, several Elders responded that it was a third party's prerogative to request that knowledge. This request for access, however, involves conditions of use or a moral responsibility of using that knowledge or resource properly with Anishinaabe protocols and its intended purpose. For example, the proper purpose of *mushkeekkeh* and *meecheem* is improving the lives of people through healing and nourishment, respectively (see section 4.3.1). Furthermore, requesting access to a particular resource comes with the moral responsibility of harvesting in a non-wasteful manner and using the resource based on need. The user is expected to truly need the resource to improve their well-being. So, sharing and exchanging knowledge is related to the nature and purpose of the resource, whether biophysical or intellectual, which is for the health, survival and well-being of the people of Pikangikum.

Even though it is more likely that common knowledge of *meecheem* or *mushkeekkeh* would be shared with outsiders for the purposes of commercial NTFP planning, development and commercialization, both forms of knowledge introduce serious questions regarding confidentiality and intellectual property rights. Furthermore, in the context of commercial, community-based NTFP planning, research and development, expert guidance and payment would be required. Regardless of the type of knowledge that Pikangikum Elders might chose to offer for commercial purposes, however, knowledge sharing will depend on the establishment of the right conditions such as community control, meaningful collaboration and partnerships, and significant benefit sharing with the Pikangikum people (see Chapter 5) since *all* Anishinaabe knowledge is designed for the benefit, survival and well-being of the Anishinaabeg.

4.2.5 Anishinaabe knowledge innovation

For the purposes of NTFP planning, research and development, several Elders felt it was important to understand the specific nature of medicinal knowledge that is revealed through dreams and fasting. Even though the Elders interviewed stated that this practice isn't currently observed, they described these traditional methods of knowledge innovation and generation as fundamentally important to their intellectual tradition and identity. Although this practice could be revitalized, this would have to occur from within the community. In the meantime, Elders are interested in collaborating with scientists and accept scientific knowledge if it interfaces with their traditional knowledge and guidance. For this reason, it is important to understand the epistemological nature of Anishinaabe knowledge and intellectual roots of Pikangikum Elders when thinking about commercial NTFPs, knowledge collaboration, and NTFP partnerships.

In the past, according to Elder Oliver Hill, some Anishinaabe children were selected and educated from a young age through traditional methods such as the *dream fast*:

If someone wanted to obtain insight and knowledge into a certain area, [they would need to understand that] medicinal knowledge comes from that root of knowledge. It was not just by accident or people didn't just go and try to figure these things out. The Elders that were teaching wanted this teaching process. It was a very restricted way of living. For instance, children that were recognized or were selected were sent away into the wilderness to go and be out there alone, to dream, and try to obtain that knowledge. The reason was for the children to receive a blessing of knowledge and it came through dreams. The child would know. Whoever that person or creature was that came to that child came to bring the blessing (interview, Aug. 19, 2009, translated by Paddy Peters).

The people of Pikangikum possessed these culturally specific methods for teaching and generating new knowledge, especially with respect to medicinal knowledge, which depended on traditional healers.

When youth were sent out on the land to dream, there was also an element of familiarizing oneself with the land and the beings that exist there. Elder Mathew Strang explains that

when you go and do this ten-day fast, you will begin to have dreams. You will begin to dream about someone coming to you and speaking to you, coming to reveal and talk to you (interview, Aug. 19, 2009, translated by Paddy Peters).

Elder Oliver Hill further describes the nature and whereabouts of the dream fast:

You know how long this dream quest was? For ten days. In Beren's Lake there is an island that they call Dreamer's Island. That is where they put people that did the dream quest (interview, Aug. 19, 2009, translated by Paddy Peters).

Hallowell (1976) similarly described this practice of dream fasting among the people of the Beren's River, which included Pikangikum. In fact, dreaming is an experience on the land structured by traditional institutions, guided by Anishinaabe experts, and facilitated by encounters with other-than-human beings who offer "to share their knowledge and power" with young boys. (Hallowell, 1976, p. 464). The dreaming experience is a form of communication in which an individual interacts with specific beings and can entail the exchange of gifts and knowledge, such as medicinal knowledge. As such, dreaming is not a mental activity in which a youth, medicine man or woman disengage from reality to experience imaginary dreams. Dreaming is about entering more intimately into one's relationship with the land, different beings, the Creator, and receiving insight about a subject matter, such as *mushkeekkeh*.

4.2.6 Anishinaabe knowledge in land-use planning, research, and development

Because of their experience on the land, Pikangikum's contemporary Elders and knowledge experts guide and advise land-use planning, development and management of the Whitefeather Forest. In fact, the role of Pikangikum Elders has been incorporated into provincial policy related to forest management and development. For the purposes of community-based land-use planning, the OMNR has produced the Forestry Management Planning Manual (2009), which states:

For the Whitefeather Forest, Pikangikum First Nation Elders will play a guiding role in forest management planning. The guiding role will be a continuation of the role that the Elders played in the development of the land use strategy for the Whitefeather Forest, and includes provision of strategic advice, communication with the Pikangikum community, and building Pikangikum community consensus. The guiding role of the Elders is a part of Pikangikum's customary decision-making approach, and is associated with the role of the Elders as senior stewards of the land who are responsible for passing on Pikangikum customary stewardship traditions (OMNR, 2009, p. 3).

Pikangikum Elders state, however, that the knowledge relevant to current planning, research and development continues to come from the Creator even though the people of

Pikangikum aren't presently utilizing Anishinaabe institutions governing knowledge innovation as previously described. In fact, new institutions such as the Whitefeather Forest Management Corporation and Whitefeather Forest Elders Steering Group are the centers of community-based research that involve local, government, and university researchers through the Whitefeather Forest Research Cooperative research partnership.

So, while some community members have suggested that traditional knowledge institutions and innovation are no longer functional, Elders are strongly supporting knowledge interfacing, planning and research between "Whiteman's" scientific, managerial knowledge and Anishinaabe traditional knowledge. I will return to this idea of collaboration and knowledge interfacing in Chapter 5. In the meantime, it is important to understand that knowledge innovation for the purposes of land-use planning and development, such as commercial NTFPs, functions on an interdisciplinary and collaborative research model that includes Pikangikum Elders, government planners and university researchers. This shift in knowledge innovation, however, does not imply that Anishinaabe methods of knowledge innovation have permanently drifted into the past. The bottom line is that, based on Pikangikum Elders' guidance and advice, Anishinaabe values and teachings are taking on new importance in the context of partnerships between Pikangikum, research and government institutions. With this in mind, I turn to present the bulk of my research results on Anishinaabe processes, practices and protocols regarding traditional and novel forest products, such as *meecheem* and *mushkeekkeh*.

4.3 Pikangikum Elders' teachings about NTFPs

In interviews and conversations with Elders, various principles and values began to emerge from the many cultural teachings and protocols regarding traditional and commercial NTFPs. Some teachings were more general in nature and related to a cosmological perspective of all of creation including the land, plants, trees, and human and nonhuman beings on the land. These teachings, however, represent important conditions for the use of Anishinaabe *meecheem* and *mushkeekkeh* in the case that community-based NTFP planning, research and commercialization is more seriously considered in Pikangikum and/or with government, university or corporate partners. Other teachings were more specific to the particular approach and behaviours required for

the appropriate access to, harvesting, preparation, use, and exchange of things from the land. Thus, this section offers an Anishinaabe normative and moral approach to NTFP planning, research and commercialization.

This section complements the earlier idea that Pikangikum Elders and traditional knowledge must play a central role in NTFP planning, research, development and commercialization. So, rather than offering a check list of do's and don'ts, this section provides a cultural introduction to the types of protocols and cultural interpretations to be dealt with in the context of developing a partnership relationship, negotiating agreements and conducting research, product development, and commercialization. These teachings, instructions (*auhneesheenuhbay kadodohg*), or conditions of use are summarized in Table 4.

4.3.1 Respect, purpose and need

Respect for all of creation and purposeful utilization of resources based on need are important principles offered by Pikangikum Elders. First, all things from the land deserve the greatest respect. This is a principle that Elders applied to all of creation, which includes animate and inanimate beings of the land. The principle of respect is as important when moose hunting and cutting firewood as it is when harvesting or exchanging medicines. For example, when butchering a moose, the first task is to cut and place the moose's *ohmooduh* (moose dewlap) in a tree (Late-Elder Norman Quill, per. comm., Sep. 22, 2009). This is an act of respect towards the moose, and by placing the *ohmooduh* in a tree, the hunter reconnects the moose's "spirit" with its environment and food source.

Respect can refer to many different aspects of the environment, such as river rapids, which can take life if not treated with respect. If this teaching of respect isn't followed, Pikangikum Elders teach that there are consequences that will be experienced such as sickness or even death. This is particularly the case with handling medicine, as the Late-Elder Norman Quill explains:

Ahkeepaykeetoohwahch means that they respected the medicines. So they had to keep the medicines clean [because of] the respect they had. And that is why they had to look for a clean area (*paykuhnoohng*) in order to preserve that medicine (interview, Aug. 17, 2009, translated by Paddy Peters).

Table 4: Elder teachings and conditions of use of Anishinaabe knowledge, *meecheem* and *mushkeekkeh*.

Phases of NTFP commercialization	Specific Anishinaabe teachings
All phases	Respect and value the land and its resources as gifts from the Creator.
	Use resources for identified needs and the users' well-being; if resources exceed the needs of the user, sharing is required
	Use resources based on the understanding that the Creator gifted resources with specific purposes. <i>Meecheem</i> and <i>mushkeekkeh</i> are meant to improve the health and well-being of the Anishinaabeg.
Harvest or production	Request guidance of knowledgeable individuals when harvesting <i>meecheem</i>
	<i>Mushkeekkeh</i> should be obtained through knowledgeable individuals
	When harvesting <i>mushkeekkeh</i> , use tobacco as a gift to the Frog, which ensures the efficacy of the <i>mushkeekkeh</i>
	Request access to a particular resource or resource area from a resource steward
	Harvest all resources non-wastefully
	Harvest all resources from clean areas
	Return remains of <i>mushkeekkeh</i> or <i>meecheem</i> to clean areas
Preparation, storage and administration	<i>Meecheem</i> is healthiest when consumed fresh, but some foods can be frozen or dried.
	<i>Mushkeekkeh</i> is often harvested and prepared only when requested, but can be dried and stored.
	There are multiple ways that <i>mushkeekkeh</i> can be administered depending on the type of <i>mushkeekkeh</i> and illness.
Gifting and selling	<i>Meecheem</i> and <i>mushkeekkeh</i> can be non-commercially gifted
	<i>Meecheem</i> can be sold within the community of Pikangikum at a price determined by the local market
	The <i>mushkeekkeh</i> provider doesn't set its monetary value
	When provided, <i>mushkeekkeh</i> should be compensated with goods or monetary payment
	The purchaser exchanges a valuable object or monetary payment for the <i>mushkeekkeh</i> based on their personal attribution of value to the <i>mushkeekkeh</i>
	The personal attribution of value to <i>mushkeekkeh</i> should be high and fair to show respect for Anishinaabe knowledge, knowledge specialist, and ensure the efficacy of the <i>mushkeekkeh</i>
Value-adding	Understanding the multiple uses of plants could lead to a complementary production strategy, higher forest valuation,

	less resource waste, and more job opportunities
	Because Anishinaabe methods of knowledge innovation are not currently practiced, knowledge collaboration and interfacing could lead to product and knowledge innovation

Geniusz (2009, p. 58) explains that these behaviours or Anishinaabe protocols “are ways in which those following izhitwaawin [Anishinaabe way of life] show their respect for the rest of Creation and help to maintain the reciprocal relationships between humans and other beings.” Because this principle encompasses all human, ecological and cosmological relations in an Anishinaabe worldview, it necessarily includes institutional relations and cross-cultural partnerships, which will be discussed in the following chapter.

Another principle Elders referred to many times is intentional or purposeful action. Any action in relation to other beings, which includes the land and things from the land, requires the proper intention and purpose. This refers to having the Creator’s knowledge of how to properly use the things of the land and understanding the implications and consequences of one’s actions. For example, Anishinaabe knowledge should guide the reasoning behind the action, such as harvesting *mushkeekkeh*. Has that knowledge come from the Creator, other-than-human beings, or knowledgeable individuals who have taught the harvester? The Late-Elder Norman Quill explains:

When you take [something] from the land or you harvest from the land, you just don’t take [for no reason]. *Cheeohtuhbeenuhg* means that there is a reason why you have to take. There is always a reason. So, for example, any tree, even if it’s a poplar [trembling aspen], you can only take the inner bark, which I showed you. The sap runs around June for two or three months. But also the *wuhnuhgahg* (the inner bark) is easy to take off during this time (interview, Aug. 17, 2009, translated by Paddy Peters).

But intentional action also refers to taking in response to a need in a non-wasteful manner. Why is *mushkeekkeh* needed? Because the purpose of *mushkeekkeh* is healing, it is harvested with the intention of improving the health of others. So, just as the Creator placed everything on the land with a purpose – whether this knowledge has been revealed or not to the Anishinaabeg – things from the land must be utilized with the correct knowledge, purpose, intent, and reason.

So, *mushkeekkeh* must be harvested with the knowledge of the plant, the particular part used, how to harvest the plant, how to administer the medicine, and the specific illness associated to a medicine. Harvesting isn't a haphazard or isolated action. Equally, if food is harvested it is taken for the purpose of feeding oneself and one's family. For example, killing moose, fishing pickerel or harvesting trees must be done in a non-wasteful manner. As Elder Mathew Strang points out, one shouldn't harvest more than can be utilized:

Meeteekoohg (trees) or *meeteehg* (a tree). If you destroy the trees by cutting them down, you are breaking Anishinaabe traditional laws (*Auhneesheenuhbay eenuhkoohneehkayweehn*). *Kuhmuhneesayuhng* refers to wood harvesting, that is, dry firewood. Mathew's father taught him that he will carry a heavy burden when he dies if he cuts more than he needed. So he only cuts what he needs. When cutting wood for a cabin construction you only cut down what you need to construct with (interview, Sep. 15, 2009, translated by Paddy Peters).

So resource use that is based on a defined need refers to acting with full understanding of the resource and the particular use it will serve. Purposeful resource use, on the other hand, refers to utilizing resources with their gifted purpose in mind; *meecheem* is meant to nourish and *mushkeekkeh* is meant to heal. So, respect for all of creation and purposeful use of those resources that have been gifted by the Creator are important teachings.

4.3.2 Harvesting of *meecheem* and *mushkeekkeh*

It was very particular where and how they got the medicine. *Kuhohteenuhmoowahch* is the term he used to refer to where they harvested or how they harvested the medicine (Late-Elder Norman Quill, interview, Oct. 4, 2009, translated by Paddy Peters).

To understand correct procedures for harvesting NTFPs, such as *mushkeekkeh* and *meecheem*, there are various protocols, or traditional processes. These teachings and harvesting protocols are important for customary use of *meecheem* and *mushkeekkeh*, but also for the purposes of commercial NTFP development. Harvesting protocols, however, are particularly important for *mushkeekkeh*, partly because of the more complex protocols governing their access, use and exchange. Furthermore, not following these protocols can lead to more serious consequences than misappropriate use of *meecheem*.

The first teaching Pikangikum Elders provide when they are asked about correctly harvesting and handling *mushkeekkeh* is that it is absolutely necessary to leave a token or gift in exchange for the harvested medicine. For example,

Kuhoohtuhbeenuhg is a form of taking or harvesting from the land. You always know that they are talking about medicine from the land [when they use this term]. So before they can take, the person gives a token. *Ohpuhkeeteenuhn* means they give the token or gift. This is the only way that the medicine that they harvest will work (Late-Elder Norman Quill, interview, Aug. 17, 2009, translated by Paddy Peters).

Tobacco (*auhsaymuh*) was often, but not exclusively, described as the primary type of gift or token provided in exchange for a particular plant or medicine. This is a widespread harvesting protocol among the Anishinaabeg (Densmore, [1928] 1974; Geniusz, 2009). Densmore ([1928] 1974, p. 325) writes that the custom “in gathering plants for medicinal use is to dig a little hole in the ground beside the plant and put tobacco in the hole, speaking meanwhile to the plant.”

In Pikangikum, Elders taught that tobacco is used specifically as a form of exchange, payment and token of respect to *Ohmuhkuhkee* (The Frog), who controls, looks after, and protects *mushkeekkeh* as well as Anishinaabe *auhtuhs oogahweenahn* (legends) (Elders Charlie Peters, Oliver Hill and Mathew Strang, interview, Feb. 23, 2009, translated by Paddy Peters). The Late-Elder Norman Quill provides a short description of *Ohmuhkuhkee*:

The Frog controls the frog plants, berries and all medicine. Before you could take the plants out of the ground you had to offer tobacco to the Frog. If you offered tobacco, the Frog was pleased. But if you didn't offer tobacco and you plucked the plants up then the Frog would be unhappy and he would come and sleep with you. It was that kind of frog called *ohbuhbeegoomuhkuhkee* (toad) (field trip, July 3, 2009, translated by Paddy Peters).

The Frog has been mentioned in relation to Anishinaabe botanical *gikendaasowin* (knowledge) of more southern Anishinaabeg (Geniusz, 2009, p. 69). Geniusz (2009, p. 61) briefly describes a specific Anishinaabe teaching in which an “offering is made to beings who care for that plant,” one of which is a toad. *Ohmuhkuhkee* is one of several animals who has taught (or teaches) the Anishinaabeg of certain plants, their names, and their uses. Elsewhere, the Frog has been described as one of several animals of

importance to plants, medicine (Kenny, 2000) and Mide practices (Dewdney, 1975, p. 147-9). In Pikangikum, however, *Ohmuhkuhkee* is the most important other-than-human person responsible for *mushkeekkeh*, although there are several others that appear in Pikangikum's contemporary *auhtuhsogahweenahn* in relation to *mushkeekkeh*, including *Wiskejak*⁶ and the "Lion" (*Mehsheebesheewh*) (Elder Oliver Hill, interview, Feb. 23, 2009, translated by Paddy Peters).

Elders consistently emphasize the importance of following this "traditional process" of respecting *Ohmuhkuhkee* when dealing with *mushkeekkeh* for customary use or new product development. Elder Gideon Peters explains the importance of following traditional processes when harvesting *mushkeekkeh*:

There is a process that they follow before they harvest the *weekaysh*, that particular root. Just because you see other people harvesting and you want to go harvest that [medicine] using your own just common sense, that *weekaysh* is not going to deliver the same effect on you as it would if someone that had knowledge that would go and harvest that *weekaysh*. So they had to be very particular he says. So the other thing that we should be aware of is you just can't [harvest a medicine] just because you heard that this plant is [used] for a certain remedy. And if someone goes and extracts that just because he heard [it's a medicine], that's not going to work because you are not within that process, within that knowledge of extracting that medicine or plant. It won't work he says. In our culture, there is also a protector of that medicine or plant. There's maybe a Frog there that protects that medicine because if you don't follow that process in harvesting that medicine that Frog will take offence of you. Maybe he will come after you, bite you or something because you are not respecting that keeper of that medicine. So that protector of that medicine, maybe the Frog, expects that you will honour him in offering tobacco (community meeting, Dec. 18, 2009, translated by Paddy Peters).

In this instance, Elder Gideon Peters points out several other important interrelated principles in addition to respecting the Frog with tobacco. More specifically, correct harvesting of medicines depends on having the right knowledge or going to knowledgeable individuals. In this sense, Pikangikum Elder guidance and Anishinaabe knowledge is central to harvesting and potential commercial activities.

This harvesting protocol is also important for understanding the interconnected worldview and cultural landscape of the Pikangikum people. Placing tobacco is an act of

⁶ The *Wiskejak* is an important cultural figure to the Pikangikum people who regularly appears in Anishinaabe *aadizokewinaan*.

exchange and maintaining relations. It is important when accessing and obtaining these things of value, either when purchasing a product from a fellow community member or harvesting medicine from the land, to pay and respect the individual who possesses that product or the Frog who protects the medicine. The Late-Elder Norman Quill explains:

With every known medicinal plant (*kuhtuhseehng mushkeekkeh*) you have to use that process and you always have to follow that process to honour the owner of the medicinal plant or keeper of the medicinal plant, *kuhteebaytuhg mushkeekkeh*, meaning the Frog (interview, Aug. 17, 2009, translated by Paddy Peters).

Elder George B. Strang explains this same teaching in terms of payment: “they paid that Frog with tobacco” (interview, Oct. 6, 2009, translated by Gerald Peters). This highlights the broader relational importance of exchanging things of value for *mushkeekkeh*.

Harvesting with tobacco (*auhsaymuh*) reflects a set of relations that involve a form of economic exchange. By paying and respecting the Frog, correct relations are maintained and it is ensured that the Frog will continue to protect the medicine for all of creation, including the Anishinaabeg.

Harvesting *mushkeekkeh* with tobacco is also important to ensure that the medicine works. In this respect, the Late-Elder Norman Quill explains that

From his knowledge of *mushkeekkeh* and the medicinal plants, before you harvest them you have to offer tobacco (*auhsaymuh*). This is the only way that the medicine will benefit you or work (*ahsheeyuhwuhng mushkeekkeh*). That is the term that he uses, *ahsheeyuhwuhng mushkeekkeh*. *Auhsaymuh* is what you have to give to the *Ohmuhkuhkee*, the Frog (interview, Aug. 17, 2009, translated by Paddy Peters).

So, if *mushkeekkeh* is not fully respected, harvested with tobacco, or paid for, it will not function from an Anishinaabe perspective. Harvesting *mushkeekkeh* without tobacco results in ineffective and powerless *mushkeekkeh*. On the other hand, following expert guidance and correct harvesting protocols prevents serious consequences to the individuals involved in the harvesting activity. Some Elders expressed fear of not following this teaching because of the potential repercussions, such as misfortune, illness or even death. For this reason, Pikangikum Elders are cautious, careful, and intentional to follow this harvesting teaching.

When harvesting *meecheem* from the land, there are also several Anishinaabe protocols that are important to follow, including take only what you need, harvest for the

purpose of nourishment and healing, and share *meecheem* when you have more than you need (also see 4.3.1). In fact, it is the duty and responsibility of the Pikangikum people as stewards of the land to respectfully harvest foods so that good relations are maintained with these beings (Elder Mathew Strang, planning meeting, July 23, 2009). Elder Mathew Strang also explained that because the Creator gifted these resources and stewardship duty to the Anishinaabeg with the intention that they would maintain respectful use, these beings will choose not to return or the Creator will take them away if the people of Pikangikum cease to use the resources or if that use continues in an inappropriate way (planning meeting, July 23, 2009).

Unlike the harvest of *mushkeekkeh*, however, it is not necessary to harvest *meecheem* with *aseema*, or a tobacco offering:

There are other plants, *kuhmeecheekuhtaykeehn*, or the edible plants. You don't have to offer anything, or offer tobacco to the Frog, for whatever grows on the ground or on the trees that is edible. *Meehcheeohtuhbeeneekahtaywuhn*, in other words, you can just pick these yourselves. You can harvest them yourself. You don't need to offer anything (Late-Elder Norman Quill, interview, Aug. 17, 2009, translated by Paddy Peters).

Elder Mathew Strang also gives a clear sense of the common nature of harvesting edible plants from the land:

Kuhmuhweehn maymwaych (not really). You don't have to follow any process. *Peekoohyuhweehyuh* (anyone) can pick the plants, even the children (*auhbeenooheesh*). You can freely pick or harvest these plants that are not medicinal. You don't have to follow the traditional ritual processes that they have been talking about. Not in this case (interview, Aug. 25, 2009, translated by Paddy Peters).

But picking foods does depend on some basic Anishinaabe knowledge of the edible plants and Elders teachings because there are dangerous and poisonous plants. For example, Mathew Strang explains that

You have to teach the children. Like in our case we were taught since we were small children. *Puhtaynuhteehn kuhmuhnuhmeehcheekuhtayhg* or there are many plants that you cannot touch or eat. There might be fifty types of plants or more. *Kuhkuhcheesh kuhmeehcheech* or if you just [harvest these] out of ignorance without any knowledge, even if you are told that you are not to touch those plants or not to eat those berries, you will get sick. For sure you will get sick when you talk about the *manitoo* wild carrot. That's a deadly plant. You can't eat that (interview, Aug. 25, 2009, translated by Paddy Peters).

When harvesting *meecheem*, the quantity of resources an individual can harvest is flexible, not absolute, and have no quotas from an Anishinaabe perspective. However, Pikangikum Elders teach that you shouldn't harvest wastefully and, as previously mentioned, with particular and purposeful needs in mind.

Kuhshuhkaywuhteeseeweehn. Kuhyuhskooneeseech. Kuhtaypuhkayneemooseech. These all mean that you are greedy, overly greedy, or you never feel content, and you always need to have more and more, or you just think about yourself and not about others. So the teaching is to take only enough (*meeneek*) or what you can eat and use. Or the other term, *ooweemeenuhn*, means if you pick more than you can use for yourself, then you want to give to others. It is good to share. *Cheemecheeneesheewuhnuhcheetooogh* means to waste or if you pick too much. This is not good. (Elder Mathew Strang, interview, Sep. 15, 2009, translated by Paddy Peters).

