

TOWARDS RENEWED BALANCE & HARMONY IN THE NATURAL
WORLD: AN ENVIRONMENTAL RESPONSIBILITY PROTOCOL
FOR KAHNAWAKE MOHAWK TERRITORY AND BEYOND

by
KATSITSARONKWAS LYNN JACOBS
B.Sc.(Environment), Guelph University, 1996

A thesis submitted in partial fulfillment of
the requirements for the degree of

MASTER OF ARTS
in
ENVIRONMENT AND MANAGEMENT

ROYAL ROADS UNIVERSITY

September 2003

© Katsitsaronkwas Lynn Jacobs, 2003

National Library
of Canada

Bibliothèque nationale
du Canada

Acquisitions and
Bibliographic Services

Acquisitons et
services bibliographiques

395 Wellington Street
Ottawa ON K1A 0N4
Canada

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file *Votre référence*

ISBN: 0-612-83334-8

Our file *Notre référence*

ISBN: 0-612-83334-8

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

Canada

Home

They call our home
 a reserve
 Where we should be happy,
 grow and preserve
 I guess we should be grateful
 for all we've got
 A mortgaged home on a ¼ acre lot
 A highway here
 A highway there
 A big old bridge,
 full of wear and tear
 A seaway we did protest
 but there it is ugly and grotesque
 Trains that park their
 chemicals of doom,
 right outside our children's room
 Bell towers – 3 in all,
 erect and standing
 of all the gall
 Outside neighbours
 with anger and hate
 who can never understand us
 who will never relate
 Papers signed for which
 they didn't even ask,
 It's here now people
 we are being taxed
 So this is our home
 our little place
 where we must strive
 or vanish in haste.

*A poem by Karonhienha:wi
 From Kahnawake youth magazine 'Revolution'
 November 22, 2002, Volume 1 Issue 6*

Abstract

According to the traditional teachings of the Haudenosaunee People, the Creator gave each member of the natural world a particular responsibility to fulfill in order to maintain balance and harmony in the universe. Humans were given the important responsibility to nurture a respectful relationship with our family of Creation, and ensure that the cycles of life continue. However, many people have lost their connection to the natural world and no longer know how to fulfill their responsibilities in our world today. Humans are making it very difficult for other species to carry out their duties.

Indigenous and non-indigenous Peoples have much to learn from each other in the important task of renewing balance and harmony in the natural world. When working together, Western science and Indigenous science can form a more comprehensive and holistic understanding of the world. Greater collaboration and respect is required on this front if we are ever to achieve meaningful solutions. However, in the last five centuries, Indigenous Peoples have experienced the imposition of foreign approaches and values in our communities, and significant disruptions in our traditional frameworks. The Mohawk community of Kahnawake is currently rediscovering, re-examining, strengthening, and revitalizing our own traditional frameworks for re-implementation into our daily lives and community operations. As part of this important movement, this research attempts to address the essential question: How can Indigenous principles and frameworks be used as a basis for the active fulfillment of our responsibilities to the natural world?

The framework of the *Ohén:ton Karihwatéhkwen*, our traditional Thanksgiving Address, is used as the base for this research. **Chapter One** presents the research significance, methodology, and context. Knowledge was drawn from extensive reviews of literature from many different frameworks and worldviews, oral accounts, interviews, community surveys, informal discussions, and personal experiences. **Chapter Two** explores the evolution of environmental responsibility in Kahnawake through the framework of the *Ohén:ton Karihwatéhkwen*. This analysis was carried out in order to uncover the main issues our community must consider to begin renewing the fulfillment of our responsibilities to the natural world. **Chapter Three** explores the varied relationships that have evolved throughout time between humans and the natural world. Different approaches to natural science education, risk assessment, justice, and environmental management are compared and contrasted in order to uncover the most appropriate solutions to recommend for Kahnawake. Finally, **Chapter Four** provides the overall conclusions and recommendations of this research.

The ultimate goal of this research is to reach to the core of our environmental crisis by finding culturally-relevant ways to renew our relationship with the natural world and restore our abilities to fulfill the responsibilities given to us by the Creator. An Environmental Responsibility Protocol is recommended for further discussion and eventual implementation in Kahnawake and beyond.