In this sense, food and medicinal resources are not open access resources since the Pikangikum people use a qualitatively different type of resource use institution than the Canadian government's quota or licensing system.

Elders often talk about how certain foods and medicines are harvested according to the seasons, which ensures particular product qualities. For example, the moose is most intensely hunted in the late summer and early fall. Elder Oliver Hill pointed out that the moose is ready when foxtail barley turns golden brown. The beaver is also at its best for eating in the late fall after having fattened up for the winter. Many specific types of *mushkeekkeh* are also harvested in the fall season when they have matured, especially root medicines such as *weekaysh*. Pikangikum Elders teach that it is in the fall when many plants are full of medicine, ready for harvest, and can be stored throughout the year. Elder Mathew Strang explains that

Kuhweehn mooshuhg means that it will not always be available, which makes reference to the time of the season, mainly from May to July. During these three months the land is just coming back to life and plants or vegetation is just growing. So, during these three months, *kuhweehn buhbuhmaycheekuhtayseenohn*, meaning that our people don't touch, go and gather, or go and seek during these three months because they know that it is a time of growing. When you talk about *mushkeekkeh*, it has two ways: you cannot touch it or you can touch it. You cannot touch *mushkeekkeh* during these three months, May to July, because that is the time that it grows. So the only time you can touch the *mushkeekkeh* is after it has grown up and matured from August to April. During those three months, *kuhweehn cheehneesheesheng*. In other words, it is not good yet. The *mushkeekkeh* is not

good yet during those three months because it's in a growing stage. The only time that it is good is when it has grown up or when it has matured (interview, Feb. 23, 2009, translated by Paddy Peters).

So, *mushkeekkeh* might be harvested in the fall or winter seasons. The basic idea, however, is that the time of harvest of different types of *mushkeekkeh* varies with the season, which is reflected in the Anishinaabe concept *auhneenuhpeeh kayoohneesheesheehng*. The Late-Elder Norman Quill explains this term as “when they knew the season and the time when to harvest the plants” (interview, Aug. 17, 2009, translated by Paddy Peters). Because different medicines ripen at distinct times and have different possible harvest seasons, it is necessary to comply with Anishinaabe institutions and knowledge experts.

It is of utmost important that the harvest and use of medicinal and edible plants occur with knowledge of clean (*paykuhnoohng*) and unclean or defiled places (*ohkeeweeneetoonahwuh*). Harvesting resources from clean places ensures the purity and health of the medicinals and edibles. Elders Mathew Strang and Charlie Peters collaboratively mention the importance of harvesting *meecheem* from clean areas:

Mathew responds ‘Yes, it is important,’ and Charlie says ‘*wuhweesh*,’ stressing the important of getting *meecheem* from a clean area (*paykuhnoohng*). Mathew uses an example of *meenahn* (blueberries). You pick blueberries from *kuhsheepaykuhg* (clean area). You don’t pick them where they have been disturbed or [the land] has been defiled (interview, Feb. 23, 2009, translated by Paddy Peters).

In relation to *mushkeekkeh*, Elder Charlie Peters explains the idea of unclean or defiled areas:

Back then *mushkeekkeh* was from the land and it helped heal, but there came a time when the Whiteman came to this land. The Whiteman brought a lot of things to this land (paper, cans, and other materials) that began to be scattered on the land. And in that way *ohkeeweeneetoonahwuh* or the land became defiled. This *mushkeekkeh* on the land that our people used had to be clean in the way the Creator had created the land. That is the only way that the *mushkeekkeh* would have its purpose or power. So when the land became defiled because of these foreign materials that were brought upon the land, then the *mushkeekkeh* would not be the same (*kuhweehn tuhyuhshyuhwuhtuhseenoohn*). It would lose its power (interview, Feb. 23, 2009, translated by Paddy Peters).

So, harvesting *mushkeekkeh* or *meecheem* from a clean, undefiled area is necessary to ensure its purity or effectiveness. These unclean areas, however, are relatively uncommon

and isolated in the Whitefeather Forest. In fact, there are only a few locations that are heavily contaminated by garbage or defiled by conventional forestry clear cutting.

In this sense, harvesting from clean areas is particularly important not only for customary use, but also for commercial production and sale. In the opinion of Elder Mathew Strang, if an individual was to harvest *meecheem* or *mushkeekkeh* from an unclean place for commercial purposes, “you would be selling sickness to the people” (Elder Mathew Strang, community planning meeting, July 28, 2009). If certain areas are polluted the Elders will not want to sell products from these areas because they would be selling contaminated products. In this instance, product quality, correct harvesting procedures, and awareness of the potential consequences of one’s actions, such as inflicting illness instead of healing, are intricately linked from an Anishinaabe perspective.

Once again, recognizing the difference between clean and unclean place, their boundaries and the dynamics of the system requires Anishinaabe knowledge and expert advice.

Kuhsheepaykuhg means a clean area. *Keekuhyuhtuhkwuhn* means that there is a clear understanding, knowledge, or that you recognize. Or that *keekaycheekuhtay ahkoohpaykuhg* referring to this kind of knowledge or that you know what a clean area is. When you talk about that island, it is still a clean area. When you talk about the garbage along the shoreline, the water flows from the forest and usually drains into the lake, or the steams. But that garbage does not affect the forest area in that island. So that is still a clean area. (Elder Mathew Strang, interview, Aug. 25, 2009, translated by Paddy Peters).

The concept of defiled areas in the Whitefeather Forest is also related to the harvesting of forest products from clean areas for household, community, or commercial use. Defiled areas refer to large forestry cut blocks in the southern portion of the Whitefeather Forest along the Nungessor Road. Elsewhere, Pikangikum Elders have taught that these areas, including the *mushkeekkeh* and *meecheem*, were defiled by conventional forestry practices such as clear cutting, soil scrapping, creation of forest plantations, and the use of herbicides (Miller, 2010). In this research, Elder George B. Strang also described conventional forestry as destructive in nature, but added how Pikangikum might harvest *mushkeekkeh* and timber in a complementary nature for commercial purposes with Anishinaabe knowledge and Elder guidance:

When I think about the land that we own, there's a lot of medicine in it. The forest is full of medicine. It is also full of money. That is why the Whiteman wants it. When the Whiteman does his forestry logging, he is destroying all the medicine that grows there. They destroy a lot of things when they cut down the trees. There would be a lot of medicine that would come from those trees that they cut down. Look at how much medicine they have destroyed when they cut down trees at these clear cut areas. That's what I think about. That's why we are trying to protect our land, so that this land doesn't get destroyed too early. Before we do start cutting down the trees in our land, we will get medicine from those trees first. We will get medicine from this land that we own. That's what I think (interview, Oct. 6, 2009, translated by Marcella Kejick).

The Late-Elder Norman Quill also mentioned how Pikangikum needs to practice a new type of forestry in which everything on the land is accounted for or all part of the trees, including branches and bark (personal com., May 29th, 2009, translated by Paddy Peters). When traditional teachings are not followed in large-scale natural resource harvesting, the ecological integrity as well as the *mushkeekkeh* and *meecheem* are compromised. So, for Elders such as George B. Strang and Solomon Turtle, it is not the type or scale of operations that directly leads to defiling of the land, but the lack of guidance from Pikangikum Elders and Anishinaabe knowledge experts in relation to harvesting activities.

From an Anishinaabe perspective, there are serious consequences for not following harvesting protocols at the individual level as was previously mentioned in the case of *mushkeekkeh*. On the other hand, there are positive consequences if you do follow the teachings. According to Elder Mathew Strang,

Tuhmeenoysay if you follow the teachings. In other words you will prosper. *Puhpuhmeetuhseehg* if you don't listen to those teachings. *Kuhweehn tuhmeenoosaysee* means that that person will not prosper [if they don't follow the teachings] (interview, Sep. 15, 2009, translated by Paddy Peters).

Although this teaching refers to individual actions, it equally applies to the context of community planning and development with even greater implications in terms of community prosperity and the success of the Whitefeather Forest Initiative and partnership relations. Elder Solomon Turtle pointed out that the Creator looks favourably upon the planning process and Whitefeather Forest Initiative (planning meeting, Oct. 26, 2009). This is the result of careful thought and action with a great deal of respect for Pikangikum's teachings and Elders' guidance.

4.3.3 Processing, storage and administration of meecheem and mushkeekkeh

After they harvested and prepared them they would keep the medicines in containers, whatever container they had – maybe a can or an old jam jar. They would keep those, so they would be ready to give [the medicine] when people would come, when these medicines would be required. They had them on hand. *Kuhyuhtoomushkwayhg* means a person who is asking for medicine. And they needed to prepare these medicines before hand so they would have them on hand when people asked for medicine. *Kuhkeeshuhcheeoosheetoowuhch* means preparing the medicine before hand, so they would have it in stock (Late-Elder Norman Quill, interview, Aug. 17, 2009, translated by Paddy Peters).

Anishinaabe *meecheem*, such as moose meat, fish, and berries, are minimally processed and consumed within the community soon after their harvest. These foods might be cooked (*keesheesaykway*), fried or smoked. Moose meat (*moosohweeyuhsh*) is cooked in various ways, such as boiling, frying, stewing, or smoking in a traditional meat smoker. This dried moose meat (*kuhskeewuhg*) is highly valued by the Pikangikum people. The two most commonly consumed fish are the Pickerel (*oohkuhseh*) and the Whitefish (*auhteekuhmayg*). Pickerel is most often filleted, battered and fried. Whitefish, however, is well known and valued as a smoked fish (*nuhmaytaykwuhg*). Other fish species, such as the Burbot (*meesuheh*), Jackfish (*kecheekeenohshayseh*), Lake Sturgeon (*nuhmay*), Sucker (*nuhmaybehn*), and Lake Trout (*nuhmaykoos*), and Tullibee (*oodoonepe*) are consumed much less. The Sucker, however, is often smoked. Meat and fish foods are not often stored, although more people are storing and/or freezing meats and fish with the introduction of refrigerators and freezers. The storage of traditional food, however, tends to contradict norms of reciprocity since it appears to lead to less sharing of foods with extended family members, friends, and community members. Berries might have been stored in the past, but currently they are eaten fresh partly because they are not collected in sufficient quantities. Various other edible plants are eaten fresh and not stored.

The people of Pikangikum prepared medicines (*odoosheetoohn*) in a variety of ways and these methods reflect the different illnesses and means of administering the medicine. Although Elders didn't outline specific preparation categories of medicine or food, there are some basic groupings of traditional methods. Many medicines or herbs are often boiled (*keeshuhkuhmeeseekay*) into a tea or medicine water (*mushkeekkeh*

wuhbooh). Other medicines are prepared as a poultice and topically applied with bandages (*kuhyuhgoobeeshoog*). Some medicines, such as *weekaysh*, have many different methods of administration. For example, it can be simply chewed for stomachaches, sore throats, and colds. On the other hand, it might be dried, ground and snorted for headaches or pain. Alternatively, *weekaysh* can be placed in hot water so that the medicinal steam may be inhaled. Elder Mathew Strang explains drinking and topically applying *mushkeekkeh*:

These plants can be used and applied in various ways. You can drink it (*meeneekuhtay*) in liquid form after you prepare it by boiling (*ohtay*). Or the other way is *kuhyuhgoobeeshoog* (band-aid) if you have a scab or rash on your body (interview, July 30, 2009, translated by Paddy Peters).

All these methods, of course, reflect the particular illness and ailing body part.

The people of Pikangikum often rely/relied on fresh medicinals that are/were harvested and processed only upon the request of an individual seeking *mushkeekkeh* and healing (*kuhyuhtoohmushkwayhg*). In these cases, *mushkeekkeh* is/was harvested fresh and based on need. Moreover, *mushkeekkeh* isn't/wasn't harvested and stored in large quantities. Late-Elder Norman Quill talks about the traditional process that has been followed in the past:

The other thing is the gathering process (*cheemuhweetoohnuhg*). The people didn't do that just to have large quantities of medicines. They didn't do that. They did not keep a lot of medicine. When it was needed that is when they got it. So it was for present use only. *Gwuhyuhnch* means to have in their possession. *Puhyuhsh* means that they went and harvested for the present. *Kuhweehn ohkeegwuhyuhncheeyuhyuhseewuh* means if you went to go ask for medicine from him, Norman might not have that presently. He would have to go, take your order and harvest it. That is what they did (interview, Oct. 4, 2009, translated by Paddy Peters).

But some medicines are/were indeed dried and stored depending on the experience of the individual, the type of medicine, and local demand for a certain *mushkeekkeh*. This is particularly the case for medicine men and women who “carry medicine” (*obeemeeweetoohn*) because of the higher demand for their medicines throughout the year. For example, *mushkeekkeh* is/was made into “bundles” of dried herbs or *mushkeekkeh wuhbooh* (medicine water):

But they went out to fill the order when someone wanted medicine. And usually they put the medicine that they harvested into small bundles. Sometimes if they had a container they would put that into a container. This was the dry medicine harvested from the land. But there was another type of medicine that they would boil and it would be liquid (*mushkeekkeh wuhbooh*) (Late-Elder Norman Quill, interview, Oct. 4, 2009, translated by Paddy Peters).

So, the people of Pikangikum possess(ed) traditional ways and methods of preparing foods and medicines as well as administering specific medicines for particular illnesses.

After the preparation and/or use of *mushkeekkeh* or *meecheem*, it is very important to return unused materials to a clean area, which reflects the respectful treatment of resources.

Mushkeekkeh has to be put back into the land and into a clean area. It has to be carefully handled (*cheemuhnuhcheecheekuhtahg*) because it is something that will help you. So you put it in *paykuhnoohng* (clean area of the land). You don't put it in the garbage disposal. You put it back in the land (Elder Mathew Strang, interview, Feb. 23, 2009, translated by Paddy Peters).

Food remains should equally be returned to a clean place out of respect. This is the case for the bones or remains of animals such as the moose, beaver or ducks that must be returned to their habitat rather than an unclean location. For example, beaver bones must go back to the water and duck bones in the tree.

As for the development of community-based NTFPs, Elders are interested in NTFP planning and research that draws on these customary practices and ideas of processing. Pikangikum Elders were interested in various types of products from less processed to biochemical extracts in pill form. However, Pikangikum Elders showed a strong preference for “traditional” medicine and foods, which includes products they recognized as depending on Anishinaabe methods of preparation and Anishinaabe knowledge. For example, Elders would like to see products that approximate herb bundles and herbal medicinal tea infusions. Elder Charlie Peters explains his preference for traditional products:

To market this medicine, it would have to be prepared traditionally by our people, the way they prepared the medicine. The Whiteman has his own way of producing medicine. In other words they would have to follow the traditional way of making medicine (interview, Aug. 12, 2009, translated by Paddy Peters).

Elders George B. Strang and Solomon Turtle also identified their preference for

traditional products for the reason that these are products that they understand. For example, they were particularly interested in liquid medicinals or *mushkeekkeh wuhbooh*, such as medicinal teas or essential oils. Elders indicated that they understand products with “lower” levels of transformation and processing which would signify a greater ability for Elders to collaborate and offer traditional knowledge in NTFP planning and partnerships. As the medicinal, nutraceutical, or natural health care product is more greatly processed, Elders are less able to understand the product, how it is transformed, and how it works.

Despite showing a preference for products of “lower” levels of processing, Elders are not opposed to novel products, such as pharmaceuticals and nutraceuticals, that involve biochemical isolation, extraction and transformation, such as pills in bottles. It was clear that the most important issue is one of cultural protocol, rather than product. Likely the most important principle is that Pikangikum Elders are continually consulted for their advice and guidance to ensure the various cultural protocols are followed.

Pikangikum Elders’ preference for traditional products, however, does not preclude scientific research. In fact, Elders showed a high degree of interest in collaborative product research and development that brings scientific and traditional knowledge together. As well, Elders were not against “higher” levels of product transformation, such as the nutraceutical Pycnogenol, a highly researched extract from the edible inner bark of *Pinus sp.*. The Late-Elder Norman Quill spoke specifically about this product:

If that medicine, that raw medicine, helps save lives then he says he’s okay with it being processed into this (interview, Sept. 24, 2009, translated by Gerald Peters).

In this case, the particular form or level of processing a plant isn’t as important as the product’s purpose. In another instance, Elder Oliver Hill showed a strong interest in the birch leaf juice as a toxin cleansing health care product given the community’s problems with alcoholism and gas sniffing. So, it is first and foremost important to plan for products that serve the purpose of providing health benefits to the community, following which Elders prefer to focus on products with lower levels of processing and research.

4.3.4 'Sale' of *meecheem* and *mushkeekkeh*

When questioned about new, commercial *meecheem* and *mushkeekkeh*, most Elders stated that it would be a good idea to sell NTFPs such as natural health care products, nutraceuticals and functional foods. Perhaps Elder Charlie Peters most succinctly articulates this interest:

It would be good (*tuhoohneesheesheen*) to sell the medicine plants. I also think that our people, the Anishinaabeg, would continue to use the medicine since this was their blessing from the Creator to have knowledge of the medicine (interview, Aug. 12, 2009, translated by Paddy Peters).

The Late-Elder Norman Quill also acknowledged the value in exploring the idea of developing and selling of medicines and foods:

Tuhmeenoy say means that it would be valuable. It would be worth it to sell *mushkeekkeh*, like the *weekaysh* and *peesheewuhtehg*. They are very valued because they are used as remedies for a sore throat or a baby or a small child that has a pain in the chest areas. *Tuhmeenoy say* is an acknowledgement. It acknowledges the fact that it would be valuable to sell that (interview, Aug. 12, 2009, translated by Paddy Peters).

At the outset, Elder Sam Quill, however, expressed a larger degree of reluctance with respect to the research, development and production of commercial NTFPs:

Some of those Elders who were part of the planning process have departed or deceased, but the teachings and knowledge that they have left behind should be respected. But today, I just don't know how deep or meaningful our knowledge is because everything that we speak about is what we learned from them, the Elders. The knowledge they left behind should be used to further our process. The example of my parents had their knowledge too, but it was limited, because they were converted to Christianity. So I say with respect to include all of these in our process (interview, Aug. 19, 2009, translated by Paddy Peters).

However, Elder Sam Quill continued to say that it was most important that certain conditions frame the production and sale of community-based NTFPs. So, even though the Creator is the true source or "owner" of Anishinaabe knowledge and associated products, Anishinaabe knowledge and products can be appropriately exchanged through non-commercial gifting, trade, and monetary transactions. However, Anishinaabe institutions and protocols frame these various types of current transactions of knowledge, *meecheem* and *mushkeekkeh*. In other words, accessing, sharing, exchanging and using Anishinaabe knowledge is related to Anishinaabe economics, teachings, and institutions.

This Anishinaabe system and meaning of exchange and valuation is reflected in the Anishinaabe language. When used in the context of *mushkeekkeh*, the term *auhtuhway* (a person buys) refers to a transaction of importance in a way that more closely approaches the concepts of barter, trade or the exchange of valuables, especially in the context of *mushkeekkeh*. *Auhtuhwuhgaah*, on the other hand, refers to when a person gives a notice or advertises by word of mouth that he or she has something for sale. However, these words might equally be used in the context of commercial transactions with business products and commodities. In other cases, the act of selling is emphasized as an exchange activity involving *shooneeyuh* (money).

Translator and land-use coordinator Paddy Peters explains two different terms that would be used in *auhneesheenuhbaymooweehn* when speaking specifically about purchasing *mushkeekkeh*:

Eekeeteepuhyuhmuhwuh means that I paid that person. *Eekeemeenuh* means that I gave a present or a gift. A gift would be in currency or something of value. Those two terms would be used. I would give you this pen and I would say *eekeemeenuh*. I could also use this pen in the same way and use it to pay you or *eekeeteepuhyuhmuhwuh* (interview, Oct. 27, 2009).

In this instance, the two ideas of traditional economic exchange and gifting take on a surprising conceptual similarity.

The acts of gifting, exchanging things of value, or paying for an object with currency, however, occur within very distinct contexts. Gifting is characterized by closer, reciprocal relationships (family, friends, community Elders) whereas exchanging things of value or monetary payment occurs with greater distances in social relations. Thus, Elders and the land-use coordinator pointed out that the production of new commercial NTFPs, if moved forward, would occur for the first time at the level of the community through Pikangikum's community-based enterprise for regional and international markets. The land-use coordinator spoke about how the context of these transactions (*auhtuhway*) would change:

This will change once this becomes a business. That is the only way that it will change. This [community-based NTFPs] is still governed by Anishinaabe customary teachings. Like how you value these things, I'll give you something in exchange. This is how much I value your medicine. That will all change when it crosses this line and then it becomes a business commodity (Paddy Peters, interview, Oct. 27, 2009).

Although this potential change in transaction contexts is recognized, Pikangikum Elders emphasize that Anishinaabe processes and teachings are an important foundation for gifting, trading and sale of NTFPs within the community and to proceed into this new terrain of commercial, community-based NTFPs (see Table 4), which I will now describe with respect to *meecheem* and then *mushkeekkeh*.

In the case of selling Anishinaabe *meecheem* within the community, it is appropriate for a vendor to set the monetary value of their food product. In Pikangikum, moose meat is sold as moose burgers and stew. Bannock and smoked whitefish are also sold. Selling these products involves making a profit, but also ensuring a relationship with the land and maintaining Anishinaabe knowledge. Moreover, it is important to sell a high quality product. This means selling a nourishing and healthy food product that comes from the land. Highly processed foods available in stores are perceived as lacking health and nourishing benefits.

In Pikangikum, *mushkeekkeh* is provided to someone in need of healing in exchange for money or valuable objects *without* the associated knowledge of the plant's identity, habitat, time or harvest, means of preparation, and quantity of medicine. The knowledge related to one specific use of a plant(s), however, can also be purchased or traded for. This might occur within the context of an apprenticeship, which inherently presumes the exchange of labour for knowledge, or transactions in which one pays a large sum of money or object of value for such knowledge to use a medicinal plant. Similarly, Densmore ([1928] 1974, p. 323) describes how learning and knowledge were acquired slowly over time when an individual "felt inclined to go to the old men and buy the knowledge."

Elders consistently provided specific cultural teachings for appropriate sale or commercialization of products without its associated knowledge, which are rooted in customary practices, knowledge, and protocols. First and foremost, it is important in the case of *mushkeekkeh* that the individual seeking the medicine or the purchaser (*kuhyuhtoomushkwayhg*) determine the value of the medicine according to personal standards and provide a payment of that value. The seller mustn't set a monetary or exchange value on a medicine. By setting the price, the seller shows a greater concern

with gaining a high profit than providing a health service, maintaining Anishinaabe knowledge, and maintaining good relations. For example, Elder Mathew Strang explains:

There are those people who just gather it, take the medicine from the land for their own selves. They gather that medicine just for the sake of selling it. They also name the price. And there are some people who gather the lynx root. They ask a high price. Those who gather this root are the ones that establish the price that they want to sell it at (interview, July 30, 2009, translated by Paddy Peters).

Rather than the seller placing a high value on *mushkeekkeh* products, it is the buyer that should place a high value on *mushkeekkeh*, which ensures respect for the *mushkeekkeh*, Anishinaabe knowledge and knowledge specialist, the Frog, the process of healing and Creator. The Late-Elder Norman Quill explains Pikangikum's local protocols for exchanging things of value and providing fair and personal value to these products:

They had a process that they had followed. The person who wanted the medicine would pay the person who had the medicine. That person that possessed that medicine had the knowledge of that medicine and how to prescribe it. And the person who wanted the medicine would give something of value in return. The Whiteman has their knowledge of medicine too, but they have their own process of prescribing (interview, Oct. 4, 2009, translated by Paddy Peters).

Nevertheless, it is very important that the individual seeking healing pays a good, high price for the medicine. From an Anishinaabe perspective, the most important thing is that *mushkeekkeh* is respected, given value, and expresses its purpose of healing through the process of harvesting, selling, purchasing and consuming Anishinaabe *mushkeekkeh*.

Money doesn't inherently alienate *mushkeekkeh* from its Anishinaabe value. However, acquiring profit through the sale of *mushkeekkeh* should not motivate providers or sellers of *mushkeekkeh*. To the contrary, other motivations should guide the sale of *mushkeekkeh* such as providing a healing product, supporting customary activities and rights, knowledge transmission, and respectfully maintaining the use of medicines. It is true, however, that this payment occurred in non-monetary ways in the past, which reflects a barter economic system. The Late-Elder Norman Quill explained this traditional process:

That medicine man who healed that person would often get paid. That person who got healed from that medicine man would give some of his belongings to that medicine man who healed him or her. That is how it worked. Even if they asked for that medicine they would trade or give them something for that medicine. That is how it worked back then. They didn't have any money. That is how it has always

been in the past for people who have Anishinaabe medicine. You give them something in exchange (interview, Sep. 24, 2009, translated by Gerald Peters).

However, individuals can gift *weekaysh*, a common medicine, to family members or friends without expecting something in exchange such as cash or a barter object. In this sense, exchanging or gifting *weekaysh* is similar to food distribution in that it can be gifted to relatives, but payment is required at greater social distances. Elder Mathew Strang explains the difference between gifting and selling *weekaysh* at different social distances:

It is good to use this *weekaysh* as merchandise product because in our culture that is the only way that this certain plant root is going to work, if you sell it or buy it. And only for the purpose of your well-being. But we were told that if you sell it for too little then you will be healed for what you paid for. You will only be healed a little bit. The other thing we were told is in your own immediate family (your children or your grandchildren) you can just give it to them. There is no need to sell it to them. So I see that it is good that the people are selling this product (interview, July 30, 2009, translated by Paddy Peters).

Gifting *weekaysh* at shorter social distances without payment, however, might be an exception to the rule that payment is always required for *mushkeekkeh*. At any rate, it is very important to pay a high and fair value for *mushkeekkeh*, especially outside of household or family relations, within the community or commercially.

The exchange of things of value, whether objects or cash currency, for *mushkeekkeh* is of utmost importance since it is precisely by giving value to the *mushkeekkeh* that it works or it is efficacious. By giving value to *mushkeekkeh* and paying for them in some form, it maintains its power or is guaranteed to work. Elder Mathew Strang explains the link between the traditional process of paying for or valuing a medicine and its healing efficacy:

Weehmeenoohyuhyuhch means a person must pay a price to get well or to be healed. There is a cost or a token. A person needs to pay with something of value. It was also up to you, the person seeking healing, as to how much faith you had in that medicine. If you have a lot of faith by what you paid, then the medicine would achieve its purpose. There was a price (interview, Sep. 15, 2009, translated by Paddy Peters).

If medicines are not paid for, they are not efficacious as is the case with non-Anishinaabe medicines, which are not valued in the same way as Anishinaabe *mushkeekkeh* and

provided for free at the Nursing Station. When asked if community-based NTFPs should be supplied at the Nursing Station to community members, Elder Solomon Turtle pointed out that

medicine people never used to just give out the medicine. They would get something in return from that person who was sick. A person who was sick would give the medicine man his or her belongings. It may be a gun or something (interview, Oct. 6, 2009, translated by Gerald Peters).

Elder George B. Strang also referred to this issue in the same interview:

Look at the white [non-Anishinaabe] medicine. Some people take that Whiteman medicine for five years before they get better. And he says that he has been taking diabetic medication for 20 years now. It hasn't done anything for him (interview, Oct. 6, 2009, translated by Gerald Peters).

So the payment for or the valuation of *mushkeekkeh* is very important in terms of ensuring an efficacious product.

Although producing medicinals or foods for a market system may not permit traditional processes of value exchange given its different methods of valuation, Elders highlight the importance of receiving a fair, high economic value for these products, especially Anishinaabe *mushkeekkeh*. For example, when questioned about one traditional medicine sold in an urban center for the price of approximately \$0.50 per root stick, Elder Mathew Strang responded as follows:

That isn't much. If I have a sore throat, I would pay maybe \$10 for a single root. The reason why I pay that much is I want my throat to be healed, or I want to be healed. *Ahbeetaytuhmuhn* means that you have faith in that product or medicine to have an effect on you. That is your healing. The other reason why you pay so much is because you also have to have the respect for that certain medicinal plant. It is medicine. Like you say that root cost you 50 cents. I don't think that would work (interview, July 30, 2009, translated by Paddy Peters).

So, giving value to Anishinaabe *mushkeekkeh* is important at the moment of production as well as the purchase or exchange. In a related manner, Anishinaabe protocols strongly suggest that the knowledgeable or gifted individual give a token or "payment" to *Ohmuhkuhkee* at the moment of harvest whether for personal use or preparation for a third party; the individual seeking or purchasing the *mushkeekkeh* from a knowledgeable individual must also give a token, valuable object or monetary payment to that specialist in order to further assign a value to the *mushkeekkeh* which ensures the efficacy of the

mushkeekkeh and shows respect to *Ohmuhkuhkee*, Anishinaabe knowledge, and the knowledge specialist.

It was also apparent that paying a high price for medicinal products is important because of the multiple uses of certain plants. Elders suggested that recognizing the various uses of a plant such as *weekaysh*, which has been described as possibly having 20 different uses, leads to increased local valuation and explains why *mushkeekkeh* shouldn't be sold at lower economic values (Elder Mathew Strang, meeting, Dec. 18, 2009). So, paying a high value for *mushkeekkeh* also reflects a broader understanding of the plant and product only possible with Anishinaabe knowledge and the advice of experts.

4.4 Chapter Summary

In this chapter, I have presented my research results in relation to Objective 1, which was to identify the culturally appropriate means of harvesting, processing, and commercializing NTFPs originating from Pikangikum's knowledge and use of plants. Through conversations with Pikangikum Elders, I came to more fully understand the cultural meaning of some of these products, such as *mushkeekkeh* and *meecheem*, and their cultural context including Anishinaabe knowledge, knowledge specialists, and community institutions. In fact, this chapter demonstrates the complex and interrelated nature of the conditions of use; Anishinaabe knowledge characteristics; and specific Anishinaabe teachings and protocols that should inform product planning, research and development. In the next chapter, I build on the notion of Anishinaabe institutions, values, and teachings to include the perspectives of Pikangikum Elders and leaders regarding prospective NTFP partnerships and benefit sharing.

Chapter 5: Anishinaabe perspectives on partnerships and benefit sharing

In this chapter, I present my research findings concerning my research Objective 2, which was to explore the perspective of Pikangikum Elders and leaders on appropriate partnerships and benefit sharing arrangements for potential NTFP planning, development and commercialization. As discussed in the previous chapter, Pikangikum Elders showed that the development of NTFPs is an issue of process, rather than specific products, that depends on Anishinaabe Elders, values, knowledge and teachings. In addition, Pikangikum Elders indicated an interest in NTFP development that combines scientific and indigenous knowledge, which implies developing partnerships and benefit sharing arrangements.

Accordingly, in this chapter, I broaden the idea of culturally appropriate NTFP development to include relational and institutional principles that would encourage, according to Pikangikum Elders and leaders, successful partnerships with government agencies, corporations and universities with the goal of product development. It should be understood, however, that these principles do not necessarily signify that negotiations would be successful if each principle is followed. This is because Elders may still come to disagree with product development at a later stage and identify fundamental differences and contradictions between research or corporate processes and Anishinaabe principles or protocols. In the first section, I present important partnership principles identified by Pikangikum Elders and leaders for potential NTFP development with partners. In the second section, I present the nature, types, and extent of benefits that Pikangikum Elders would expect to arise through NTFP development and commercialization.

5.1 Partnerships and non-timber forest products

It has already been initiated, that it is the plan of the Elders, that we need help and support from the Whiteman in developing these products (Elder Alec Suggashie, interview, July 30, 2009, translated by Paddy Peters).

There are a variety of principles that Elders and leaders envision guiding partnerships regarding NTFP planning, research and commercialization. These principles or rules

emerged out of discussions with Elders and leaders who are the traditional resource managers of the Whitefeather Forest. In the following subsections, I discuss nine partnership principles that are summarized in Table 5.

5.1.1 Asking permission

If outsiders are interested in partnering with Pikangikum to research, plan, and potentially develop NTFPs, or if current partners wish to propose a project, several Elders were clear that *asking permission* is a basic and fundamental principle. Asking

Table 5: Partnership principles

Partnership principles	What do Pikangikum Elders envision in terms of potential NTFP partnerships?
Asking permission	Elders, leaders and community members expect to be asked permission for access to, use of, or development of any resources from the community or Whitefeather Forest. Asking permission refers to initiating a working relationship between partners and Pikangikum’s governance structures.
Working relationships	A working relationship means joint planning and decision-making between partners and the community of Pikangikum. Pikangikum Elders expect to be in the driver’s seat regarding resource development on their traditional lands.
Cautious product planning & development	Elders are cautious, patient and sagacious in terms of planning and decision-making about potential NTFP development. This precautionary approach intends to promote understanding and respect of cultural protocols, ensure the Elders’ vision for the Whitefeather Forest Initiative and its intended objectives and benefits, and promote and maintain good relations.
Elder participation & guidance	Elders require an important role in guiding planning, research, and development activities in the Whitefeather Forest. This means taking their knowledge, teachings, and advice seriously in working relationships for any new development activities.
Knowledge & decision-making collaboration	Elders are excited about bringing traditional and scientific knowledge experts together to create novel solutions and hybrid forms of knowledge. This implies collaborative and joint research in which Elders are part of the research team and process of decision-making.
Effective communication	Effective communication is important between partners of different cultural and institutional backgrounds. Effective communication needs to occur at various levels including key individuals, planning teams, and with the community of Pikangikum through frequent community meetings.

Diligent, long-term partnerships	Elders and leaders recognize the amount of hard work and diligence required to make partnerships function successfully in negotiations, recognize differences, and find a balance and mutually beneficial outcomes.
Respect	Elders and leaders perceive cross-cultural respect as pivotal to developing and maintaining good relations between partners. This includes full respect for different cultural and knowledge traditions and practices, which implies respecting different epistemologies and ontologies.
Maintain good relations	Maintaining good relations means building a positive relationship between partners through honest and open discussions, which includes consideration for the community of Pikangikum and other-than-human persons.

permission, however, *doesn't* just refer to seeking verbal consent or performing basic “consultation”. Rather, it refers to asking permission within a particular type of relationship, or structural organization, in which partners meet as peers. The Late-Elder Norman Quill refers to respecting and engaging with contemporary governance structures by asking permission within such an institutional framework:

If someone wanted to do that [develop new products] they would have to go to someone in authority such as the Whitefeather Forestry [Corporation] or the Chief and Council. They would have to go to them to get permission (interview, Sept. 24, 2009, translated by Gerald Peters).

The Late-Elder Norman Quill further mentioned the need to respect Pikangikum’s land tenure and governance of the Whitefeather Forest when asking permission to access resources just like Pikangikum respects other non-Aboriginal’s property and resources outside of the Whitefeather Forest:

You have to ask for permission from the Committee [Whitefeather Forest Elders Steering Group]. In the south everything was taken away from those Anishinaabeg in the south, but we are doing it differently here in Pikangikum. See in the south if they even cut down a little tree they get a fine for it. They had everything taken away from them down south, those communities. See if we go into town we don’t touch anything from the town, the land or whatever. You have to ask for permission first. That is what we are trying to do here with these trap lines here right now (interview, Sept. 24, 2009, translated by Gerald Peters).

In this statement, the Late-Elder Norman Quill indicates the importance of acknowledging and respecting Pikangikum’s customary tenure and engaging with community governance structures, such as the Chief and Council, the Whitefeather Forest

Management Corporation, and the Whitefeather Forest Elders Steering Group. In short, “asking for permission” is more than just requesting access to resources or input into an *a priori* project. To the contrary, asking for permission must be understood within a broader understanding of a working relationship in which partners move beyond asking for initial permission to collaborate with Pikangikum *at all stages* of planning and decision-making.

5.1.2 Working relationships

Asking for permission and working relationships must not be confused with current and past political processes of *consultation*, which implies that there is a dominant proponent conducting development activities on Crown Land and First Nation traditional lands as required under Canadian common law and the *Canada Constitution, 1982*, Section 35. In Pikangikum’s case, the community is the primary “proponent”, which means that Elders and leaders expect to maintain control of development activities while partnering with other stakeholders. In other words, Elders and leaders expect potential partners interested in NTFPs to form an institutional relationship, or *working relationship*, with the community in a similar way to Pikangikum’s current partnership with the Ontario Ministry of Natural Resources. Working relationships are partner-to-partner relationships that assume joint planning and decision-making in which partners recognize and respect the vision and sovereignty of the community over their initiative, lands, knowledge and way of life. Through a working relationship the ability of community members to learn, negotiate and make decisions about planning and development activities are institutionalized.

A working relationship between partners and the community, Whitefeather Forest Management Corporation, and Whitefeather Forest Elders Steering Group would frame the process of planning, research and potential development and commercialization of NTFPs. Pikangikum does not want further consultation; they want working relationships. Dean Owen explains the difference between working relationships and consultation:

The government uses the term “consultation” and “accommodation”. I first heard this term about 5-6 years ago. Let me give you an example of this “consultation.” The government has a plan, like putting in a hydro dam on a river. They will send in representatives to a community to discuss this project. They will present the

project, its plan and how it will work. Then usually what happens is the people will say, “Yes, this might work.” The representatives will take that answer as a “yes.” But the people were never properly informed or accommodated for. The information given is superficial, discussion is not meaningful and no feedback is taken into consideration. The government representatives are simply looking for a yes/no answer. So these representatives are “in and out” of the community without building a working relationship. Within the current working relationship that exists between the MNR [OMNR] and Pikangikum, no one side pushes its personal agenda. Maybe the MNR has their own agenda, but so far their actions have shown that they are doing good (interview, Oct. 26, 2009).

Although consultation may be an appropriate attempt by government to increase public participation in other management and development initiatives, First Nations have often experienced it as paternalistic, exploitative and controlling, rather than collaborative and mutually beneficial (Teillet, 2005).

Dean Owen expanded on this more exploitative type of relationship by providing the example of the federal department of Indian and Northern Affairs Canada (INAC).

I can't recall any partnership that has gone sour other than the one with INAC years ago. I don't know if we even consider them partners. They don't really qualify as a partner. They are just a funder and use what they provide to control what we can and can't do as a community (interview, Oct. 8, 2009).

In this example, consultation is a means of moving forward another organization's objectives at the expense of the First Nation. In Pikangikum's experience, this type of institutional relationship fails to deliver what the community is seeking through partnerships that move their land-use strategy and community objectives forward. Even if done properly, however, consultation is clearly not a desirable relationship for Pikangikum in the area of NTFP planning, research and development. Pikangikum is seeking a more stable, meaningful, and accountable institutional relationship.

In the case of NTFP planning, research and development, the Elders are consenting to “move forward” at this point in time, but they also expect partners to support the ability of community Elders and leaders to make decisions as they continue to learn with their partners about various legal, business, and research issues. Ensuring that NTFP planning, research and development occur within a governance framework increases the agency and self-determination of the people of Pikangikum. Partnerships and working relationships provide one possible means of enhancing Pikangikum's

agency, ability to define benefits, guide planning and development, and still allow outsiders access to resources within the Whitefeather Forest.

5.1.3 Cautious product planning and development

Elders did indeed express a strong interest in NTFPs. However, they also remain cautious reflecting their precautionary approach to development activities. Even though caution is an important principle in all land-use planning and development initiatives for Pikangikum, this is particularly important to NTFP planning, research and commercialization in order to ensure proper procedures, community discussion, and prior, informed consent. Elder Mathew Strang makes this point:

So what I see with these new products, I think it is good. It is good that new products can be made from our medicine and to sell and to buy them. I think that [NTFPs] will work. This is what I think, but we will have to start off *neesheehg* (slowly) (interview, Aug. 19, 2009, translated by Paddy Peters).

The Late-Elder Norman Quill also emphasized the importance of caution in planning for possible NTFPs commercialization to ensure the Elder's vision of "keeping the land" and maintain the Anishinaabe relationship with the land (see 5.2.1). Elder Oliver Hill was also clear about the importance of caution in proceeding with medicine or food product research and development:

We need to ask these kinds of questions, he says, whether it will do good or if it will do us bad. So the two examples he is using is the term *Cheeoohcheeyuhgoong* [which] means to lose or disappear. That's why he said if it will do us good or bad. By *cheeoohcheeyuhgoong* he is referring to the topic we have been discussing here, these plants on the land. The other term he uses is *auhauhgwahmehseeyuhng* [which] means to be cautious from the Anishinaabe culture because we were cautious in the past, he says. And this is the same approach that we have to take and the direction we want to go. We have to be cautious not to disrupt the Anishinaabeg and this connection to the land (interview, May 25, 2009, translated by Paddy Peters).

According to Elder Oliver Hill, this cautious approach is important to avoid social costs, such as cultural loss, and ensure the appropriate benefits or objectives of the Whitefeather Forest Initiative.

Caution is important for these Elders because they are expecting and emphasizing the means over the ends, which is consistent with Chapter 4's conclusion that process is

more important than product. In essence, Elders are stating that *at this moment* they are providing their informed consent, interest, and acceptance of the idea of NTFP development. However, this is an exploratory development initiative that involves, as the Late-Elder Norman Quill says, “proceeding to find out”:

Nuhmuhcheekoooh means that you aren't really sure. It doesn't mean that he doesn't know, but just that he isn't sure. *Tuhsheekoocheecheekuhtayh* is another term that he used. *Tuhsheekoocheecheekuhtayh* means that he wasn't sure, but yet he would support to proceed to find out. The example that he had used is *mushkeekkeh* or the cones. You could experiment with or research the cones using Whiteman's knowledge (interview, Oct. 4, 2009, translated by Paddy Peters).

Pikangikum Elders' caution borders on reluctance because they want to ensure that Pikangikum's land-use strategy and vision is maintained and that the Anishinaabe way of life is not compromised. In effect, Elders are cautious so as not to disrupt the Anishinaabe way of life, but also to generate appropriate benefits to the community, which I discuss in the second section of this chapter.

5.1.4 Elder participation and guidance

Time and time again, if you are going to do anything you must do it with the knowledge and guidance of the Elders (Alex Peters, interview, Oct. 16, 2009).

Entering into partnerships with Pikangikum means working with Elders and members of the Whitefeather Forest Management Corporation in a joint planning and decision-making fashion so as to ensure the community's involvement through community governance structures. Paddy Peters also talked about the role of the Elders in partnerships:

We have to come back to the Elders. Everything that we discuss we have to come back to the Elders, come and tell the Elders that this is what has been happening, this is what we have been discussing, this is the direction we are going. Everything has to be approved by the Elders (interview, Oct. 27, 2009).

But the role of Elders isn't one of decision making, rather as providing guidance and advice to community leaders who have the responsibility of making decisions. Alex Peters explains that “the Elders are there to advise, not run a business,” even though several Elders are experienced in the business sector (interview, Oct. 16, 2009).

The participatory and advisory role of Pikangikum Elders has even been

formalized in Ontario government policy in forestry planning, which reflects the Province's acceptance of the traditional advisory role of Pikangikum Elders in Province-First Nation partnerships. As previously mentioned in Chapter 4, the recent release of the Forest Management Planning Manual (OMNR, 2009) includes an entire part that describes the particularities of forestry in the Whitefeather Forest, including the role of Pikangikum Elders. Elder participation is important in partnerships to provide advice, communicate with the broader community and building consensus. Building consensus among members of the community is important because, as Paddy Peters points out, the entire community must be involved in discussions:

If you want to get into commercialization, like forestry, then it is the community. The community has to have the final say, the community of Pikangikum, the people of Pikangikum (interview, Oct. 27, 2009).

It is therefore important to understand that even though the Whitefeather Forest Elders Steering Group has a crucial advisory role in planning and development such as NTFPs, the broader community needs to be involved.

Even though Elder participation and guidance is crucial to all planning and development, Elders asserted that their advisory role is particularly important for partnerships involving NTFPs, such as medicines and foods, given the unique nature of this knowledge (see Chapter 4). The Late-Elder Norman Quill explains:

Kuhkeekaytuhsuohwuhch means the educated who have the knowledge, and *kuhtoohthuemoohwuhch oohmushkeekeemeewuhn* means how our people would practice our medicinal processes and skills. These two things would have to combine because not all of our people know about medicines, the plants to make medicine (interview, Oct. 4, 2009, translated by Paddy Peters).

So, Elders and leaders are clear that the Whitefeather Forest Elders Steering Group must take a pivotal role in guiding NTFP planning, research and commercialization through joint partnerships or working relationships.

5.1.5 Knowledge and decision-making collaboration

In the context of NTFP planning, research and commercialization, a working relationship means that there will be an interfacing or collaboration of knowledges and decision-making. The Late-Elder Norman Quill explains:

There needs to be a collaboration of knowledges to find out. There has to be a working relationship too because our people are interested in this working relationship. And he is also saying that they [non-Aboriginals] don't have knowledge of how to cure all ailments. But sometimes our people may hold that knowledge that the Whiteman is looking for. For instance, that diarrhea medicine that he talks about, if it works for our people then there should be research in that area using Whiteman's knowledge (interview, Oct. 4, 2009, translated by Paddy Peters).

Pikangikum Elders are speaking not only about an inclusion of indigenous knowledge in scientific research; Elders want to have collaborative or joint research, which implies shared decision making regarding research design, objectives, and outputs such as conference presentations and publications.

Elders George B. Strang and Solomon Turtle expressed their interest in collaborative research on several specific natural health care products, which were considered during an interview:

Solomon: I don't think I've ever seen Anishinawbe make their medicine this way. The only way they made it was in a medicinal tea form in which he gave it to someone who's sick. I don't think the Whiteman would know how to do it that way.

George: What would happen if someone [from Pikangikum] sent off their medicinal water? I wonder what people would think of it if research was done to it and how this water is used for medicinal purposes? I wonder how the Whiteman would make his? It would work if this medicine was used.

Solomon: It would really work (interview, Oct. 6, 2009, translated by Marcella Kejick).

But the idea of knowledge collaboration, knowledge interfacing and research partnerships is a cautious, exploratory process, according to Elders such as the Late-Elder Norman Quill:

[There could be collaboration with] *gaagikendamowaaj* or those that have the knowledge. There would be a collaboration of these two knowledges [science and indigenous knowledge]. And *kaysheeyuhahnnookeymuhkuhg* meaning that if there was collaboration then we would need to see how it would work or how these two knowledges would begin to work. *Kuhkeetuhteeseewuhg* is another term for Elders. They would be involved, for example, [in research on] the cones. He is just questioning, do they [scientists] have an understanding of the cones versus an Anishinaabe understanding of the cones. *Tuhkoohcheecheekuhtayh* is to move forward, to exercise, to proceed. He is not saying that we can't proceed, but we can proceed to see (interview, Oct. 4, 2009, translated by Paddy Peters).

Thus, we return to the idea of caution in NTFP partnerships and the process of planning, research and commercialization.

Knowledge and decision-making collaboration has also been expressed in terms of achieving *balance*. Through partnerships or working relationships, Elders and leaders expect a two-way flow of information, a genuine exchange of resources, and joint decision-making. Elders expect there to be collaboration and balance between scientific and indigenous knowledge systems as well as decision-making power. In fact, knowledge and decision-making power are often interrelated. In the following statement, Paddy Peters describes Pikangikum's working relationship with the Ontario Ministry of Natural Resources (OMNR) and how it has become more balanced, or two-sided, in terms of decision-making and exchange of knowledge.

I will give you another example: our partnership with the MNR [OMNR]. The Elders say that it began many years ago in the late 1940s when they came to the territories of our people. I guess it wasn't really a partnership or a friendship in the beginning. Some of the stories the Elders tell [involve] when the MNR came to seize their furs or burn their cabins. So they were living in fear all the time. They had to hide their furs and be on the lookout all the time for MNR people. So that was the view of the MNR. The MNR was always coming to check up on our people to make sure they were following the orders or following things that had been put in place. To me I don't think there was ever a relationship there. Not until we began our land planning process did we begin to build or rebuild our relationship, our partnership, over the years. I have heard the Elders here and there saying that we want to continue to work with the MNR, to continue to build this relationship, this partnership. I have seen it become a good working partnership with the MNR. They have learned from the Elders, and also the Elders have learned from the MNR. This was never the case before when both groups would come to the table and share ideas, share discussions. This never happened before. It was always just a one-sided discussion where MNR would do things based on the policies they were given to work with (Paddy Peters, interview, Oct. 27, 2009).

Dean Owen also explains the use of the term "balance":

For me personally, the same model as between the MNR and Pikangikum would have to be used [in the area of NTFPs]. The term "balanced approach" has been used to mean that one side doesn't outweigh the other in the way decisions are made (interview, Oct. 8, 2009).

Even though the relationship between Pikangikum and the OMNR has not been perfect, it is a good example of how balance between partners is continually negotiated and how a

genuine interest and commitment to achieving a balance between each partner's knowledge and decision-making ability is important to Pikangikum.

5.1.6 Effective communication

In the context of forestry planning with the OMNR, Elders have expressed the importance of effective partner-to-partner communication at different levels. Referring to Pikangikum, O'Flaherty, Davidson-Hunt, and Miller (2009, p. 33) have similarly spoken about the need for "effective (cross-cultural) communication and positive working relations between Pikangikum and the Province of Ontario" that requires "more than good translation." Effective communication will be equally crucial in the area of NTFP planning, research and development. In addition to regular planning meetings between smaller groups of partner representatives, Pikangikum Elders appreciate and expect regular community meetings in Pikangikum with their partners. It is during these community meetings that community representatives communicate advances in planning and development to the broader community and, in some cases, facilitate meaningful discussion between partners about key issues. In these meetings, Elders appreciate the communication of the partner's activities in an open and transparent fashion. For example, when partners are conducting research activities, Elders and community members attending these community meetings expect their partner to keep the community informed about research processes and results. Elders have also stated how these meetings are beneficial learning forums for attending community members. These community meetings are crucial forums for continual consent, information dissemination, and partner-to-partner communication at the community level.

As Alex Peters explains, open and multi-level discussions that respect differences have been important to Pikangikum's land-use planning process:

The most successful [partnership] has been with the MNR because before we started working with the MNR we sat down and the Elders came up with what they wanted to do. This process has been open and we discussed our differences in a civilized manner. These talks occurred at various levels from District Manager down. We had our disagreements too though (interview, Oct. 16, 2009).

This statement identifies two important points relative to effective partner-to-partner communication. First, effective communication is important within the community of

Pikangikum because it is through internal meetings with the community and Whitefeather Forest Elders Steering Group that community policy is defined. Second, this community policy is negotiated with partners at various levels including representative-to-representative, planning-team-to-planning-team, and organization-to-community in the case of Pikangikum's relationship with the OMNR. So, effective communication is an important component of working relationships.

5.1.7 Diligent, long-term partnerships

For working relationships, there is a need for partners to be diligent. Differences in expectations or objectives can create challenges in the process of partnership negotiation and planning, but with respect and diligence it is possible from Pikangikum's perspective to overcome differences and move forward. Paddy Peters has even compared their partnership with the OMNR to a marriage that is properly maintained through respect, honour and diligence. One partnership that has not been successful from Pikangikum's perspective due to lack of diligence is the relationship between Pikangikum First Nation and The Partnership for Public Lands (PPL), a coalition of environmental non-governmental organizations (ENGOS), which was formed through the signing of a partnership letter of agreement (PFN & PPL, 2003). Several months after the signing of this agreement, The PPL apparently walked away from the partnership. Although my research did not thoroughly explore this partnership in depth, what various members of Pikangikum say about this partnership is indicative of partnership characteristics or principles that community members consider important. This partnership was not successful according to community members because of PPL's lack of respect and diligence. Paddy Peters explains this partner's lack of diligence:

This is what our agreement was with the NGOs [PPL]: *cheekeechee ee nayhtuhmuhn*. This is why the Elders haven't dissolved that relationship yet, that partnership. So, under a partnership you need that relationship. To maintain that relationship you have to have honour and respect. Or the other term you can use is *cheekeechewehnuhmuhn*. It almost sounds the same, but it means to hold on. *Cheekeechee ee nayhtuhmuhn* and *cheekeechewehnuhmuhn*, or to hold on to that, not to let go. So I believe this is what the Elders are doing. They are holding on to that partnership agreement they had with the NGOs, no matter if the other party doesn't want to work with you until such time they want to break that working partnership. All these past couple of years that the Elders had to put up with the

NGOs, they are still holding on to that partnership, that agreement that I had signed [as Chief] on behalf of the community (interview, Oct. 27, 2009).

Irrespective of what occurred between these two partners, PPL's abandonment of the partnership led Elders and leaders to highlight that partnerships must maintain a commitment to common objectives even if difficulties arise within the working relationship.

5.1.8 Respect

From Pikangikum's perspective, working relationships are collaborative, institutional relationships based on *mutual respect*, even though partners may come from distinctive cultural and institutional backgrounds. According to Paddy Peters, respect is the most defining feature of successful partnerships, such as the Pikangikum-OMNR partnership.

In a partnership if there are two people working together or two groups working together you need to have respect in order to maintain the partnership. If you don't have respect for each other it's not going to work out. Even though you might have differences or differences of opinion you must always have that respect to maintain the partnership. And I guess my definition of respect is whoever we partner with must respect our people because our people have lived on these lands for many generations. They have maintained that knowledge of surviving on the land for generations (Paddy Peters, interview, Oct. 27, 2009).

From Pikangikum's perspective, respect of differences is an important principle in partnerships. Just as Pikangikum respects other ways of knowing, such as science, or ways of being such as other cultural worldview, practices, and beliefs, Pikangikum expects partners to respect their ways of knowing, management system and culture, practices, and traditions.

Interestingly, O'Flaherty, Davidson-Hunt, and Manseau (2008) conclude that it is not necessary to resolve cultural differences in forestry management planning, but respect of those differences is a continuous requirement in negotiations and compromise. Paddy Peters expands on the idea of respect:

The term we use is *cheekeechee ee nayhneemeeyuhn*. *Cheekeechee ee nayhneemeeyuhn* means that you have to honour or respect. You have to honour or respect who I am. I am Anishinaabe. As an Anishinaabe I live on this land and being on this land I have obtained all this knowledge and understanding of the land

and it's preserved in me. But, I also have a past. And our people have lived on this land and they have all this knowledge, this wealth of knowledge of the land. I also have a present. I also have a future. So this is what my father always told me, you are supposed to respect other people and honour other people. So a partnership has to have *cheekeechee ee nayhneemeeyuhn* (interview, Oct. 27, 2009).

In this sense, partnerships require respect from Pikangikum's perspective, which includes cross-cultural respect of different practice, knowledge and value systems.

5.1.9 Maintaining good relations

Another element of respect in working relationships is the need to "maintain good relations". The partnership between Pikangikum and the PPL was provided as an example of *not* maintaining good relations and a healthy partnership because it lacked openness or honesty. Alex Peters was quick to question this group of partners' integrity given that they said one thing and acted in another way:

The ENGOS [PPL] said that they wanted to protect the land, but when we showed them the cutting to the south about four to five years ago and they didn't do anything (interview, Oct. 16, 2009).

Several leaders also questioned the underlying motives of the PPL because they withdrew from active engagement, planning, and process of cross-cultural learning. Subsequent actions by the PPL, in which they partnered with other public and private institutions (i.e. The Canadian Boreal Forest Agreement, 2010) further supported Pikangikum's views regarding the PPL and its non-collaborative values that work in opposition with Pikangikum's land-use strategy and the agreement signed with the PPL in 2003. It is the lack of integrity and congruence between this partner's stated goals and values and their actions and alliances that contradicts Pikangikum's partnership approach.

To the contrary, various individuals spoke positively of Pikangikum's partnership with the OMNR as good partnership and "open process". As Alex Peters explained above, this partnership has faced its challenges, but overall Pikangikum's and the OMNR's differences have been discussed in a "civilized manner." In this sense, an open process is used to describe a meaningful and honourable process of establishing and maintaining a partnership. Dean Owen has additionally referred to the partnership between Pikangikum and the OMNR as successful due to an unusual openness of OMNR

representatives to learn from members of Pikangikum, especially the Elders. Key players in the regional MNR office have not only been open to develop a meaningful and functional partnership, but also learn about new ways of managing resources or perceiving the world. Thus, developing and maintaining good relations through an open process is important to trust building, learning from each other, negotiating differences and establishing mutual objectives.

Maintaining good relations from Pikangikum's perspective also requires a social and cosmological understanding of relationships including Pikangikum's community life, cultural traditions and worldview. On the one hand, maintaining a positive working relationship and good relations includes respecting community events such as deaths and funerals. These types of unfortunate events can quickly change partnership plans and meetings, and Pikangikum expects that partners will adapt to these types of community events. On the other hand, maintaining good relations extends beyond human relations to include relationships between the members of Pikangikum, their environment and other-than-human persons. As I described in Chapter 4, *Ohmuhkuhkee* must be respected when considering the harvest, preparation and exchange of *mashkikii* and associated knowledge. So, just as other-than-human persons have been conceptualized as the "bosses," "owners," or stewards of species of animals and plants in this cultural landscape (Hallowell, 1992, p. 62), Pikangikum Elders fundamentally respect *Ohmuhkuhkee* as the keeper of medicine (*kuhteabayuhg mushkeekkeh*).

In this light, the principle "maintain good relations" includes a broader conception of personal responsibility and consequences for one's actions. These "interpersonal relations between human and other-than-human beings involve reciprocal rights and obligations, in the same way that social relations between human persons do" (Hallowell, 1976, p. 462). If these social obligations and norms of reciprocity are not respected there are consequences such as *ocheenayh* (Elder Charlie Peters, interview, Feb. 23, 2009) or illness (Black, 1977). This broader, anthropological understanding of "maintaining good relations" leads to the idea that institutional and/or business partnerships will have to understand that they are participating in a larger community of beings that brings a unique sense of moral obligations and social responsibilities.

Shearer, Peters and Davidson-Hunt (2009) have also written about the principle of “good relationships” in the context of Pikangikum’s cross-cultural forestry planning. More specifically, principles such as *Cheekeechee’eenayneemeeteeyaung* (respectful relations with people) and *Cheekeechee’eenaytauhmung* (reverence for all creation) are important indicators and criteria for successful forestry planning (Shearer, Peters & Davidson-Hunt, 2009, p. 80). In this way, all of creation, which includes both human and other-than-human beings, is important to maintaining good relations in the context of forestry planning as well as NTFP planning, development and commercialization.

5.2 Benefit sharing and non-timber forest products

All benefits [need to] go towards the First Nation, the community of Pikangikum. I know with new products if the First Nation wants to commercialize traditional medicine they would have to look for partners outside the community that would show them how to produce these new products, to get them into the market. There would have to be an arrangement made where people would have to get training in making these new products and also for marketing. There we would have to have a financial arrangement with those partners. But always the benefits coming back to the First Nation. We cannot lose the vision of the Elders. The Elders have said that everything that they are preparing here through this land-use strategy, Whitefeather Forest Initiative, is all geared towards the future of the children, their grandchildren, the youth of this community for generations to come. That is why I am saying the benefits will have to come back to the First Nations (Paddy Peters, interview, Oct. 27, 2009).

Generating appropriate benefits and sharing those benefits is an important issue for Pikangikum Elders and leaders, such as Paddy Peters, which is related to the community’s past experience and relationships with outsiders who have often utilized and developed natural resources without sharing those benefits with the community. In fact, the fundamental purpose of Pikangikum’s initiative is the creation of benefits, both economic and non-economic, for the people of Pikangikum and their future generations.

When questioned about NTFPs, Pikangikum Elders envisioned multiple, interrelated community objectives and benefits that might result through both the process and outcome of planning, research and development, and commercialization. Thus, in this section I present various economic and non-economic benefits that Elders and leaders identified as important to the planning, research and development of NTFPs (see Table 6). This section, however, does not identify specific mechanisms or address the question

of “how” benefits will be shared within Pikangikum or between partners. These mechanisms would have to be developed through partnerships, negotiations and working relationships.

Table 6: Benefits principles

Benefits	How do Elders and leaders envision benefits?
“Keeping the Land”	The development of community-based NTFPs needs to fortify Pikangikum’s ability to maintain its traditional stewardship responsibilities, cultural practices and traditional knowledge, community health, and relationship with the land through historic and contemporary livelihood activities.
Employment and capacity-building opportunities	The development of NTFPs must generate local jobs and capacity building for future generations in producing and marketing these products in accordance with the Whitefeather Forest Initiative.
Financial benefits through joint ownership	Planning and business endeavours, property and/or resources will be jointly owned and the profits equally shared (i.e. 51/49 shares), which goes beyond royalty or milestone models of financial benefit sharing.
Learning from partners	Past partnerships have provided unique opportunities to learn from other experts of different cultural and institutional backgrounds. NTFP partnerships will also serve as an opportunity to create cross-cultural learning contexts for Elders, leaders and youth as well as partners.
Healing and Health	Because the Creator gifted <i>mushkeekkeh</i> to heal and <i>meecheem</i> to nourish, NTFP development must focus on specific products that address specific illnesses faced by community members and provide new opportunities for community members to access medicinal and health care products that stem from Pikangikum’s knowledge tradition and practices.

5.2.1 “Keeping the land”

The idea of “keeping the land” (*cheekahnahwaydahmungk keetahkeemeenahn*) has been at the forefront of planning and development activities of the Whitefeather Forest Initiative, and this idea extends to the development of NTFPs. According to the land-use strategy, which is entitled “Keeping the Land,” the overall vision of the Elders is as follows:

A future in which *Beekahncheekahmeeng paymahteeseewahch* are able to maintain our ancestral stewardship responsibilities for Keeping the Land

(*Cheekahnahwaydahmunk Keetahkeemeenahn*) for the continued survival and well-being of Pikangikum people (PFN & OMNR, 2006, p. 1).

This vision of “keeping the land” can be boiled down to three interrelated components: Pikangikum’s stewardship strategy, customary activities, and economic development (PFN & OMNR, 2006, p. 5). So, although many of the objectives and benefits that the Elders are seeking through NTFP development are interrelated and non-hierarchical, “keeping the land” is perhaps the most central and overarching goal or expected benefit.

By attempting to “keep the land” through the Whitefeather Forest Initiative and put the people of Pikangikum back on the land, Elders wish to revitalize Pikangikum’s customary (and non-customary) activities and knowledge. Access to and use of the land, whether through subsistence activities or new commercial activities, presents the opportunity to current and future generations to maintain cultural practices, indigenous knowledge, and the Anishinaabe stewardship responsibilities.

Elders often mentioned how their indigenous knowledge of NTFP had been devalued over the last century and how the development of commercial NTFPs presents an opportunity to re-value Anishinaabe knowledge and the use of traditional medicines and bush foods. In fact, one of the main purposes of the NTFP section of Pikangikum’s land-use strategy is to re-value, maintain, and re-cultivate Pikangikum’s indigenous knowledge tradition. Elder Oliver Hill talks of the loss of appreciation for Anishinaabe knowledge and the need to revive it:

I am deeply, deeply regretful. So we have to go back and retain this knowledge. [We have to] *cheekeewayyuhng* (to go back home) and *nuhseekuhmuhng* (to go and retrieve it) (interview, Aug. 19, 2009, translated by Paddy Peters).

The re-valuation and cultivation of Anishinaabe NTFP knowledge means ensuring the *conditions* for Pikangikum’s cultural health, indigenous knowledge, practices and relationship with the land. Re-valuing Anishinaabe knowledge in the community is directly related to the teaching of younger generations, which is an important objective or desired benefit from potential development and commercialization of NTFPs. The Late-Elder Norman Quill expresses his deepest desire to pass his knowledge of plants and traditional teachings onto future generations:

That is what I desire. I won't be around. My days are short. It is my desire to have these young people learn these things. They have to learn the teachings (interview, Aug. 12, 2009, translated by Paddy Peters).

Through new economic opportunities, Elders envision involving the younger generations in traditional pursuits that have declined in popularity, such as Anishinaabe medicinal use and bush foods.

Elder Alec Suggashie emphasizes the importance of creating new opportunities to pass Anishinaabe knowledge onto today's youth:

[It is important] for the youth to see and learn about these products that our people have used in the past. One of our Elders, Norman Quill has taught some of the youth in our community. But there are those who have never learned and have no knowledge of these plants. I support the land-use process for our people to invest in new products. The youth in the past have learned the things that they were taught. For example, Mathew has the knowledge he learned from his Elders about the medicinal plants that he knows, what he was taught and how to use those (interview, July 30, 2009, translated by Paddy Peters).

The Elders understand, however, that simply teaching about their NTFP traditions and indigenous knowledge isn't enough.

In the past, Pikangikum's cultural health, identity, indigenous knowledge and practices have been interdependent with economic opportunities and land-based jobs. Until recently, commercial trapping and fishing sustained the people of Pikangikum, put people out on the land and presented the opportunity for teaching, practice, and knowledge continuity and adaptation. Commercial activities support(ed) customary activities and knowledge; these are not distinct spheres of practice and knowledge. So land-based activities, both subsistence and commercial, are important for maintaining Pikangikum's relationship with and stewardship of the land. In a cyclical manner, maintaining Pikangikum's traditional relationship with the land through customary and new commercial activities is particularly important since knowledge comes from experience on the land (see section 4.2).

So, the processes of planning, research and development of community-based NTFPs with partners is seen as a positive direction, but with various expected benefits. In particular, new commercial NTFPs must complement and support Pikangikum's customary activities, rights to resources and re-value and re-cultivate Pikangikum's

indigenous knowledge. According to Elders, this can be achieved through creating the appropriate conditions, increasing different livelihood opportunities, and creating land-based jobs through NTFP planning and development, which will put some of the Pikangikum people back on the land. Thus, the need for land-based jobs relates to increasing access to resources, old and new livelihood activities, indigenous knowledge and a dynamic way of life.

5.2.2 Employment and capacity building opportunities

With the decline of the trapping economy and reduced job availability in firefighting, employment opportunities are harder to come by, especially those that keep people on the land. This is strongly reflected in the fact that unemployment is high in Pikangikum with only 180 full-time jobs (50 are held by outsiders) and 60 summer jobs for a population of approximately 2400 inhabitants (Mamow Sha-way-gi-kay-win, 2009). Elsewhere, it has been stated that Pikangikum's estimated unemployment rate is 70% (O'Flaherty, Davidson-Hunt & Manseau, 2008, p. 2). Thus, one key objective of the Whitefeather Forest Initiative, and the development of NTFPs, is the creation of employment and new livelihood opportunities for future generations, which is related to the Elders' desire for Pikangikum's increased inclusion and self-determination in economic development in the regional economy.

While improving numerical job *availability* through NTFP planning, research and commercialization is one issue, increasing *access* to and/or decreasing barriers to employment is another key component of increasing employment opportunities. Pikangikum Elders and leaders understand that these two dimensions are interrelated, but can be addressed through various partnerships. Consequently, Pikangikum Elders anticipate that partners will participate in the creation of a local NTFP industry that will indirectly lead to the generation of more local employment availability within the community. Elders also expect, on the other hand, that increased job opportunities will be directly provided by the partner during development activities. For example, partners might provide seasonal job opportunities for NTFP planning or research projects, which has been the case during recent government research projects regarding woodland caribou and lake sturgeon. Partners might also provide preferential training or job

opportunities within their respective organizations. These wage-based jobs might arise during and/or after planning, research and commercialization phases of NTFP development.

Of equal, if not more, importance is increasing access to employment for members of Pikangikum. Access to employment was described as lower for members of Pikangikum for two interrelated reasons: discrimination and lower community capacity or education. In Pikangikum, there is a strong sense that the community has been increasingly excluded from various industries, such as government firefighting positions and gold mining. In response, Pikangikum is actively attempting to increase access to employment by establishing partnerships that might decrease discrimination and provide better job availability with partner entities as previously mentioned.

Pikangikum is also attempting to increase employment access by addressing employment barriers and increasing community capacity and education through government, industry and educational partnerships such as the Whitefeather Forest Training Initiative. While this current partnership focuses on increasing the general educational level of community members and offering technical training in forestry, increasing the capacity and education level of community members is a fundamentally important benefit in prospective NTFP planning, research and development. Many community members are not trained or experienced in a particular field, such as mining, forestry or NTFP research, production, and marketing. In this respect, increasing access to potential NTFP employment opportunities depends on capacity building and education in the area of NTFP policy, research, and business. In fact, scientific research and product marketing are two main areas in which Elders recognize a need to seek out partners. It is expected that there would be a component in training or capacity building in these two main areas, especially in the area of NTFP business management. Paddy Peters points this out:

I guess the other thing is that we, the First Nation, would have to learn about running these kinds of businesses. That is the other thing that we would have to learn. Different aspects of running a business, also with a partnership, we would have to learn those aspects (interview, Oct. 27, 2009).

Thus, partners in the area of NTFPs will need to recognize these employment and capacity challenges, and seek to increase access to employment by aiding in the

development of skills and education of community members in specific industries and jobs. In whatever capacity Pikangikum decides to engage in an emerging NTFP industry, Elders and leaders expect product development to result in increased economic inclusion, employment opportunities, and even capacity building and education.

5.2.3 Financial benefits through joint ownership

Although it is important not to create unrealistic expectations regarding the financial benefits that might arise through NTFP research, development and commercialization (Vermeulen, 2007, p. 432), it is necessary to consider what appropriate financial benefits might arise and how they might be shared. In other bioprospecting projects, various financial benefits have been associated with the commercialization of NTFP and associated indigenous knowledge, including up-front payments, royalties, funds, milestone payments and joint ownership (Posey & Dutfield, 1996). Pikangikum Elders and leaders, however, expect potential financial benefits to take the form of joint ownership of products and/or novel knowledge, which would frame any other forms of financial benefits.

The idea of joint ownership applies in particular to resources, either natural or intellectual, found in the Whitefeather Forest. Paddy Peters explains revenue or profit sharing from his perspective:

They [First Nation politicians] always talk about revenue sharing: how much percentage First Nations would get, and how much companies would get? I guess [The Government of] Ontario is included. The example I can use is the casino revenue sharing within Ontario. With Casinorama, all the First Nations in Ontario are shareholders of those casinos. So they get so much a year of revenue. But it is all revenue sharing. First Nations get so much, plus where that casino is located, that First Nation gets so much. Ontario gets so much too. But if it is within our community of Pikangikum, since these resources are going to be from within our territory, the percentage would have to be higher for the First Nation than for the partner (Paddy Peters, interview, Oct. 27, 2009).

Alex Peters also indicated that Pikangikum Elders have decided that there must be a minimum of 51/49 profit sharing for any development in the Whitefeather Forest. The conventional profit-sharing model, or royalties, creates minor financial benefits, which is inappropriate for profit sharing from resources developed from the Whitefeather Forest. Furthermore, royalties are undesirable from Pikangikum's perspective because

Pikangikum has to pay an additional 3% to federal, provincial and regional (i.e. Nishinawbe Aski Nation) levels of government (Alex Peters, interview, Oct. 16, 2009). With three levels of sharing profits, financial benefits would be even smaller. Of course, smaller percentages of profit sharing are appropriate for resources developed outside of the Whitefeather Forest.

Although most individuals who were interviewed indicated that a 51/49 profit-sharing arrangement would be preferable, one leader pointed out that it would be best to negotiate financial benefit sharing agreements on a case-to-case basis. Dean Owen explained that in his experience, First Nations currently consider fees or royalties as models for profit sharing, but he considers revenue sharing as something to be negotiated rather than bringing a prescriptive approach to the partnership negotiation table.

This position on profit sharing is directly related to Pikangikum's perspective of working relationships and community-led decision-making (see section 5.1.2). Although this principle was previously described as a partnership principle, it is important to understand that Pikangikum Elders and leaders equally consider increased decision-making and power sharing as a development objective and an *expected benefit* in the context of NTFP development. Alex Peters explains Pikangikum's position on partnerships and power sharing:

This is also in terms of decision-making so that the partnership is essentially a 50/50 sharing partnership, but Pikangikum has the veto and power to control the decisions. Pikangikum and the Elders will be in the "driver's seat" and there is only one driver's seat in any vehicle (paraphrase from interview with Alex Peters, Oct. 16, 2009).

Pikangikum wants to benefit from and ensure the correct use of the resources found on their traditional territory.

5.2.4 Learning from partners

Through working relationships, Elders and leaders seek partners who are willing to share resources in a similar way as Pikangikum's current partnership with the OMNR. Pikangikum's partnership with the OMNR has provided numerous opportunities for resource sharing – human, financial, and intellectual – and cross-cultural and cross-institutional learning for the community and the Whitefeather Forest Elders Steering

Group. This opportunity for community leaders, Elders, and other community members to learn from their partners is a subtle, but significant benefit. Alex Peters explains the knowledge exchange that has occurred:

There are all kinds of benefits such as the knowledge of Western science that the Elders have taken up. The Elders like to integrate the knowledges. With the MNR [OMNR], we also get access to the government and get to see how their system works (interview, Oct. 16, 2009).

In this instance, Alex Peters also points out the importance of partnerships providing access to institutional experience, information and scientific knowledge. With the working relationship between the OMNR and Pikangikum, leaders and Elders have gained access to various resources, such as frequent meetings with government civil servants, which provide new opportunities to learn about government policy, protocols, and institutional norms. But it has been the access to and exchange of scientific and traditional knowledges that Elders have enjoyed the most.

5.2.5 Healing and Health

Because of the specific nature of NTFPs, Elders emphasized the potential healing and health benefits based on purposeful planning and commercial development of NTFPs. As explained in Chapter 4, *mushkeekkeh* has the purpose of healing, and *meecheem* nourishes and brings health to the body. Furthermore, the Creator gifted *mushkeekkeh*, *meecheem* and their associated knowledge to the Anishinaabeg, which means contemporary NTFP planning, research and development need to purposefully plan for the potential outcome benefits of medicines and foods.

Just as one must harvest things from the land with a purpose in mind, new research and development initiatives must equally be designed with the purpose of certain medicines and foods in mind. Consequently, there is an expectation that planning, research, and development of NTFPs might target specific illnesses that the community of Pikangikum experiences. In general, it is expected that the objective of healing should take precedent over, but not to the exclusion of, economic profit or general research goals, such as generating publications. Just as bush foods are eaten to nourish or bring health to the body and medicinal knowledge is used for healing and not for profit – despite the importance of receiving something of value for a medicinal product – new

research and development activities must equally plan and develop products at the scale of the community with healing and health objectives in mind.

If NTFPs are developed for commercial sale, Paddy Peters explains that among Elders “there is an expectation there to be in good health and knowing that there is a product out there that can help them” (interview, Oct. 4, 2009). With the decreased use of Anishinaabe *mushkeekkeh* and reduced reliance on bush foods, the development of novel NTFPs presents the opportunity to increase awareness, access to, and availability of these medicinal and health products to community members. The development of medicinal or health products, then, should actually attempt to create better health or the opportunity for better health for community members by producing new knowledge and products.

Healing and health, however, isn’t simply conceptualized as a community benefit. Rather, Elders expect that both Aboriginals and non-Aboriginals will experience opportunities for healing and health benefits from Anishinaabe knowledge, medicines, and foods. Although the following conversation held between Elders Solomon Turtle and George B. Strang has already been presented, it is worth revisiting for the purposes of this point:

George: It would work if this medicine was used.

Solomon: It would really work.

George: It would really work if people would use it. The White people would use it as medicine, so would Anishinawbek (interview, Oct. 6, 2009, translated by Marcella Kejick).

So, although Pikangikum Elders and leaders are clear that primary benefits must flow to the community of Pikangikum, they also recognize potential spillover health benefits that might emerge if NTFPs are developed.

5.3 Chapter Summary

The purpose of this chapter has been to present my research results in relation to my research Objective 2. In other words, I have presented Pikangikum Elders’ and leaders’ perspectives on appropriate partnerships and benefit sharing for commercial NTFP planning, research and development. It is clear that community members have a clear understanding and set of expectations of potential partners, such as forming diligent and honest working relationships, communicating and seeking prior informed consent at

all stages, involving community Elders as primary advisors, collaborating in terms of knowledge and decision making, and maintaining cultural respect and good relations with Pikangikum's community. These partnership characteristics are very important to community members for successful partnerships and projects.

Benefit sharing, however, is another important dimension that these partnerships must clarify and define in relation to Pikangikum's land-use strategy, "Keeping the Land," which puts the land and Pikangikum people front and center. Economic development, employment, financial benefits, healing and health, customary activities, and cross-cultural learning and decision making are all important in an integrated and interconnected way from the perspective of Pikangikum Elders and leaders. Partners need to regard the process of NTFP planning, research and commercialization as a means to achieving these short-term and long-term goals and values.

Chapter 6: Discussion

Whether plants are medicinal, nutritive, or useful in some other way, there is a strong belief among Aboriginal people that they are gifts from the Creator and that the spiritual connection will be broken by inappropriate use (Marles *et al.*, 2000, p. 7).

This research identifies specific values, teachings and customs important to Pikangikum Elders for the appropriate use of traditional resources and the development of community-based NTFPs for commercial sale outside of the community. Pikangikum Elders identified the importance of the land and knowledge that was gifted by the Creator, Pikangikum's traditional knowledge holders, Anishinaabe customary activities, and conditions of access to and use of the land and its resources. The willingness of third parties to support these core values and objectives are central to Pikangikum's land-use strategy and development initiative (PFN & OMNR, 2006). In fact, Pikangikum Elders are interested in the idea of commercial NTFPs as a means of advancing Pikangikum's land-use strategy and its economic, cultural, and environmental goals.

In this chapter, I discuss and analyze how my research results presented in Chapters 4 and 5 relate to several bodies of literature including those of NTFPs, traditional knowledge and biodiversity; partnerships and benefit sharing; and moral economy. In the first section, I begin by locating Pikangikum's perspective on NTFP development, which I presented in Chapter 4, in current discussions about the commercialization of NTFPs, traditional knowledge and biodiversity. In the second section, I position my results on partnerships and benefit sharing, which I presented in Chapter 5, in relation to the partnership, benefit sharing and biodiversity commercialization literature. In the final section, I analyze and interpret my research findings through a moral economy lens. In this section, I also present a conceptual framework for understanding the role of indigenous peoples, values, and institutions in the so-called "NTFP industry".

6.1 Non-timber forest products

This research has revealed more questions than answers. Nonetheless, integrating Pikangikum Elders' teachings and analyzing them in relation to various sources of literature generates a speculative idea of NTFP planning, research and development in

Pikangikum. The specifics of NTFP development in Pikangikum, however, remain tentative because of the community's iterative adaptive approach in which partnerships, planning and research are negotiated between multiple stakeholders. Also, this research relates to *prospective* commercial NTFP planning, research and commercialization. Once these assumptions are clarified, however, I might make various observations and interpretations regarding the nature of NTFP development in Pikangikum First Nation.

6.1.1 Product type

Laird and ten Kate (2002) describe the various categories of products such as pharmaceuticals, biotechnology, crop protection, seed, horticulture, botanical medicine, natural personal care and cosmetics. Although Pikangikum Elders were not opposed to different products that would require varying degrees of research and processing, they preferred traditional products with lower levels of transformation as potential objects of research, development and commercialization. This suggests a stronger interest in botanical medicines, natural personal care products, functional foods, and possibly cosmetics. In particular, botanical medicines most closely reflect traditional medicines since they are “produced directly from whole plant material and contain a larger number of constituents and active ingredients working in conjunction [...], rather than a single, isolated compound, as in the case of pharmaceuticals” (Laird & ten Kate, 2002, p. 259). To the contrary, these botanical products include raw herb materials, extracts, or phytomedicines (Laird & ten Kate, 2002, p. 259).

In Canada, “traditional herbal medicines”, or botanical medicines, are defined as “a finished drug product intended for self-medication, for minor self-limiting ailments suitable for treatment, whose active ingredients are herbal only” (Health Canada, 1995 cited in Marles, 2001). However, Pikangikum Elders have been clear that providing raw herb materials at wholesale prices contradicts Anishinaabe values of NTFPs. This suggests the need for scientific and traditional knowledge interfacing, product research, and innovation that generates additional value to products, rather than merely producing and selling traditional medicines. I pick up on this idea several times in this chapter when discussing knowledge collaboration (see section 6.1.2) and value adding (see section 6.1.3).

In the case of Anishinaabe *meecheem*, Pikangikum Elders indicated an interest in functional foods. Most representative of Anishinaabe “bush foods”, a functional food is “similar in appearance to conventional foods, it is consumed as part of a usual diet, it is demonstrated to have physiological benefits beyond basic nutritional functions, and/or it reduces the risk of chronic disease” (Health Canada, 1997 cited in Marles, 2001). Finally, it should be noted that Pikangikum Elders did not definitively indicate whether they preferred exclusively developing a medicinal product or food product or both types of products. However, it was clear that focusing on *mushkeekkeh* would be inherently more dangerous or challenging from an Anishinaabe perspective, even with the guidance of Elders, and more risky from a product research and development perspective.

6.1.2 Collaborative and purposeful products

Pikangikum Elders expect NTFP development to respectfully include their intellectual resources or traditional knowledge. In fact, the most central principle for developing NTFPs is partnering and working with Pikangikum’s knowledge specialists through the Whitefeather Forest Elders Steering Group. This approach stands in opposition to some product research and development that solely obtains product information through academic literature, databases, and brokers, whose ultimate sources are indigenous communities (Laird & ten Kate, 2002). Posey and Dutfield (1996, p. 28) also explain how traditional knowledge

is an important element in the commercialization of natural products, because it consists of a wealth of information on how these products could be commercialized. Currently, traditional knowledge is supplied to commercial interests through databases, academic publications, or field collections.

To the contrary, Pikangikum Elders and other community members fully expect to play a major role in planning, decision-making, and the development of NTFPs, or biological resources, in collaboration with scientists, government officials, or corporations.

Medicinal and food sectors, more specifically, often “seek traditional knowledge to help guide product research and development activities” (Laird & ten Kate, 2002, p. 270), but this has only recently involved communities in terms of collaboration and benefit sharing. Although Pikangikum’s traditional knowledge might help to identify new product development from a scientific perspective, it is Pikangikum’s cultural meaning,

teachings, protocols and institutions regarding traditional harvesting, preparation and commercialization that are also important and germane to planning, research and the development of collaborative products. Moreover, it is important to reconceptualize traditional knowledge and how it is accessed and utilized so as to respect indigenous rights, community self-determination, and cultural continuity (Posey & Dutfield, 1996). Finally, collaboration is key to community self-determination as well as appropriate innovation, adaptive learning, and codification of new rules, practices, and knowledge at the community level (Davidson-Hunt & SLRI, 2004).

This approach requires particular attention to the involvement and collaboration with Pikangikum Elders who hold land-based and authoritative knowledge (Davidson-Hunt & Berkes, 2003). Elders are specialists in indigenous knowledge, values, and teachings that are relevant to product research, planning and management decisions and processes. With respect to Anishinaabe knowledge, Geniusz (2009, p. 71) points out

when experimentation is necessary, those living inaadiziwin [way of being] rely on generations of knowledge to make informed decisions about which plant or tree they should use. The results of this informed experimentation is another source of gikendaasowin [Anishinaabe knowledge].

In Pikangikum, it is through these new, collaborative relationships that the Elders envision generating new knowledge, understandings, and increased ability to manage resources. In this manner, my research results support Alexiades' (2003, p. 21) characterization of traditional knowledge that "is continuously generated through the process of contact and exchange between different knowledge systems, including non-indigenous and cosmopolitan scientific knowledge" (Alexiades 2003, p. 21).

As well, Elders were clear that the development of NTFPs should focus on products that increase the community's ability to deal with specific health problems in Pikangikum. In this sense, collaborative product research and development should have clear objectives and purposeful products that might bring healing or nourishment to the community, which reflects Pikangikum Elders understanding of *meecheem* and *mushkeekkeh* as gifts from the Creator. This purposeful product research and development strategy is important since it implies specific objectives and research designs for product research that do not involve random bioassays. In this way, a purposeful research and development strategy mirrors the Cree Anti-Diabetic Project,

which brought Cree Elders, healers and scientists together to jointly design and direct research of anti-diabetic medicines based on traditional medicinal use, rather than use a random bioassay research design (CBHSSJB, 2009; Pierre Haddad, personal comm., Nov. 4, 2009).

Pikangikum Elders' interest in NTFPs with lower levels of transformation such as botanical medicines and functional foods might also reflect their interest in playing a primary role in collaborative planning and research. The greater NTFPs are transformed the less Elders might understand the technical process which would lower their ability to participate or offer guidance. Finally, in terms of product distribution and sale, the idea of purposeful products also implies that partners will have to facilitate or ensure increased access to these products within the community through institutions such as the Northern Store and the Nursing Station or through new institutions.

6.1.3 Value adding

One teaching about the development and commercialization of NTFPs is that these products must be highly valued (*keecheekaykoohn oohnooh*); in economic terms, this means giving a fair value and not selling these products at lower bulk or wholesale prices. In this way, value-adding should be a key element of Pikangikum's NTFP strategy, which Elders indicated by explaining that Anishinaabe value is higher than retail values for certain products, such as sticks of *weekaysh*, partly because community members possess the knowledge of that plant and its multiple uses.

A value adding approach is important since the benefits generated from product research and development are "best captured when source country institutions and companies participate at a higher level in the value chain" (Laird & ten Kate, 2002, p. 276). Marles (2001, p. 58-9) has also pointed out the "need to pay more attention to highly processed products, which provide greater employment opportunities within the community and have low bulk and high value", especially due to the geographic remoteness and higher transportation costs to markets faced by many rural First Nation communities such as Pikangikum. This approach stands in contrast to a large portion of Canada's NTFP industry that typically exports products, including medicinal plants, as raw materials at bulk or wholesale prices, which are then sold back to companies based in

Canada as value added products (Marles, 2001). However, value adding in a way that reaffirms the Anishinaabe value of receiving a high, fair price for NTFPs shouldn't serve the distinct purpose of making a profit, which is inappropriate from an Anishinaabe perspective. In fact, the high value received for these products must support Anishinaabe values and traditional processes such as respect of the plants, Frog and knowledge specialists; maintain Anishinaabe cultural and knowledge; ensure the efficacy of the medicine; and provide a necessary healing or health product to community members and consumers.

To Pikangikum Elders, NTFP knowledge and resources, both common and special, are gifts from the Creator with the purpose of healing illness and increasing one's well-being. Common knowledge and resources, however, are more likely forms of knowledge available to Pikangikum's community-based initiative and sharing with partners. Special knowledge is very confidential and individual in nature, which requires individual willingness and consent, while common knowledge is more readily shared for the benefit of anyone in need. In any case, knowledge and products from an Anishinaabe perspective are inherently valuable and require payment; however, how and to whom payment would occur in the case of common or special knowledge remains unclear. Both forms of knowledge, however, might entail a conceptual conflict between a common and private property rights systems in the case that common Anishinaabe knowledge is transformed into privately owned, scientific knowledge.

Although special medicinal knowledge is generated through traditional Anishinaabe institutions such as dream fasting, Pikangikum Elders didn't express the importance of actually drawing upon these methods. Instead, Elders support the idea of collaborative research and knowledge interfacing between scientific and traditional knowledge systems and experts. Just as Anishinaabe knowledge is central to knowing about, acquiring, and respecting *mushkeekesh* and *meecheem* within the community of Pikangikum, collaborative research could provide necessary non-Anishinaabe knowledge that translates a specific NTFP's cultural and economic value for non-Anishinaabe consumers, thereby increasing the value consumers are willing to exchange for these products. Additionally, knowledge interfacing gives Pikangikum and their partners the means to use scientific evidence to make therapeutic claims on product labels, which is

required under Health Canada policy and regulation for the development and sale of natural health care products (Marles, 2001).

Given the cultural significance of products, however, Pikangikum might equally consider an approach to value adding and product marketing that utilizes Pikangikum's cultural identity as a trademark or cultural indicator much like the specialty cheese or wine industry in Europe (Posey & Dutfield, 1996) or bison farming in White Star, Saskatchewan that uses symbols of regional food and culture in product labeling (CBC, 2010). Collaborative partnerships and product development with Pikangikum Elders might also combine product value adding through scientific research as well as cultural indications and labeling such as indigenous identity and rights, cultural survival, and ecological sustainability. For example, companies partnering with Brazilian communities, such as The Body Shop, Aveda, and Natura, focus on niche markets and advertise these partnerships as corporate social responsibility (Morsello, 2003).

This value-adding approach steers away from other intellectual property rights (IPR) methods such as the patenting of new knowledge, which coincides with Posey and Dutfield's (1996, p. 92) suggestions:

IPR laws are generally inappropriate and inadequate for defending the rights and resources of local communities. IPR protection is purely economic, whereas the interests of indigenous peoples are only partly economic and linked to self-determination. Furthermore, cultural incompatibilities exist in that traditional knowledge is generally shared and, even when it is not, the holders of restricted knowledge probably still do not have the right to commercialize it for personal gain. Furthermore, the lack of economic self-sufficiency of indigenous peoples and the unequal power relations between themselves and the corporate world would make it very difficult for communities to defend their IPR.

Laird and ten Kate further elaborate this issue of property rights that might play a significant role in NTFP planning, research and development with partners:

Intellectual property systems have evolved primarily to serve industrial commercial interests and to emphasize private ownership, in contrast to the collective and communal property traditions of many indigenous and local communities. Geographic indications and trademarks, however, have the potential to respond to the concerns of local and indigenous communities more effectively than do other intellectual property rights. While copyright and patents are intended to reward investments in innovation, geographical indications and trademarks reward [...] producers who maintain a traditional high standard of quality, while at the same

time allowing flexibility for innovation and improvement in the context of that tradition (2002, p. 278).

In fact, one Elder pointed out that it is very important to keep medicinal recipes confidential in product labeling (Elder Mathew Strang, community meeting, Mar. 9, 2011), which coincides with the concept of trademark.

Although my research only scratched the surface of issues related to intellectual property rights, it appears that NTFP planning, research and development in Pikangikum might depend as much upon the negotiation of these issues related to property rights (i.e. private and common property) as those related to the economic and cultural viability of a particular product. Because Anishinaabe knowledge and associated NTFPs are considered common property and gifts from the Creator, transforming local economic objects into a private property or market system may inherently conflict with an Anishinaabe worldview. As Alexiades (2003) explains, the typical movement and transformation of natural resources into economic goods and value occurs such that actors from industrialized regions appropriate public goods found in peripheral zones, add value to these resources, and return private goods to these same non-industrialized regions and communities at a financial gain.

It is also because of this underlying issue of property rights that Pikangikum's NTFP approach might benefit from moving towards botanical medicines or functional foods, which add value using scientific and cultural labeling, rather than seeking to capture value through the IPR regime that emphasizes the privatization and patenting of knowledge, molecules, and inventions. This privatization approach to regulating the flow of economic value, knowledge and products appears to fundamentally conflict with Anishinaabe values, cultural meaning and common property. At the current time, however, it is unknown whether Pikangikum Elders might elect to "utilize western intellectual property rights regimes and other contractual agreements" for their benefit or seek to "develop alternative models to claim and exercise traditional resource rights" (Alexiades, 2003, p. 21-2). In fact, Pikangikum might draw upon a mixture of both these options, such as partnership agreements or contracts, such as the WFRC (2004) and Pikangikum's land use strategy (PFN & OMNR, 2006), and alternative mechanisms, such

as biocultural protocols (i.e. this research) or local community initiatives led by the Whitefeather Forest Management Corporation.

As part of Pikangikum's community-based enterprise approach to natural resource management, NTFP development and production could be integrated with the Whitefeather Forest Management Corporation's forestry production system that should begin within the next two or three years. Just as the Late-Elder Norman Quill taught that Pikangikum needs to develop a different type of forestry, Titus *et al.* (2004) explain how there are various options to integrate NTFP production into forestry management, which range from inactive to active management strategies. Complementary NTFP and forestry operations, however, would need to occur under the guidance of Pikangikum Elders. In fact, community forestry operations might plan for a series of value-added products, such as edible or medicinal tree bark, in addition to conventional timber harvest, but in a way that follows Pikangikum Elders' knowledge regarding the multiple uses of certain trees and plants and low-impact harvesting techniques. In theory, then, increasing the number of uses of trees harvested for commercial purposes should subsequently increase the total economic value of a forest stand or inventory. Also, increasing the diversity of harvesting and processing activities and forest products in Pikangikum should increase the livelihood opportunities for community members. In some cases, however, a conflict between different values or uses of the land may be inevitable.

In a similar manner, Belcher, Ruiz-Perez, and Achdiawan (2005) describe different and non-exclusive NTFP strategies such as subsistence, supplementary, integrated, natural specialized and cultivated specialized. Although no member of Pikangikum maintains a complete subsistence strategy, many families continue customary activities that supplement cash incomes within the community's mixed economy. The Whitefeather Forest Management Corporation, therefore, might develop an NTFP "integrated strategy" within the primary forestry production system. In Pikangikum's case, therefore, NTFPs and their production is a complex matter that requires a production-to-consumption system perspective, which I will now discuss.

6.1.4 Subsistence and commercial NTFPs

This research strongly suggests the importance of conceptualizing NTFPs on a spectrum between subsistence and commercial (see Figure 5) based on an understanding of a NTFP production-to-consumption system (Belcher, 1998), even though a large part of the NTFP literature defines NTFPs by phylogenetic grouping or functional category (Belcher, Ruiz-Perez & Achdiawan, 2005).



Figure 5: Subsistence and commercial NTFPs. This figure conceptualizes the spectrum between subsistence and commercial NTFP production strategies in Pikangikum First Nation.

In Canada, the use and development of NTFPs is fundamentally structured by the Canadian legal and policy context in which Aboriginal rights have tended to confer resource use rights for subsistence (i.e. personal use, gifting and trading within kinship networks), but not commercial purposes (i.e. sale inside or outside of community for cash currency). However, there is almost no direct regulation of medicinal and edible NTFPs, conventionally defined, in the province of Ontario, even though general laws and regulations apply to commercial NTFP production (Hillyer & Atkins, 2004a; Hillyer & Atkins, 2004b). Natural health care products, on the other hand, must be registered with Health Canada, which reviews the scientific research of a particular product and authorizes scientific therapeutic claims on the product label (Marles, 2001). Thus, while subsistence activities are unregulated as basic Aboriginal rights, federal and provincial policy and law would likely regulate the harvest, production, and sale of NTFPs for commercial purposes outside the community.

In addition to this legal argument, this spectrum suggests that “NTFPs must be considered in terms of systems” (Belcher, Ruiz-Perez and Achdiawan, 2005, p. 1444), which distinguishes between subsistence and commercial production strategies that involve different actors and varying lengths of production-to-consumption value chains.

On the one hand, Pikangikum's land-use strategy explicitly separates "customary activities" and "non-timber forest products" (*nahnahtookkaykoon kahohcheehsheecheekahtayk eemah ahkeeng*) (PFN & OMNR, 2006, p. 41). Although this separation is based on Aboriginal rights, it also reflects differing production strategies, legal implications, and distances from production to consumption. Pikangikum's household economic production strategy, such as moose hunting or harvesting of medicines, differs greatly from, but would work in parallel, with a community-enterprise production approach if Pikangikum was to develop community-based NTFPs.

On the other hand, a production-to-consumption perspective accepts a network approach to value creation (Belcher, 1998) and considers economic value as co-produced by network actors (Ramirez, 1999), which is particularly germane given Pikangikum's partnership approach that seeks supportive partners and resources such as intellectual and financial resources to advance its community-based planning and development. So, the nature and complexity of network actors of the production-to-consumption system will change through the process of developing of NTFPs, previously located within the community, with partnerships for sale nationally and internationally. The scale of production would be an important dimension in Pikangikum's NTFP production approach, which supports Belcher (2003) and Davidson-Hunt, Duchesne, and Zasada (2001) who both emphasize scale as a defining feature of NTFPs. While members of Pikangikum have held licenses for commercial trapping, fishing and wild rice production, these activities occurred at the scale of the trapline and kinship group, which are headed by Elders and resource stewards. For example, the Late-Elder Norman Quill held a trapping license for a Registered Trap Line on the east side of the Whitefeather Forest. With recent land-use planning, however, commercial activities such as forestry and NTFPs would occur at the scale of the community and Whitefeather Forest through the Whitefeather Forest Management Corporation.

In sum, the planning, research and development, and commercialization of NTFPs would necessarily involve a greater array of partners, such as government departments, corporations, and universities, because of the legal nature of commercial NTFPs as well as the increase in scale and complexity of the production-to-consumption system from

subsistence to commercial NTFPs. For this reason, my research investigated the nature of appropriate partnerships and benefit sharing in the case that Pikangikum First Nation was interested in proceeding with commercial NTFPs. Thus, in the next two sections, I expand my analysis and discussion of NTFPs to include my research findings on partnerships and benefit sharing that I presented in Chapter 5.

6.2 Partnerships

In Chapter 5, I presented the perspectives of Elders and leaders on partnerships for NTFP planning, research and development. In fact, these perspectives, norms and values represent Pikangikum's terms of engagement with state, non-governmental and corporate actors and the community's vision of partnership success. This is important because different organizations will have different perspectives of appropriate partnerships and indicators of success. It is important to note, however, that these principles *do not* represent *actual* characteristics of partnership success, which has been a topic of research elsewhere (Mohr & Spekman, 1994; Sexias & Berkes, 2010).

In this section, I discuss and analyze if and under what conditions Pikangikum First Nation and the Whitefeather Forest Management Corporation are seeking to engage with regional, national and international markets and actors with the goal of commercializing NTFPs such as natural health care products and functional foods. This is an extremely important research question since it is easy to assume what an indigenous group might expect or desire from resource commercialization without the various stakeholders actually consulting or working in partnership with a group, such as the case of the San and the commercialization of Hoodia (Vermeylen, 2007).

6.2.1 Partnership type

Partnerships are becoming a popular model of natural resource management and development to governments, such as the Government of Ontario (2000), as well as First Nations (Assembly of First Nations, 2011). It is easy to assume, however, that a certain type of partnership will work for a particular set of circumstances and/or stakeholders. For this reason, it is very important to understand that partnerships need to be collaboratively defined and negotiated by stakeholders. In Pikangikum's case, however,

the community is looking for very specific types of partnerships, which they call “working relationships.” These might also be called “operational partnerships” (Mitchell, 2002) for planning, research and development activities, which involve two-way flows of information and non-financial resources. But collaboration is also important to Pikangikum, especially in terms of planning, decision-making and mixing of knowledge systems, which reflects the concept “collaborative partnerships” that involve significant power sharing (Mitchell, 2002) and consensus decision-making (Story & Licker, 1997). This is not to say, however, that Pikangikum isn’t interested in other types of partnerships. Indeed, the community expects various types of partnerships such as “contributory/supportive” relationships (Mitchell, 2002). However, Pikangikum is clearly against what Mitchell (2002) calls “consultative partnerships” in which government, university or corporate entities lead projects and control the development, access to, and benefits derived from resources from the Whitefeather Forest without collaborating or operating together in partnership. This undesirable form of participation involves non-local proponents that seek input from local stakeholders, but do not share decision-making or power.

The Government of Ontario (2000) additionally sub-defines collaborative partnerships as “strategic”, “comprehensive” and “joint venture” partnerships. At the moment, Pikangikum highly regards and wishes to continue their comprehensive partnership with the District OMNR. Although this partnership is particularly important at the moment for the processes of Forestry Management Planning and Dedicated Protected Area Planning, this relationship will be equally important for the planning and development of commercial NTFPs, especially because of the OMNR’s legal jurisdiction over the administration and development of natural resources on public lands, such as the Whitefeather Forest.

Developing commercial NTFPs, however, will necessarily require a broader array of partners with research and business/marketing expertise. Indeed, Pikangikum Elders and leaders see the value in forming *networks* of experts, knowledge and resources unlike the Gitga’at First Nation that envisions building linkages between their social enterprise and other local institutions, rather than seeking business partnerships with organizations outside of the community (Turner, 2010). As in the case of many of the most successful

United Nations Development Programme (UNDP) projects, Pikangikum wants to form partnership networks, rather than seek isolation from regional, national and international economies (Sexias & Berkes, 2010). In fact, Pikangikum Elders and leaders want two-way, reciprocal partnerships that seek to balance power, decision-making and the sharing and exchange of knowledge and resources (Sexias & Berkes, 2010, p. 202-3). Moreover, Pikangikum's partnership approach proposes to build on cultural values and resources through social enterprise development (Berkes & Adhikari, 2006). In short, Pikangikum's partnership approach suggests that the development of community-based NTFPs would generate a network and diversity of partners (Berkes & Adhikari, 2006; Sexias & Berkes, 2010) that include supportive, operational and collaborative partners (Mitchell, 2002) such as the OMNR, universities, corporations and other government bodies.

In terms of research, Pikangikum's might expand its current research partnerships with various universities through the WFRC (2004) to include the specifics of NTFP research. On the other hand, the current Pikangikum-OMNR partnership might jointly seek out financial capital to contract out research and avoid additional partnerships altogether, which would address Pikangikum's shortage of particular scientific knowledge and technologies while increasing their control of intellectual property. In any case, Pikangikum wants strategic partnerships with collaborative and operational characteristics in a way that keeps Elders in the "driver's seat". In the event that commercial materials, knowledge and/or innovations emerge out of research activities, Pikangikum would then expect joint ownership of intellectual and biogenetic property through joint venture partnerships. This partnership approach reflects the James Bay Cree Anti-Diabetic project in which multiple institutions partnered for a period of about 7 years of research at which time discussion began regarding the potential commercialization of research through joint venture (CBHSSJB, 2009).

In other words, the development of a diversity of partnerships and network of partners will depend, in Pikangikum's case, on a procedural perspective to the development of NTFP planning and research partnerships. For example, Pikangikum expects strategic and/or comprehensive partnerships for initial stages of product planning, research and policy development of possible forest resources. However, if certain knowledge, innovation and products are generated with commercial potential,

Pikangikum Elders and leaders preference for joint ownership would suggest that partners should seriously consider a joint venture business model at a later stage of product development with the purpose of generating, protecting and distributing financial benefits of NTFPs amongst commercial partners. At any rate, Pikangikum wants to develop new partnerships with corporate partners who can support Pikangikum to identify and access markets, work on product design, and develop the community's capacity in NTFP business management.

6.2.2 Collaborative partnerships and knowledge interfacing

From the perspective of Pikangikum Elders and leaders, collaborative partnerships imply processes of institutional collaboration, community-based decision-making, and knowledge interfacing. The development of partnerships for NTFP planning, research, development, and possible commercialization in Pikangikum clearly depends on seeking permission or *free, prior informed consent* (FPIC) as well as developing a working relationship that involves respectful, honest, and diligent collaboration in which community Elders, leaders, and the broader community are in the “driver’s seat.”

It is clear that “consent has been identified as a basic requirement” for research and commercialization projects that involve biogenetic and traditional knowledge resources (Rosenthal, 2006, p. 120). However, there has been a fundamental shift “away from the traditional model of individually oriented ethnobotanical studies for bioprospecting that involves indigenous communities toward one that is structured around institutional relationships” (Rosenthal, 2006, p. 119). Indeed, researchers and companies are increasingly adopting collaborative and ethical approaches in their work with indigenous peoples (Davidson-Hunt & O’Flaherty, 2007; Laird & ten Kate, 2002; Piquemal & Nickels, 2002). Rosenthal (2006, p. 119) argues, forming institutional relationships (i.e. partnerships) with “preexisting and broadly representative indigenous governance” is a “key factor in determining the feasibility and integrity of prior informed consent for the use of traditional knowledge.”

In a similar way, Pikangikum’s perspective on partnerships, such as asking permission and working relationships, supports this trend in research and development that seeks FPIC through institutional relationships between organizations and indigenous

governance structures. On the other hand, Pikangikum's perspective of partnerships, collaboration and FPIC goes beyond Rosenthal's (2006) conceptualization of "institutional relationships", which more closely reflects "consultative partnerships" (Government of Ontario, 2000) since they fail to establish an ongoing relationship and increase collaboration, power sharing and decision-making with the community. Fundamentally, however, Rosenthal (2006) fails to recognize institutional relationships in which community members, through their indigenous governance structures, are in the "driver's seat".

In my research, Pikangikum Elders showed an *initial* and *cautious* interest in this new area of bioeconomic development and cultural revitalization for their community in which the community expects to be significantly involved in the process of decision-making, project design, and product development. For research or economic activities, Pikangikum is looking for partners to *continually* and *iteratively* seek understanding about the level of acceptance, participation, and consent with community Elders, leaders, and the broader community regarding specific projects and project characteristics, procedures and benefits. From Pikangikum's perspective, "prior informed consent is based on the concept of an *ongoing process* that begins with the initial contact and continues throughout involvement in the project; it is through this continuing process of communication and information sharing that "subjects" are able to *continue* to choose to participate in research involving themselves" (Bannister in Rosenthal, 2006, p. 128). This signals a need to consider prior informed consent in the context of longer-term working relationships – at least in Pikangikum's case of NTFP development – that moves beyond conventional consultation approach of governments, universities, and corporations.

In Pikangikum's case, developing a working relationship and obtaining FPIC will have to be developed in a similar way as other university researchers have collaborated with community members through local institutions such as the Chief and Council and the Whitefeather Forest Management Corporation (Miller, 2010, p. 51). Unfortunately, natural resource development in Ontario has often proceeded and continues to proceed without the federal and provincial government's recognition of Aboriginal rights and consultation, which has become a responsibility of the government, or "honour of the Crown," and positive constitutional duty under Canadian common law (Teillet, 2005).

So, in the context of NTFP research and business partnerships, it is not appropriate in Pikangikum's case to conceptualize FPIC as a process of obtaining consent from community representatives or "consultation" that Pikangikum has associated with INAC, the OMNR, and other research institutions.

Even though Rosenthal's perspective is useful in cases in which proponents require FPIC from indigenous groups that are more geographically distributed and have broader governance structures, he overemphasizes the strength of "Western-style" indigenous governance and consent through broadly representative political institutions and representatives, rather than community-scale, collaborative and operational partnerships. In response to Rosenthal's perspective, Bannister (in Rosenthal, 2006, p. 128), suggests that while it is beneficial to "work institutionally rather than individually," there is a "potential distancing of the political decision makers from the ecological and cultural contexts and sources of the plants and knowledge that they aim to protect and/or negotiate benefits."

Indeed, Rosenthal (2006) and Soejarto *et al.* (2005) describe large-scale ethnobotanical projects that span large geographical areas, many indigenous communities, and created agreements with broad indigenous political institutions that are assumed to be representative of the entire geographic and cultural area. On the contrary, Pikangikum is seeking collaborative and community-controlled research at the scale of their community and traditional territory that "involves a partnership of equal parties in which local communities are treated as expert collaborators" (Posey & Dutfield, 1996, p. 140). So, similar to the Mohawk of Akwesasne, Pikangikum has the "zeal to deal" with NTFP partners, which refers to the desire to cooperate, solidify working relationships between partners and use consensus decision-making or mutual agreement at a community level (Story & Licker, 1997, p. 151).

Pikangikum Elders' vision of collaborative and operational partnerships extends to knowledge integration as well as institutional collaboration and decision-making. Pikangikum Elders are strongly interested in natural health care products that utilize knowledge interfacing between science and traditional knowledge, but that respects both cultural and knowledge traditions. The NTFP literature, however, continues to lack any consideration of indigenous knowledge, collaboration and partnerships, innovation, and

intellectual property rights. This might be explained by the dominance of development and conservation objectives (Belcher, 2003) that rarely consider indigenous perspectives. As such, stakeholders such as development organizations seek to improve livelihoods by encouraging small-scale entrepreneurship and products used at the household level, while conservationists seek to encourage small-scale, benign harvesting and sale of products which is assumed to add value to forests and counteract forestry development (Belcher, 2003). While these objectives of economic development and conservation are not unimportant to Pikangikum Elders, it is clear that partnerships, power sharing, cross-cultural learning and knowledge interfacing are equally important to the community's NTFP approach. Thus, product development would involve processes of innovation that build on Pikangikum's traditional knowledge of specific products through scientific exploration and collaborative research.

Pikangikum's partnership approach also offers a critique of many conventional bioprospecting and ethnobotanical projects that assume the primacy of scientific knowledge, fail to collaborate with traditional knowledge experts, and opportunistically draw upon or attempt to revalidate traditional knowledge within a scientific paradigm (i.e. Rosenthal, 2006; Soejarto *et al.*, 2005). In Pikangikum's case, Elders seek meaningful participation as project and research advisors so that they might provide important Anishinaabe teachings and knowledge related to biology and ecology as well as cosmology and morality, which are seldom used in research, development and commercialization projects. In fact, this research suggest that Pikangikum's traditional knowledge is just as important for understanding project and research design, objective definition, appropriate means of production, avenues of value adding and commercialization, and guidance of partnership structure and benefit sharing. Although third parties might feel this form of collaboration with traditional knowledge experts would increase transaction costs, it is also potentially valuable to the process of innovation, research, and product development as well as ensuring continued participation of the community.

Pikangikum Elders' vision of research and commercialization involves expert interfacing (i.e. scientists and Elders) and knowledge blending through collaboration. In fact, Elders are excited about bringing traditional and scientific knowledge experts

together to create novel solutions and hybrid forms of knowledge. In Pikangikum, there have already been several successful collaborative research projects focused on woodland caribou (O’Flaherty, Davidson-Hunt and Manseau, 2007), fire ecology (Miller, 2010), and forestry planning (Shearer, 2008). This form of knowledge collaboration has been described by several researchers such as the case of the James Bay Cree Anti-Diabetic Research Project that assembled a research team that included scientific and traditional knowledge experts and resulted in jointly owned knowledge (CBHSSJB, 2009).

Torri and LaPlante (2009, p. 2) equally describe “how local [Indian] communities, in a network of supportive partnerships, draw knowledge for [*sic*] others, combine it with their own knowledge and then innovate in their local practices.” This approach to the design of bioprospecting research and projects gives communities a greater role and level of self-determination to draw on scientific knowledge in a network of supportive partnerships to generate local solutions. Altman (2001, p. v) has similarly referred to new, paradoxical hybrid economies “made up of market, state and customary components” and “science, social science and Indigenous knowledge systems.” According to Simonelli (in Rosenthal, 2006, p. 136, emphasis in original), “until the scientific community reevaluates the philosophy driving the process we [scientists] will fail to receive the *informed permission* that we need to enter indigenous territories and carry out our *jointly* constructed and mutually beneficial projects.”

6.2.3 Anishinaabe knowledge, knowledge sharing, and property rights

My research has documented the idea that it might be appropriate for some First Nation communities, such as Pikangikum, to share certain kinds of information and traditional knowledge related to NTFPs *under certain conditions*. In the case of Pikangikum, all NTFPs and associated traditional knowledge originate with the Creator; however, ‘common’ knowledge is considered collective property, while ‘special’ knowledge is considered individual property. In this sense, common knowledge is more likely to contribute to NTFP planning, research and development since it is more readily shared within the community and with non-community members. Special knowledge, however, is individually held and should not be accessed, shared or used for NTFP research and development unless that individual consents and participates.

Pikangikum's willingness to share common knowledge under certain conditions positively compares to Sexias' and Berkes' (2010) description of successful partnerships that involve a two-way flow of information as well as Story and Lickers' (1997) description of the Mohawk of Akwesasne's willingness to promote "freedom of information" in a partnership with forestry industry representatives and government agencies in the Eastern Ontario Model Forest project. What is inappropriate in Pikangikum's view is when partners use that shared information for their own benefit or usurp ownership of that knowledge. From Pikangikum's perspective, Anishinaabe knowledge should be used for the common good of the community and the Anishinaabeg, instead of third parties taking possession of a "public good" and transforming it into a private good for the financial gain of an individual or corporation.

The use of common Anishinaabe knowledge, however, introduces additional questions about collective property rights beyond the Whitefeather Forest. As Elder George B. Strang explains

There are a lot of people who have knowledge in this Indian medicine, not just Pikangikum. People all over the north know about these things (interview, Oct. 6, 2009, translated by Gerald Peters).

Can Pikangikum use knowledge that might also "belong to" other boreal forest communities (i.e. Cree peoples)? In other words, should other boreal indigenous groups be included or excluded from benefits generated through the Whitefeather Forest Initiative because they were also gifted these NTFPs and knowledge by the Creator? As in the large ICBG bioprospecting projects in Mexico and Peru (Rosenthal, 2006), it might be necessary to involve broader institutions, such as Nishinawbe Aski Nation, which represent more Anishinaabe communities. On the other hand, "controlling the appropriation of knowledge through allocating exclusive property rights on the basis of ethnicity is neither practicable...nor desirable" since it can encourage animosity and tension between communities and/or ethnic groups (Vermeulen, 2007, p. 431).

The point of contention, however, may not be the transformation of common property knowledge and products into private property. Rather, the fundamental issue of commercialization may depend on *who* controls this transformation and *who* is allowed to benefit. If privatization serves Anishinaabe values of cultural preservation, increases

Pikangikum's ability to maintain their stewardship of their resources that were gifted by the Creator, uses economic transactions as a means of cultural respect and valuation, and creates products for the health and wellbeing of all people, then privatization may not conflict with Pikangikum's worldview. At any rate, issues of property and collaboration remain unclear and will require further discussion within Pikangikum and with partners.

6.3 Benefit sharing

For NTFP research, development and commercialization involving First Nation communities, it is clear that "benefit sharing with communities must take place" and "capacity must be built so that First Nations can lead research" (Howe, 2005, p. 9). These normative statements, however, do not represent the status quo in product research and commercialization in relation to First Nations in which there is "a great deal of concern in Aboriginal communities that pharmaceutical companies might seek to profit from the development of products based on traditional remedies, without any recognition or financial compensation for the inventor of the remedy" (Marles *et al.*, 2000, p. 7).

With benefit sharing becoming increasingly important in the context of bioprospecting projects, Vermeulen (2007) identifies various dimensions of benefit sharing arrangements including the 1) type of benefits; 2) degree of benefit generation and sharing; and 3) distribution of benefits (i.e. who are the beneficiaries). In this research, Pikangikum Elders identified their views on the type and degree of benefit sharing that should occur through NTFP planning, research, and commercialization. They also commented occasionally on *who* should benefit, but they did not offer ideas about *how* these various, potential benefits might be distributed. It appears that Elders and leaders are aware that this final practical question must be worked out through working partnerships.

6.3.1 Types of benefits

With respect to the types of benefits, Pikangikum Elders and leaders expect an array of economic and non-economic benefits from NTFP planning, research, and potential commercialization. In this manner, Pikangikum's perspective is very similar to the post-hoc perspective of the San of southern Africa who entered into a benefit-sharing

agreement with South Africa's Council for Scientific and Industrial Research for the commercialization of Hoodia (Vermeulen, 2007). In this case, although the agreement was an improvement over previous practices of uncompensated appropriation of indigenous knowledge, it was established before exploring what kinds of benefits the San considered meaningful and useful. As a result, this benefit sharing agreement "mainly regulates an economic relationship; the main concern was redistribution of money and no attention was given to the social impacts of the agreement" (Vermeulen, 2007, p. 432). When questioned after the establishment of the agreement, the San stated that they would have been equally interested in social or non-financial benefits, such as an increase in decision and power sharing, capacity building and education, and trust funds or infrastructure projects, rather than direct payments to unaccountable leaders.

In a very similar way, members of Pikangikum are expressing a strong desire for "distributive justice" (financial and non-financial benefit sharing), "procedural justice" (participatory and joint collaboration) and "interactional justice" (cautious, relation-based approach that aims to increase capacity and self-determination) (Vermeulen, 2007). With Pikangikum, however, there is even a broader concern for the financial benefits as well as the non-financial benefits – social, cultural, environmental – of NTFP planning, research and potential commercialization.

6.3.2 Non-financial benefit sharing

Like many other indigenous communities, Pikangikum appears to be just as interested in the non-financial benefits as financial benefits that might accrue from research and commercialization of NTFPs and associated traditional knowledge, which reflects an increased expectation in the literature of a much greater degree of benefit sharing. For example, Turner (2010) demonstrates how the Gitga'at First Nation is primarily interested in maintaining customary activities and knowledge while providing employment opportunities through local ecotourism development. Also, a workshop involving B.C. First Nations and other natural health care product stakeholders reported that among those individuals who accepted the idea of commercialization in principle, there was also a need to proceed in a culturally respectful way that revalues and safeguards traditional knowledge, plants and ecosystems, rejuvenates the use of

traditional health care approaches, and serves as a medium of economic development (Howe, 2005, p. 17). This strongly reflects Pikangikum's view on benefit sharing and speaks to the integrated and holistic vision of indigenous communities in their approach to economic development and benefit sharing.

The creation of jobs and training opportunities is one of the core non-financial benefits that Pikangikum strongly desires, which implies both short- and long-term benefits. Pikangikum might benefit from the immediate creation of jobs on planning and research projects or longer-term training opportunities such as scholarship opportunities for university and college education, as was the case in the James Bay Cree Anti-Diabetic project (CBHSSJB, 2009). Capacity building is a principle mentioned very commonly in the biogenetic research and commercialization literature. As Howe (2005, p. 14) reports, there is a "need to build capacity for research within First Nations communities so that First Nations communities can lead the research" such that "outside experts [...] assist with, not lead, the research." Capacity building would also be particularly important in the context of NTFP value-adding such as scientific research and marketing knowledge (see section 6.1.3).

Leading research is not always possible, however, given the current lack of scientific research and marketing capacity in communities such as Pikangikum. It is for this reason that partnerships must be structured in such a way that collaboration, sharing of expertise and resources, cross-institutional and cross-cultural learning, and providing access to policy and institution "backdoors" might iteratively build individual and community capacity with communities such as Pikangikum. As is the case with other Aboriginal partnerships in Ontario, Pikangikum is seeking increased access to markets and stronger business capacity that facilitates sustainable community development (Government of Ontario, 2000, p. 15-6). These three dimensions depend on developing "management expertise and technical know-how," "developing long-term employment and skill-development opportunities," and "helping to build the institutions and infrastructure that contribute to economic self-sufficiency and control" (Government of Ontario, 2000, p. 15). In this sense, Pikangikum is echoing the trend across the province in terms of establishing partnerships with the purpose of generating local and community benefits.

Finally, Pikangikum's vision of integrated and multiple benefits reflects the literature on First Nation economic development. First Nations' motivations for economic development are diverse including a desire for increased land tenure and resource ownership, employment and capacity building opportunities, community self-determination, cultural revitalization and the creation and administration of social and health care programs (Anderson *et al.*, 2006). Pikangikum is clearly following this path of holistic, community-based economic development in the potential area of NTFP planning, research and commercialization. The support of customary activities and knowledge, the creation of employment and capacity building opportunities, and healing and health benefits reflect the holistic and integrated perspective that community members have toward the type of benefits generated and the degree of sharing between partners of NTFP research and development projects.

6.3.3 Financial benefit sharing

Financial benefits are also an important consideration for Pikangikum. Posey & Dutfield (1996) have described various financial benefits that might flow to indigenous communities through the commercialization of biogenetic resources and associated traditional knowledge including up-front payments, royalties, funds, and joint ownership. If traditional knowledge and resources only contribute at an early stage of research, financial compensation tends to take the form of royalties of 1-5 %, while if knowledge and resources result in a product, royalties could be as high as 10-15% (Posey & Dutfield, 1996). Pikangikum Elders, however, have identified that they desire full involvement, consensus decision-making and the majority of financial benefits in the development of new forest products. This means partnerships, planning and business endeavours will be jointly owned and the profits equally shared (i.e. 51/49 shares) through a working relationship.

As such, Elders and leaders expect a greater share of financial benefits than mere royalties or milestone payments, which strongly parallels the James Bay Cree Anti-Diabetic Research Project (CBHSSJB, 2009). In this traditional medicinal and scientific research project two Cree communities (two more communities joined at a later date) were granted 51% ownership while the four partnering universities maintained a 49%

share of ownership and investment, if commercialization of resources was to occur. This project appears to have spearheaded, at least in Canada, the concept of joint ownership of intellectual property through collaborative research and might provide a model for Pikangikum to consider.

This focus on joint financial ownership and benefits, however, should not negate other financial benefits such as milestone payments, royalties or Elder honoraria in Pikangikum's case. In fact, honoraria for Elder participation and guidance have been a central part of Pikangikum's initiative and planning activities. Therefore, smaller financial benefits should not be underestimated in the context of biogenetic research and commercialization projects.

6.3.4 Partnership and benefit sharing agreements

Successful partnerships depend on both formal and informal relationships and agreements (Sexias & Berkes, 2010). Formal agreements, however, appear to take on extra importance in the area of commercial NTFPs and associated traditional knowledge such as legal contracts, agreements, and memorandum of understanding (Posey & Dutfield, 1996). In fact, "biodiversity prospecting contracts (BPCs) are the most frequently used tool for establishing formal legally binding relationships between providers and users of genetic resources" (Tobin, 2002, p. 287). These are critical pieces of partnerships given the legal nature of activities including planning, research, development and commercialization of natural resources at international, national and regional levels of administration, even though the general sentiment in Pikangikum is that written agreements are not particularly valuable. In Pikangikum, ethical action is the most important component of maintaining good relations; however, Alex Peters did state that agreements are important given their importance to non-Aboriginals (conversation, Oct. 26, 2009). Nonetheless, partnership agreements are an important aspect of partnerships since they represent a goal and outcome for partners to negotiate expectations, objectives, rights and responsibilities (Tobin, 2002).

Agreements are also important at early stages of partnership formation and later stages of business, such as product research, marketing and sale, because they give a First Nation greater control over information, knowledge and innovations generated through

joint work or research (Posey & Dutfield, 1996). This was the case with the Iroquois Cranberry Growers (ICG), a community-based agriculture enterprise of Wahta Mohawk First Nation, which formed a research relationship with the Horticultural Research Institute of Ontario (HRIO) and the Ontario Food Technology Centre (OFTC) (Government of Ontario, 2000). At first, the ICG didn't develop an agreement with the HRIO, which resulted in the ICG losing a degree of control over intellectual resources generated in the partnership process. Because of this experience the ICG subsequently developed an agreement with the OFTC, which gave the ICG more control and proprietary rights over information and knowledge.

Similarly, an agreement was created as part of the research project on liyiyiu (Cree) anti-diabetic plants with the purpose of describing the project and its objective and setting out the roles of partners, but most importantly, setting “out who can use the information that the project produces,” and describing “the ways that liyiyiu ownership of their traditional knowledge will be protected” (CBHSSJB, 2009, p. 1). Thus, “as trade develops beyond local and regional markets it becomes ever more sophisticated and relationships between actors are likely to shift from informal agreements to formalised arrangements circumscribed by contracts and memoranda of understanding” (Belcher & Schreckenberg, 2007, p. 359), which is very important to communities such as the Wahta Mohawk First Nation, Mistassini First Nation, or Pikangikum First Nation, even though Pikangikum Elders and leaders emphasize ethical action or legal accountability.

6.4 An Anishinaabe moral economy

In this final section, I discuss and analyze my research findings and Elders' teachings through the lens of moral economy. First, I argue that Pikangikum's NTFPs are culturally meaningful products that are embedded within Pikangikum's social and economic system or moral economy. Consequently, Pikangikum Elders expect their moral economy, knowledge and cultural meaning to extend into commercial NTFP planning, research and development, which must cyclically support and reaffirm the local system of values and meaning, economic exchange, and social relations, despite their expectation of significant cultural changes. Second, I argue that Pikangikum's partnership and benefit-sharing approach exemplifies a possible blended or “hybrid” solution

between customary, state, non-governmental, and market systems. Elder guidance and teachings will need to significantly inform product research and development through respectful, collaborative and power sharing partnerships with universities, government and/or corporations. Finally, I argue that Pikangikum's approach to community-based NTFPs, partnerships, and benefit sharing arrangements represents a conceptual bridge between the typically dichotomized moral and political economy perspectives. In Pikangikum's case, these are non-exclusive perspectives through a collaboration of values and working relationships with government, universities and/or corporations, instead of Pikangikum's indigenous moral economy and capitalist political economy coming into conflict.

6.4.1 Culturally meaningful and embedded products

It is very important (*keechekaykooohn oohnooh*) that these plants are highly valued (Late-Elder Norman Quill, interview, Aug. 12, 2009, translated by Paddy Peters).

Pikangikum's NTFPs are culturally meaningful and embedded products within a traditional and customary system, but how might Pikangikum's cultural meaning, traditional knowledge and Elders' teachings inform commercial NTFP development? As the Late-Elder Norman Quill mentions above, the Anishinaabe "value" of these things that come from the land is central to the development and production of commercial NTFPs in Pikangikum First Nation. This value has various dimensions including economically valuing these plants, but also culturally and ecologically valuing these plants. In fact, Pikangikum Elders' holistic perspective does not separate these ways of valuing things from the land.

In a general sense, this research supports the growing body of literature that advocates for the inclusion of Aboriginal values in natural resource development and management (Sapic, Runesson & Smith, 2009; O'Flaherty, Davidson-Hunt & Manseau, 2007; O'Flaherty, Davidson-Hunt & Miller, 2009). While Ontario forestry management policy defines Aboriginal values as natural features such as archeological sites, cottages, and animal calving areas, these values are better described as holistic and integrated within a system of cultural meaning and practices (Sapic, Runesson & Smith, 2009) as well as an indigenous knowledge system (O'Flaherty, Davidson-Hunt & Manseau, 2007;

O’Flaherty, Davidson-Hunt & Miller, 2009). More specifically, botanical meaning for the Anishinaabeg is highly related to knowledge, cultural practices and meaning, procedures and protocols (Geniusz, 2009), and a holistic worldview (Davidson-Hunt *et al.*, 2005). In Pikangikum, intangible values and cultural meaning are equally important for the development of commercial NTFPs. These “things from the land” are not simply raw materials from a natural resource development perspective. Unlike many NTFP partnerships in the Brazilian Amazon that “involve only direct acquisition of forest products” (Morsello, 2003, p. 488), stakeholders or partners will need to consider Pikangikum’s things from the land as culturally meaningful and embedded within the process of product planning, design, research and development.

Despite their importance, debates regarding the commercialization of NTFPs have tended to converge around issues of ecological sustainability (Belcher & Schreckenberg, 2007; Turner, 2001) and economic and livelihood opportunities for marginalized peoples (Belcher, Ruiz-Perez & Achdiawan, 2005; Belcher & Schreckenberg, 2007; Marshall, Newton & Schreckenberg, 2003) without any mention of indigenous values or community objectives. For the purposes of community-based NTFPs and social enterprise, however, a greater understanding of the cultural context, values and meaning of these products is needed. In fact, the basic premise of the moral economy and economic anthropology literature is that social relations, which include economic exchanges, are guided by cultural values and meaning, practices, and institutions.

Values shape the commercial activities in all societies. In fact, “commodities, like persons, have social lives” (Appadurai, 1986, p. 3). This research supports this idea by showing how distinct cultural values shape specific economic activities at the local and customary level, which might shape community engagement and commercial activities within government policy and/or market economy. Even if we assume that all commodities, or economic objects, have social lives, there is an important conceptual distinction to be made between customary and market values based on the nature of the social relations and distance of economic exchanges. Alexiades (2003) alludes to these distinct social systems in relation to the commercialization of indigenous knowledge and resources:

When knowledge, cultural artifacts or other resources join transnational flows, they become detached from a particular place and context and eventually become re-attached to other, at time geographically, culturally or socially distinct social systems. In doing so, their social and economic value often changes; in other words they are fundamentally transformed (Alexiades, 2003, p. 18).

On the one hand, economic exchanges and value are localized for certain objects, such as *mushkeekkeh* and *meecheem*. On the other hand, economic exchanges that occur over larger expanses of land and groups of people have led to more impersonalized creation of value called the market economy. In both cases, Pikangikum has a long history of consuming directly from the land as well as providing commodities to regional and international markets such as fur pelts, wild rice, and pickerel. With greater social distance, or value chains/networks, between production and consumption, economic exchange has typically been characterized by single values such as financial profit. In smaller communities, on the other hand, economic exchange and value can often be considered a “total phenomenon” (Mauss, 1967) or “embedded” within social and technical arrangements (Scott, 1976) and a local system of gift exchange, social solidarity and reciprocity (Argumedo & Pimbert, 2010; Mauss, 1967; Sahlins, 1972). This line of thinking resurrects the substantivist-formalist debate in economic anthropology (i.e. Sahlins, 1972).

More recent debates are framed between modernity and dependency perspectives (Anderson & Bone, 1995). In this theoretical context, indigenous or peasant engagement with market economies is often characterized as spurring cultural erosion (Argumedo & Pimbert, 2010), inducing societal degeneration, and tarnishing human values (Mies, 1997), which reflects the position of dependency theorists. On the other hand, the NTFP literature until recently has been marked by an acceptance of progress through economic development (Marshall, Newton & Schreckenberg, 2003) or the modernity perspective. This stream of optimism has suggested that Aboriginal economic engagement with the “new and emerging” NTFP market economy might improve livelihood opportunities (Duchesne, Zasada & Davidson-Hunt, 2000; Emery 2001) while potentially increasing forest and conservation values (Belcher & Schreckenberg, 2007). More recent discussions regarding the commercialization of NTFPs have begun to more completely and critically consider the factors and constraints influencing the project success, that is,

an increase in socio-economic status and ecological sustainability (Belcher & Schreckenber, 2007; Marshall, Newton & Schreckenber, 2003).

In Pikangikum, economic transactions of most NTFPs and associated traditional knowledge, including *mushkeekkeh* and *meecheem*, have remained within the customary sphere of economic activity, which implies that commercialization of NTFPs will disembed these NTFPs from the local cultural and economic system. As Turner (2001, p. 45) explains, “the concept of commercial exchange is not novel. However, the prospect of large-scale global marketing of these products presents major concerns for both Aboriginal and non-Aboriginal people alike.” Marles *et al.* (2000, p. 7) concurs when he points out that Aboriginal communities of the Canadian boreal forest are significantly concerned “that pharmaceutical companies might seek to profit from the development of medicines based on traditional remedies, without any recognition or financial compensation for the inventor or the remedy.”

As the two statements above suggest, First Nation communities are obviously reluctant to produce NTFPs, especially medicines, for external markets. This reluctance is historically well-founded given the exploitative and extraction-based development model used in periphery zones that draw on indigenous resources such as raw materials, labour and intellectual resources (Alcorn, 1995; Alexiades, 2003). The “flow and appropriation of ideas, technologies, goods and plantes [*sic*] is clearly not new,” however, the intensity, rate, and asymmetry of these flows of value are greater today (Alexiades, 2003, p. 19). Furthermore, richer regions and actors typically control the generation of economic value. With the excessive intrusion of market economy values at the expense of indigenous or peasant values – for example, rights to and relations with the land, customary practices, social solidarity and reciprocity – local peoples express discontent when they are asked to make great compromises between local and state-imposed values on their community. In these instances, it is understandable that communities and academics alike are skeptical of indigenous participation in non-local markets with corporate actors that are conceptualized as inherently threatening and dangerous to the local system of cultural values, institutions, and practices. In fact, Pikangikum Elders are cautious for the reason that they want to ensure direct, significant and appropriate

benefits for the community, but also in order to maintain various relations within the community.

The debate between proponents and skeptics of Aboriginal economic development has been more recently bridged through a contingency perspective (Anderson & Bone, 1995) and other more nuanced descriptions of economic development in Aboriginal communities in which indigenous values have successfully shaped the direction of a community's economic and cultural change. Gombay (2005) describes a unique instance of local institutions mediating between local cultural values, such as maintaining access to customary activities and bush food, and the demands of the regional economy, such as the need for wage labour and the financial requirements of those customary activities. This example reflects a contingency perspective by showing how a particular indigenous moral economy, local self-determination, and the use of cultural values to guide development and cultural change can lead to local and community-level economic solutions. In Pikangikum, community Elders spoke of local NTFP values that *may* conflict with market values or private property rights, which might explain their cautious approach to NTFP planning, research and development. These local NTFP values, however, do not *necessarily* conflict with market values and private property rights.

In Pikangikum's case, Elders desire community-based commercial activities that are guided by *and* support the cultural values, wisdom, and the institutional arrangement of the Whitefeather Forest Elders Steering Group. As such, Elders are not adverse to commercial activities, such as the commercialization of NTFPs that express cultural, ecological and social values and goals. Nonetheless, community self-determination is the key, which illustrates the importance of Pikangikum's partnership approach. Thus, Pikangikum Elders' perspectives on NTFP planning, research and development are indicative of a contingency or moral economy perspective that provides the theoretical space for creative, local institutional solutions that draw on cultural capital to engage in commercial activities.

6.4.2 Hybrid indigenous institutions and partnerships

In Canada, community-based enterprises and partnerships have provided a solution for some Canadian First Nations to complex challenges of economic depression, the weakening of cultural institutions and values, and land/resource claims and tenure. Many First Nation communities, including Pikangikum First Nation, are seeking their own path to economic development, cultural survival and environmental stewardship through community-based enterprises (Anderson *et al.*, 2006; Berkes & Davidson-Hunt, 2007) and partnerships with non-Aboriginal corporations (Anderson, 1997). In Pikangikum First Nation, the Whitefeather Forest Management Corporation is an institution that facilitates the community's internal economic development at arms length of political structures, represents legitimate institutions to government and private organizations, and allows for the expression of local values, knowledge, Elders' teachings, and social organization in economic development. In fact, the Whitefeather Forest Management Corporation is a community-level organization that brings customary and corporate activities together under the reigns of the community's manifold environmental, cultural and economic objectives. Thus, Pikangikum's Corporation reflects the community's attempt at creating a local, hybrid solution to apparent contradictions between Pikangikum's customary system of resource use and common property and government and market systems of development and individual property rights.

As Berkes and Davidson-Hunt (2009, p. 2) point out, "community-based enterprises tend to require the innovation of new types of social organization, and capacity building that goes with it." However, these innovative and hybrid institutions, such as the Whitefeather Forest Management Corporation, don't develop in a vacuum. On the contrary, Pikangikum's community-based enterprise demonstrates how customary institutions are adapting to local and global opportunities and challenges that defy the dichotomization of Western-style and traditional institutions. Pikangikum's community-based enterprise has been built using local, regional and international 'tools' and in relation to other actors within a larger political economy. So the idea of hybridity extends to a larger-scale perspective of a community's place in the broader political economy in which it has relationships with government, university and corporate institutions (see

Figure 6). In this research, Elders and leaders communicated very specific values, norms and benefits that they will bring to the “negotiating table” in the area of NTFP planning, development and commercialization. However, these normative principles did not merely emerge out of my interviews and discussions; rather they have developed through set of historical relationships between Pikangikum, corporations, government agencies, and universities.

As Howe (2005, p. 18) reports in relation to natural health care product research and commercialization, different stakeholders ascribe to “different value systems. How can these value systems be reconciled?” For example, because commercialization implies a market-based approach, many stakeholders are seriously concerned as to whether it is even possible to respect cultural or ecological principles. While differences in regimes of

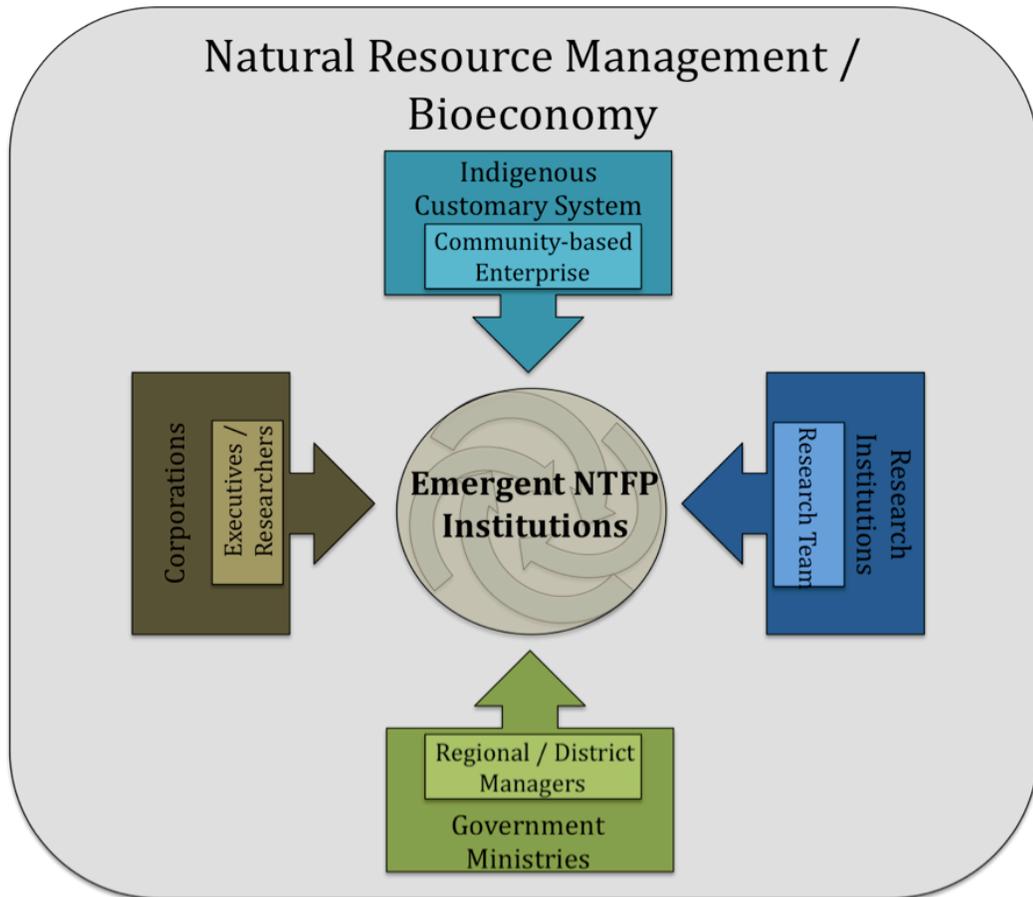


Figure 6: Emergent NTFP Institutions, Norms and Values. Each actor brings its own set of norms, values and morals to the “negotiating table” and partnership which leads to emergent and hybrid institutions under certain conditions.

value or cultural meaning ascribed to NTFPs may signal a potential impasse between partners, reaching an agreement between partners with regards to the terms of engagement are perhaps more important than resolving cross-cultural differences in NTFP planning, research and commercialization. As Appadurai (1986, p. 15) suggests, a “commodity context, as a social matter, may bring together actors from quite different cultural systems who share only the most minimal understandings (from the conceptual point of view) about the objects in question and agree *only* about the terms of trade.” Furthermore, O’Flaherty, Davidson-Hunt and Manseau (2007) point out that resolving cultural differences in the context of co-management may not be as important as respect and diligence/commitment.

Figure 6 illustrates this idea of hybridity and how institutions, such as emergent NTFP partnerships, might draw on resources, property rights, values and norms from different institutions and systems. Paradoxically, each system remains relatively separate, while demonstrating a high degree of interdependence, interaction, and intermixing. It also shows that my research consisted of determining the norms and values from Pikangikum’s customary system and community-based enterprise (CBE) that might inform and shape potential partnerships, agreements and emergent NTFP institutions. In the context of natural resource management, this arena of interaction has been coined “place-based learning communities” (Davidson-Hunt & O’Flaherty, 2007) or “communities of learning” between government, university and indigenous communities (Robson *et al.*, 2009). The use of different values and the emergence of institutions is a *dynamic process* in which power and conditions change through interaction, negotiation and learning (Davidson-Hunt & O’Flaherty, 2007), which is represented by the swirling iconography in the center circle. In fact, the “process of negotiation gets to the heart of the partnership process. This is where goals and expectations are formally set out. It is also where roles and responsibilities are defined, and where agreement is reached on how benefits will be shared” (Government of Ontario, 2000, p. 80). Through this dynamic process, however, there are tangible outcomes that symbolize the hybrid nature of this process such as forms of knowledge, specific forest products, as well as written partnership and/or benefit sharing agreements.

Over the last decade, Pikangikum has established several successful partnerships that reflect this diagram between the Whitefeather Forest Management Corporation and government agencies/ministries (i.e. PFN & OMNR, 2006) and universities (i.e. WFRC, 2004) with the goals of research, planning, and development. These partnerships have led to a new mechanism for generating hybrid forms of knowledge through place-based learning communities (Davidson-Hunt & O’Flaherty, 2007) or communities of learning (Robson *et al.*, 2009). Pikangikum Elders envision a similar development model in the area of NTFP planning, research and commercialization that uses collaborative, iterative interactions and hybrid solutions to land-use planning, development and management.

6.4.3 A bridge between moral and political economies?

Moral economy has been conceptualized, on the one hand, as local values, norms and morals that emerge out of a customary sphere, which draws on Scott’s (1976) and Thompson’s (1971) original argument of a “subsistence ethic” and “popular consensus” that are rooted in a people’s “traditional views.” In this case, values, norms and morals expressed by Elders and leaders reflect their local moral economy that includes social, cosmological and ecological relations. Although this argument is partially true in Pikangikum’s case, it is also an oversimplification of an indigenous “customary” reality that is, in fact, *not mutually exclusive* of a larger, interrelated political economy in which the community of Pikangikum has interacted for centuries. These local values, norms and morals have emerged out of a multi-level, complex customary sphere *and* broader community-government-corporate relationships. These norms, values and morals that Elders expressed in this research emerge from a process of negotiation *within* the community of Pikangikum and *between* Pikangikum and other regional, national and international actors. In this larger context, Pikangikum has expressed, and continues to express, its community’s vision, objectives and morals in opposition to an undesirable model of development in which nation states appropriate indigenous resources and lands and provide commercial licenses to corporations to stimulate regional development, employment, and taxes. It was under this undesirable model of development that the OMNR and forestry companies “reached” into Pikangikum’s traditional lands in the 1970s (Chapeskie *et al.*, 2005). In this alternate model of development, which was

prevented by community leaders and members, outside actors such as government agencies, corporations, and universities each advance their own agendas, values, and development model in relation to a certain set of resources.

In this way, Pikangikum's moral economy is sociologically produced, as suggested by contemporary moral economy arguments, but remains rooted in an ecologically dependent community, which contemporary moral economists often ignore. Compared with the working class of England and agricultural peasants of Southeast Asia, Pikangikum has left "periods of dearth" and the dominant, subsistence mode of production for a mixed economy. This means that a moral economy perspective needs to continue to draw on contemporary ideas of a sociologically produced moral economy that includes ideas of identity and rights to livelihood and land, but not to the exclusion of an ecological reality, which continues to play a crucial role in Pikangikum's cultural identity, local reality, and mixed mode(s) of production (Berkes & Davidson-Hunt, 2007). Pikangikum's mixed economy and modes of production include a continued interest in subsistence, significant government welfare payments, wage labour with the Band or Whitefeather Forest Management Corporation as well as the anticipated shift towards community-based forestry and NTFPs.

This non-exclusive, paradoxical argument bridges older and newer conceptualizations of moral economy and parallels the conclusions of contingency theory with respect to First Nation economic development (Anderson & Bone, 1995). Polarized thinking between modernization and dependency theories also becomes emancipated through the non-exclusive, paradoxical argument of contingency theory that suggests that modernization and dependency are two possible, but not necessary, scenarios that depend on various political, economic, social and cultural conditions. Altman (2001) has also critiqued polarized thinking of 'progressives' and 'conservatives' who fail to recognize greater degrees of complexity and hybridity between customary, state and market systems.

Community-based enterprises, partnerships and benefit sharing arrangements are institutional relationships that seek to establish new forms of reciprocity and exchange of valued resources – political, economic, or intellectual. As such, Pikangikum's CBE isn't merely a means of obtaining local independence, but rather it seeks fuller autonomy from

certain institutions, such as INAC, *in addition to* interdependence with partners in order to fulfill community needs for capital, technology, and expertise, which echoes other First Nation perspectives on economic development (Turner, 2010). This partnership approach appears to emulate successful CBEs, defined as such through the UNDP Equator Initiative, that tend to draw on a large number of partners such as NGOs, different levels of government, and research centers or universities (Sexias & Berkes, 2010).

This relational and hybrid expression of moral and political economies challenges conventional descriptions of moral economies that describe peasants who react or protest against violations of norms established within institutional relationships (i.e. Edelman, 2008; Scott, 1976; Thompson, 1971). While the 18th century English “poor” (Thompson, 1971) and Southeast Asia peasants (Scott, 1976) protested when other societal sectors defected from their moral responsibilities and rights, Pikangikum’s partnership approach recognizes a lack of and need to develop interdependent and reciprocal relationships between different societal sectors and institutions. So, Pikangikum hopes to encourage strategic partnerships that represent a new moral economic situation. Nonetheless, Pikangikum’s earlier and dysfunctional relationship and set of norms with the OMNR shifted due to protests of the 1970s against forestry allocations towards the new 1990’s partnership era (Nikischer, 2008), which supports the protest model of Scott’s (1976) and Thompson’s (1971) moral economy.

The case of Pikangikum also challenges conventional moral economy literature that dichotomizes moral and political, embedded and disembedded, and precapitalist and capital economies (Booth, 1994). The partnership and benefit sharing principles described in Chapter 5 illustrate how Elders and leaders strongly desire control of partnerships and expect partners to accept a certain morality that is based in customary law and rules, but structured through Western-style contract law. Consequently, Pikangikum’s partnership business model entails contractual or voluntary relations between partners, one norm of market society (Booth, 1994, p. 661), as well as “traditionally” structured relations based on kinship and authority within the dynamics of the Whitefeather Forest Management Corporation and Whitefeather Forest Elders Steering Group. While Alexiades (2003) questions whether indigenous peoples will select Western-style or alternative solutions to issues of development that draws on

biological and intellectual resources, Pikangikum appears to be selecting a mixture of solutions based on their specific needs and opportunities. In fact, Pikangikum's partnership approach is a creative business model that simultaneously maintains their customary values, institutions and economy while strategically implementing norms of market society.

Despite drastically distinct economic contexts, Pikangikum's approach to NTFP partnerships and benefit sharing and the emergence of a global fair trade economy equally propose creative solutions to the contradictions and "tension between ethical relationships...and the need for the wily characteristics of enterprise in the construction of transnational trade networks" (Goodman, 2004, p. 891). Rather than linking globally disparate consumers based on certain "discursive and visual narratives" (Goodman, 2004, p. 893) about production and consumption of food resources, Pikangikum is seeking local solutions to their needs and challenges as a geographically located people engaging with commercial markets, yet with a certain degree of control over operations and maintenance of Aboriginal values. Similarly, the formation of the transnational organization Via Campesina, a large coalition of 148 peasant and small-farmer organizations from 69 countries aimed at pressuring key international economic institutions on issues of human rights and agrarian reform, is a global scale actor based on particular moral economic principles (Edelman, 2005). Thus, the emergence of a global fair trade economy and transnational political entities are global scale representations of ideas related to the moral economy concept, while the Whitefeather Forest Management Corporation is a local or regional solution to the needs of the community of Pikangikum in a particular political economic context.

Once again, however, the Whitefeather Forest Management Corporation appears to contradict positions in that, like many CBEs, it takes "advantage of collapsing spatial scales that characterize globalization to engage with national and global markets, thus 'opting in' to the global market" (Anderson *et al.*, 2006; Berkes & Davidson-Hunt, 2009, p. 1). If Pikangikum and partners successfully develop NTFPs, which could be commercialized based on ideas of social and environmental responsibility, these cases will overlap analytically even more. But, in terms of developing community-based NTFPs with partners, moral economic principles will emerge through the partnership

process, such as its establishment and maintenance, as “attempts to create new relations of mutual obligation or reciprocity that are judged against the standard of a local normative system” (Neumann, 1998, p. 44).

6.5 Chapter summary

In this chapter, I presented my analysis and discussion of Pikangikum Elders’ and leaders’ views on NTFP research, development, and commercialization as well as partnership and benefit sharing arrangements. This research provides clear principles, cultural values, teachings and instructions important to the community of Pikangikum for commercial NTFP planning, research, and development. Fundamentally, the development and commercialization of NTFPs within or with the community of Pikangikum is a procedural issue that depends on certain conditions of resource use such as Elder guidance, knowledge interfacing, power sharing with the community, cultural respect, and maintaining good relations within Pikangikum’s community. So, rather than suggesting that NTFP development contradicts cultural values, Pikangikum Elders teach how the values, teachings, knowledge and protocols of Anishinaabe NTFPs have a direct bearing on the process of NTFP planning, development and commercialization.

These local values reflect how Elders and leaders envision the crafting of new emerging NTFPs institutions from their customary system and community-based enterprise. In fact, community-based enterprises and partnership principles, such as Pikangikum’s, represent local community policy or a mode of social regulation that need to govern economic development and production at the local level (Anderson & Bone, 1995, p. 124). Ethical, honourable partnerships that build on local indigenous institutions, values, and objectives are even more necessary given the immaturity of NTFP and biogenetic policy at the federal and international levels. As well, the Convention on Biological Diversity appears to champion “commercialization and privatization of intellectual and biogenetic commons” while lacking the particular mechanisms by which indigenous peoples might control and benefit from the commercialization of traditional resources and innovation (Bavikatte & Jonas, 2009; Vermeulen, 2007, p. 434).

In this respect, Pikangikum’s land-use initiative and enterprise provide a “creative strategy and unique solution” (Posey & Dutfield, 1996, p. 140) in which the community

has been able to increase its tenure and rights to their traditional lands, strengthen its ability to negotiate with public and private organizations, and define if and how research and commercialization of NTFPs and associated traditional knowledge might occur. Within this context, this research has explored the *prospective* situation of NTFP development, partnerships, and benefit sharing. As such, there remains a large degree of uncertainty regarding the possible contradictions between Pikangikum's customary and market values, which will need to be more fully discussed, negotiated and "hybridized" in the context of partnerships and product planning, research and development and intersecting customary, government and market economies and systems.

Chapter 7: Conclusions

The need to reconcile our interests is not solely about fish, moose, deer or trap lines [but] about life and the land and resources that support our existence and well-being. We want to be full partners in a plan that fairly and equitably manages the great wealth that the natural resources of this province provide. We will not continue to be made the poorest of the poor while all around us people use and exploit our resources to enrich themselves at our expense (Chiefs of Ontario, 2006, cited in Linden, 2007, p. 105).

This research has directly explored and attempted to understand the nature of “appropriate” development and commercialization of NTFPs and associated traditional knowledge from an indigenous perspective in Pikangikum First Nation, Northwestern Ontario. In particular, my research was divided into two specific objectives:

- 1) To understand Elders’ perspectives on culturally appropriate NTFP harvesting, processing, and sale from the Whitefeather Forest;
- 2) To understand Elders’ and other leaders’ perspectives on culturally appropriate partnerships and benefit sharing for NTFP development by the Whitefeather Forest Management Corporation.

These research objectives have, in the words of Alexiades (2003, p. 20), attempted to clarify two main issues underlying the potential development and commercialization of NTFPs which include whether the commercial transformation of “traditional biological and cultural resources by corporate interests... are morally, ethically and politically acceptable, even in principle, and...if so, what mechanisms can be put into place to ensure at least some financial returns or benefits flow back to those who manage these resources.” In this final chapter, I synthesize my research findings and discussion in relation to my research objectives.

7.1 Research scope and limitations

It is important to understand the limitations of my research scope and purpose. First, this research was a preliminary step in assessing the cultural feasibility of NTFP development and commercialization in Pikangikum First Nation. In this sense, the purpose of my thesis was not to assess the economic feasibility nor analyze potential markets, especially dynamics of global markets. These domains fell outside the scope of my research.

Second, as I have mentioned in other parts of this thesis, my research, analysis, and hence ‘Pikangikum’s perspective’ on developing and commercializing NTFPs have focused entirely on two basic functional categories – medicines and foods – at the expense of other types of potential NTFPs, such as ritual and technological products (Marles *et al.*, 2000). When classified in another way (Marles, 2001), my research explored nutraceuticals, functional foods, cosmeticeuticals, and traditional herbal medicines/natural health products, while ignoring pharmaceuticals and agrochemicals. So, while this thesis is limited to only some of the possible NTFP categories, Pikangikum First Nation would not be limited to the NTFP types covered in this thesis in their future endeavours.

Third, and along these same lines, it is critical to note that this thesis does not represent a definitive approach or ‘protocol’ for Pikangikum First Nation, potential partners, or any other indigenous group in terms of the development and commercialization of NTFPs. While this thesis might serve as a tool for Pikangikum First Nation and potential partners, it is first and foremost *my attempt as a researcher* to synthesize my own understanding of what Pikangikum Elders and leaders taught me in relation to my research objectives and questions. While my research provides insight into an Anishinaabe perspective that should guide product research and development, partnerships, and benefit sharing arrangements, it is important to note that there is a clear distinction between principles and practice (Berkes & Davidson-Hunt, 2006, p. 43). It is for this reason that the normative principles that my research has unearthed can only go so far. Pikangikum First Nation and interested partners will have to negotiate and establish their own principles, agreements and partnerships. In sum, Pikangikum First Nation will lead planning and decisions about *actual* NTFP development and management, research activities, and business partnerships.

7.2 Pikangikum’s perspective

7.2.1 Development and commercialization of NTFPs?

In Chapter 1, I referred to commercialization as the process of transforming traditional knowledge, products and resources into tradable goods in non-indigenous markets outside of a community’s cultural and economic system. The people of

Pikangikum have traded and marketed local products for centuries outside of the community in non-Anishinaabe markets, so Pikangikum Elders understand the basic implications of developing products for sale in “modern” markets. In this sense, the development and commercialization of NTFPs would need to be based on and framed by the community’s moral economy, rather than conceptualizing “traditional” and “modern” transactions/markets as oppositional categories.

From Pikangikum’s perspective, commercialization most fundamentally refers to an Anishinaabe way of selling (*auhtuhwuhgaah*), buying (*auhtuhway*), or exchanging things of value. Whether this occurs between community members under customary law and teachings, such as when *mushkeekkeh* is paid for, or between the Whitefeather Forest Management Corporation and NTFP partners, distributors or consumers, the basic requirement is that Pikangikum’s moral economy – Pikangikum’s customary institutions, values, and knowledge – informs or shapes these transactions. In other words, my research has demonstrated that appropriate development of NTFPs and associated use of traditional knowledge from Pikangikum’s perspective is contingent on a establishing an institutional process that increases the influence of Pikangikum’s moral economy by means of three main mechanisms: 1) Pikangikum Elder guidance, teachings and knowledge; 2) Collaborative partnerships; and 3) Community objectives and social, economic, cultural and environmental benefits. In this sense, Pikangikum Elders are interested in the idea of developing and commercializing community-based NTFPs.

7.2.2 Pikangikum Elder guidance, teachings and knowledge

In response to my research Objective 1, it is clear that research, development and possible commercialization of NTFPs and associated traditional knowledge would occur under the guidance of Pikangikum Elders, who would inform the development process with community values, teachings and knowledge. As such, a fundamental role of NTFP partnerships would be to establish relationships that would support Pikangikum’s local moral economy by facilitating the influence of Pikangikum’s Elders, teachings and knowledge, which I described in Chapter 4, “further down” the value chain at greater social distances. In fact, Pikangikum Elders are suggesting that the community collaborate with research, corporate and government partners who would normally

participate at later stages in the value chain or network. By bringing these actors into partnerships, Pikangikum might more effectively develop and market commercial NTFPs that embody Anishinaabe values, teachings, and knowledge. In other words, the process of developing NTFPs should attempt to establish a value network that more significantly involves the community, Whitefeather Forest Management Corporation, and Whitefeather Forest Elders Steering Group, rather than engaging at initial points of a value network that keeps indigenous people as suppliers of low value resources.

The establishment of a NTFP value network through partnerships, and benefit sharing agreements, could reduce the social distance between production and consumption and increase the influence of Anishinaabe values on the product value network. Although it would be expected that with increasing social distance Pikangikum's moral economy would exert less and less of an effect, it is within a "working relationship" that Pikangikum Elders would manage and navigate the process of cultural innovation and experimentation (Davidson-Hunt & SLRI, 2004; Geniusz, 2009, p. 71) that builds upon Anishinaabe traditions and teachings regarding proper harvest, processing and sale of NTFPs. In this manner, Pikangikum Elders tentatively support the idea of development and commercialization of NTFPs and associated traditional knowledge *if* community Elders and leaders are placed in the "driver's seat" so that *the way* development occurs can be managed by community members and shaped by Anishinaabe values, teachings and knowledge. In short, Pikangikum's approach to developing and commercializing NTFPs would strongly seek to incorporate an Anishinaabe moral economy into the process of developing and commercializing value-added NTFPs as a means of respecting Pikangikum's customary knowledge and authority, collaborating with community institutions, and supporting the community's initiative and objectives.

7.2.3 Collaborative partnerships

In accordance with my research Objective 2, Pikangikum's perspective on NTFP development and commercialization is based on the principle of active engagement with collaborative partners in working relationships. This basic principle sets the stage for implementing the numerous partnership principles, which I presented in Chapter 5, by

building ethical, collaborative and diligent partnerships with businesses, governments, universities, and other organizations. In other words, Pikangikum’s perspective of appropriate development and commercialization of NTFPs and associated traditional knowledge is contingent on institutional processes and factors, such as partnership principles.

Respecting Pikangikum’s self-determination, vision for NTFP development, and community institutions is fundamentally important to community involvement in the development and possible commercialization of community-based NTFPs for non-Anishinaabe markets. As Figure 7A suggests, potential partners are required to initiate discussion and negotiation with the Whitefeather Forest Management Corporation through its President. The slender blue arrows represent pathways of interaction, access to, and the initial establishment of working relationships with Pikangikum First Nation for the purpose of NTFP planning, research and development. Following initial contact, representatives of potential partner organizations would then need to meet with the Whitefeather Forest Elders Steering Group and Chief and Council. The Steering

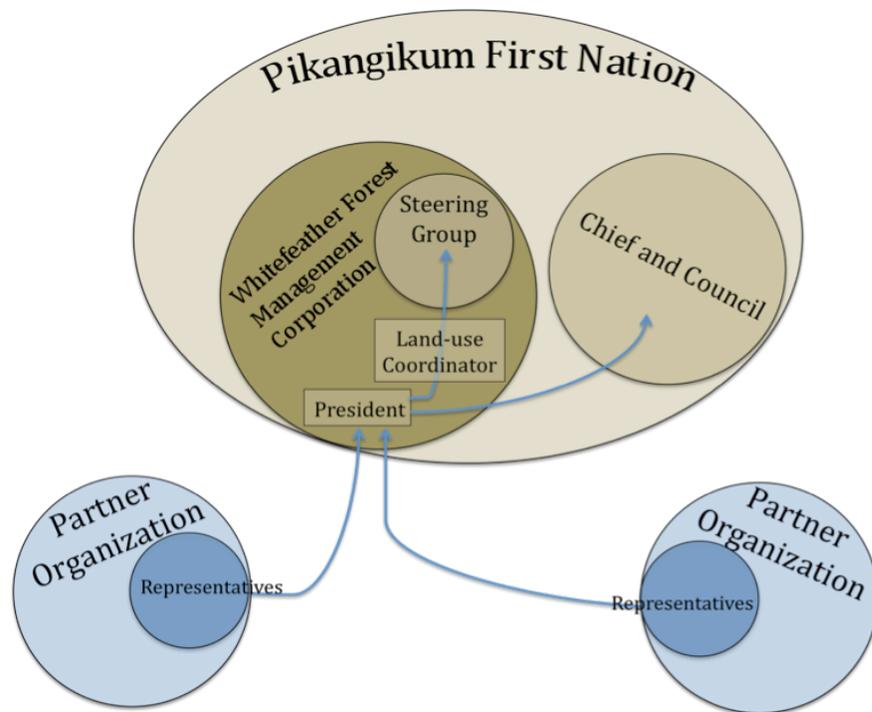


Figure 7A: Model for developing NTFPs, partnerships and benefit sharing institutions with Pikangikum First Nation.

Group, as I demonstrated in Chapters 4 and 5, would play a critical role in planning, research and development of NTFPs while the Land-Use Coordinator would fulfill an important role as cultural broker, cross-cultural communicator and translator⁷. This initial institutional contact, however, represents only the first steps of a longer process of negotiation, the generation of agreements, and relationship building with Pikangikum First Nation.

In the case of Pikangikum First Nation, and possibly other Aboriginal groups across Canada, current conflicts, misunderstandings, and resultant statements of moratorium on natural resource development, including NTFPs and associated indigenous knowledge (i.e. Chiefs of Ontario, 2008), are often the product of insufficient consultation and collaboration by governments, universities and businesses with First Nations. In order to bridge these fissures, governments, universities and businesses need to adapt their approach to include First Nations in longer-term and respectful “working relationships,” or formal partnerships which create new institutions for power-sharing, knowledge exchange, and decision-making (Figure 7B).

While Figure 7A demonstrates how partner organizations should access community institutions and initiate partnerships for the purpose of developing NTFPs, Figure 7B shows how, over time, partner organizations would establish significant, diligent and long-term working relations, partnerships, and agreements. These are represented by the two-way green arrows linking partner organizations with the Whitefeather Forest Management Corporation and Steering Group. In this sense, the development and commercialization of NTFPs with Pikangikum First Nation goes beyond the idea of consultation, as required under Section 35 of the *Canada Constitution, 1982*, and even prior informed consent in which proponents seek permission from indigenous communities to use their knowledge in development projects (Rosenthal, 2006). On the contrary, the development of community-based NTFPs with Pikangikum

⁷ This process is similarly described regarding the conduct of field surveys of cultural and natural features in the *Pikangikum Cultural Landscape Documentation Guide* (Davidson-Hunt & O’Flaherty, 2010).

would require that partners genuinely and diligently respect, work with, listen and learn from Elders through long-term working relationships.

The development and commercialization of community-based NTFPs in Pikangikum would likely require the formation of a partnership network (Berkes & Adhikari, 2006; Sexias & Berkes, 2010), which differs significantly from the Giga’at First Nation’s vision of ensuring community-control through solidifying institutional

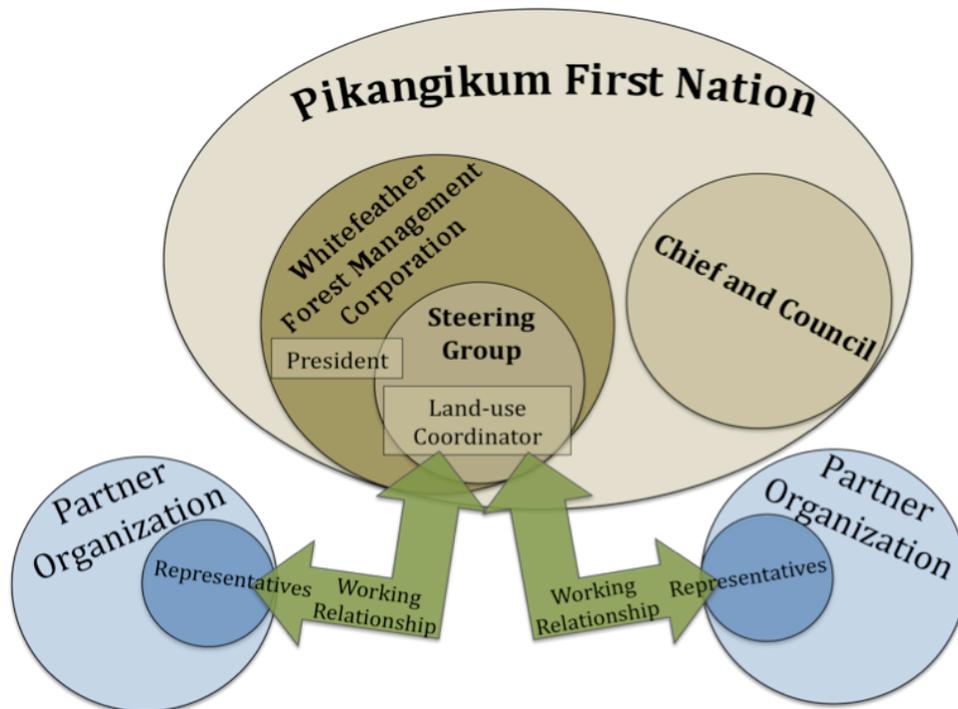


Figure 7B: Model for developing NTFPs, partnerships and benefit sharing institutions with Pikangikum First Nation.

linkages within the community (Turner, 2010). In Pikangikum’s case, the development and commercialization of NTFPs might include government partners, such as the OMNR and Health Canada, who retain the legal jurisdiction and responsibility of managing public lands and natural resources and maintaining health product standards under Canadian law, respectively. Furthermore, the development of community-based NTFPs would likely require financial resources through contributory partnerships (Mitchell, 2002) and intellectual resources, such as university researchers or private R & D

corporations, for the purposes of knowledge innovation and obtaining product licenses under Health Canada regulations. In sum, collaborative partnerships between Pikangikum and partner organizations will need to find a balance between an Anishinaabe moral economy and the partner's policies, regulations, and knowledge.

7.2.4 Community objectives: social, cultural, economic, and environmental

With respect to Objective 2, Pikangikum's perspective is based on the assumption that the development of NTFPs and collaborative partnerships would support Pikangikum's land-use strategy and community objectives, which include social, cultural, economic and environmental goals. In other words, the development and commercialization of NTFPs and associated traditional knowledge would have to be organized in order to ensure the generation of the community benefits that I described in Chapter 5. For example, if economic development does not ensure social goals, such as capacity building and job creation, then the community's objectives of ecological stewardship and "keeping the land" will be ineffective. Moreover, if there are no jobs in the community that take people of Pikangikum out on the land, then these people will emigrate or continue to depend on marginal government welfare payments. And, if Pikangikum's land tenure, cultural institutions, customary activities and indigenous knowledge are not maintained then the community's economic viability, social objectives, and ability to "keep the land" will be weakened.

As suggested by the community-based enterprise and social enterprise literature (Anderson *et al.*, 2006; Berkes & Davidson-Hunt, 2007; Peredo & Chrisman, 2006), Pikangikum's approach is not an example of conventional business, research and development. In this respect, Pikangikum First Nation and the Giga'at First Nation (Turner, 2010) share a common perspective that puts social, cultural, and environmental goals at the forefront of community-based economic development such as employment creation and financial returns; knowledge maintenance and cultural recognition; the management of multiple forest values; and the creation of health and healing products available to community members. Also, Pikangikum's perspective is based on the assumption, which my research was equally based upon, that development of NTFPs is a *collective approach* (Anderson & Bone, 1995, p. 122) that would proceed at the scale of

the community through the Whitefeather Forest Management Corporation, but in a way that would not constrain individual entrepreneurship in Pikangikum First Nation. Finally, the development of NTFPs in Pikangikum First Nation would likely involve some form of mixed production strategy (Belcher, Ruiz-Perez & Achdiawan, 2005), including forestry and NTFP production at the community level, and customary resource use at the individual and family level.

7.3 Unresolved issues

There are, however, various unresolved issues that my research was not able to clarify and that Pikangikum will have to think over, find consensus within the community on, and negotiate with partners. For example, will the development of NTFPs, such as medicines and foods, lead to their privatization in a way that contradicts or supports Pikangikum's common property and cultural valuation of "things from the land"? Although the development of NTFPs through partnerships has been argued to bring certain benefits, certain disadvantages are also apparent to communities. In fact, Morsello (2003, p. 487) mentions that NTFP commercialization and partnerships may bring conflict within communities or interfere with "complex systems and sensitive common property arrangements."

Also, will the commercialization of Anishinaabe NTFPs and knowledge imply the involvement of other Anishinaabe communities? Because the Creator gifted these products and knowledge to all Anishinaabeg, should more Anishinaabe communities benefit from the development of NTFPs in Pikangikum? Finally, questions regarding the ecological sustainability and management of commercial NTFP will have to be addressed within the community and with the district OMNR, even though my research did not address this issue. Ecological sustainability and conservation have been one of the largest concerns in the literature related to NTFP commercialization (i.e. Belcher & Schreckenberg, 2007; Belcher *et al.*, 2005; Duchesne, Zasada & Davidson-Hunt, 2000; Turner, 2000). These are merely three issues that will arise through NTFP planning, research and commercialization, and there will likely be more.

7.4 Conclusion

First Nations want to have control over their traditional territories, the diverse resources within those territories and their own economic development. Community self-determination is clearly a necessity in Aboriginal economic development and even more so in the area of development and commercialization of NTFPs or biogenetic resources and associated traditional knowledge. As Posey (1990, p. 16) argues “each group must have the option to enter into market economies or not – and to what extent and under which circumstances they want to do so, if at all.” Furthermore, if communities, such as Pikangikum First Nation, are indeed interested in engaging in market economies in the area of NTFPs, it is then important to “work with the communities to determine what ‘just compensation’ should mean, [which] would be more effective than hundreds of national and international laws” (Posey, 1990, p. 16).

In Pikangikum First Nation, only time will tell as partnerships, product research and development, and community involvement unfold. As the Late-Elder Norman Quill stated several times, *tuhsheekoocheecheekuhtayh* or “I am willing to proceed to find out.” What is certain in terms of NTFP development, however, as O’Flaherty, Davidson-Hunt and Miller (2009, p. 33) equally conclude in the context of forestry management, is that “bringing Pikangikum customary stewardship into forest management” in a way that respects principles of humility, diligence, effective communication, and balance “requires bringing Pikangikum *people* into forest management.” In this way, the future of Pikangikum, the Whitefeather Forest Management Corporation, and the development of community-based NTFPs depends on Pikangikum’s ability “to combine and adapt in an innovative way a variety of ancestral and new skills, experiences, cooperative practices, and values” (Peredo & Chrisman, 2006, p. 319) through partnerships that support the Whitefeather Forest Initiative. For this very reason, it is an exciting period for Pikangikum First Nation as they move into the future. *Mee-ee-way* (That’s all).

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Appendix I: Interview schedule

Section 1: What are NTFPs from an Anishinaabe perspective?

1. The Whitefeather Forest land use strategy uses the Anishinaabe term *Nahnahtookkaykoon Kahohcheehsheecheekahtayk eemah Ahkeeng (Naanaadok gegoon gaa-onji-ozhichigaadeg aakiing)* for the English term non-timber forest product. Can you explain to me what that term means in *auhneesheenuhbaymooweehn*? Has this term been used for a long time in Pikangikum or is it a recent term for the land-use strategy?
2. Are “NTFPs” different from “customary activities”? If so what is the difference? If not, how are they similar or the same?
3. What are NTFPs? What are not NTFPs? (medicine? food? industrial products? crafts? ceremonial?) (plants? trees? animals? spring water? fish?)
4. What is the meaning of *mushkeekkeh*?
5. What is the meaning of *meecheem*?
6. Has anyone in Pikangikum sold or commercialized NTFPs in the past or now?
7. What is your experience with different plants of medicinal, edible, functional, or ceremonial purposes?

Section 2: Would it be a good idea to research, develop, produce and sell NTFPs outside of the community?

1. What do you think of “seeking to develop commercial opportunities for community-based enterprises that make use of non-timber forest products” (land-use strategy)? Is this good or bad?

Section 3: What is the correct way to produce, process and sell NTFPs?

1. If NTFPs can be developed, how must this be done?
2. Would you prefer to sell medicines or foods?
3. Are there any key purposes that NTFPs should serve? (profit, specific activities, medicine for certain people, certain products)
4. What is the correct way to treat the plants in general or for commercial purposes? Is there a difference?

5. What is the correct way to harvest NTFPs for commercial purposes?
6. What is the correct way to process/prepare NTFPs for commercial purposes?
7. What is the correct way to sell or commercialize NTFPs?
8. What is the incorrect way to harvest, process, and prepare NTFPs?
9. Are there products that can't be developed? (Anishinaabe medicine? Whiteman medicine? food? industrial products? crafts? ceremonial?) (Explore continuums: raw to processed; for pik vs for external markets; customary vs novel)
10. Could products be developed through laboratory research (show product)? Could laboratory work seek to discover pharmaceutical agents (medicines)? Nutritional composition (food)? Mechanical properties (technological)?
11. Would you prefer to sell traditional Anishinaabe medicines or more collaborative, researched products?
12. If so, what procedures or protocols would this research need to follow?
13. Are there areas in the Whitefeather Forest where NTFPs can or can't be harvested from?
14. Are certain plants or areas polluted like the bear? Deforested areas? Certain trap lines? Around the reserve?
15. If garbage and other things can defile the land and medicines, how can Pikangikum protect these areas that are not yet defiled? Is it possible to make defiled areas clean?
16. Which areas may not support NTFPs because they have been defiled? Or could you sell products from defiled areas?

Section 4: What do Elders and leaders expect in terms of partnerships and benefit sharing arrangements for the purpose of researching and developing NTFPs?

1. What experience has Pikangikum had with partnerships?
2. What has been Pikangikum's most successful partnership? Why?
3. What has been Pikangikum's least successful partnership? Why?
4. What would correct partnerships in NTFP planning, research and business look like?
5. Could outsiders (other First Nations, "wemtigooshi", foreigners) be involved in NTFP harvesting, processing, and innovation?

6. If so, what practices would outsiders need to follow in harvesting/processing NTFPs from the Whitefeather Forest?

7. What sorts of benefits would you expect from NTFP planning, research and development?