Table of Contents

Abstract	ii
Table of Contents	iv
Glossary	vii
Acronyms	ix
THE WORDS THAT COME BEFORE ALL ELSE	X
CHAPTER 1: THE RESEARCH.....	1
1.1 Research Question.....	1
1.2 Research Significance.....	1
1.3 Research Methodology.....	2
1.3.1 Literature Review	3
1.3.2 Oral Accounts, Discussions, and Experiences.....	4
1.3.3 Community Surveys	5
1.4 Research Context.....	7
CHAPTER 2:.....	13
THE EVOLUTION OF ENVIRONMENTAL RESPONSIBILITY: A PERSPECTIVE	
FROM KAHNAWAKE	13
2.1 The People	14
2.2 Our Mother the Earth.....	19
2.3 The Waters	21
2.4 The Fish Life	23
2.5 The Root Life	24

2.6	The Small Plants and Grasses.....	25
2.7	The Medicine Plants.....	26
2.8	The Berries	27
2.9	The Natural Food Crops.....	28
2.10	The Insect Life.....	30
2.11	The Animal Life.....	32
2.12	The Tree Life	33
2.13	The Bird Life	35
2.14	The Four Winds.....	35
2.15	Our Grandfathers the Thunderers	37
2.16	Our Grandmother the Moon	37
2.17	Our Elder Brother the Sun	38
2.18	All the Stars in the Sky.....	39
2.19	The Creator, the Great Natural Power.....	40
2.20	Closing Words.....	41
CHAPTER 3:.....		41
TOWARDS ENVIRONMENTAL RESPONSIBILITY: AN ANALYSIS OF		
ENVIRONMENTAL FRAMEWORKS FROM THE SHIP AND THE CANOE.....		41
3.1	Education About the Natural World.....	44
	Ship: Western Science by Classroom Education.....	44
	Canoe: Indigenous Science by Creative Participation	47
3.2	Assessing the Health of the Natural World.....	49

Ship: Human and Ecological Risk Assessment.....	49
Canoe: Whole Health Indicators Assessment	51
3.3 Addressing Environmental Problems.....	52
Ship: Human Rights and Environmental Legislation	52
Canoe: Human Responsibility and Traditional Justice.....	54
3.4 Managing our Interactions with the Natural World.....	60
Ship: Environmental Management Based on ISO 14001	60
Canoe: Environmental Responsibility Based on Thanksgiving	62
CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS	66
4.1 Education and Community Involvement.....	66
4.2 Whole Health Assessment	68
4.3 Environmental Justice	68
4.4 Relationships	69
4.5 Structure and Capacity of KEPO.....	70
4.6 Future Research Needs.....	71
4.7 Research Implications.....	71
REFERENCES.....	73
<i>THE WORDS THAT COME BEFORE ALL ELSE</i>	<i>76</i>
APPENDIX A: KEPO ORGANIZATIONAL STRUCTURE	83
APPENDIX B: HISTORY AND EVOLUTION OF THE KEPO	84
APPENDIX C: KEPO STRATEGIC FRAMEWORK.....	91
APPENDIX D: COMMUNITY SURVEY #2 - QUESTIONS.....	93

APPENDIX E: COMMUNITY SURVEY #2 - CHARTS AND GRAPHS 94

Glossary

Canoe: From the Two Row Wampum Treaty, the canoe is the symbolic vessel of the Indigenous Peoples travelling down the river of life on Turtle Island. It contains all elements of the culture, which must be respected in commitment to the agreement.

Clan: The social and decision-making structure of families, passed through the female line. The *Kanien'kehá:ka* have three clans: Bear, Wolf, and Turtle.

Haudenosaunee: 'The People of the Longhouse', comprised of the Nations of the Iroquois Confederacy (Mohawk, Oneida, Onondaga, Cayuga, Seneca, and later Tuscarora).

Indigenous Science: The collection of knowledge and skills gained by Indigenous Peoples from their relationship and interactions within the natural world around them.

Kahnawake: 'The village on the rapids', one of the seven communities of the *Kanien'kehá:ka* or Mohawk Nation.

Kahnawakeró:non: A person from the community of Kahnawake.

Kaianere'kò:wa': The Great Law of Peace of the Haudenosaunee People.

Kanata Healthy Housing: A community project to develop healthy and sustainable housing, energy, and living alternatives in Kahnawake and beyond.

Kanien'kéha: The language or ways of the people of the flint (the Mohawk language).

Kanien'kehá:ka: 'The people of the flint' (the Mohawk people).

Kahswéntha: The Two Row Wampum Treaty, an agreement originally made between the Dutch and the Mohawk people in the 17th Century, and a model for the respectful coexistence of the *Onkwehónweh* people and our neighbours on Turtle Island.

Natural World: The whole family of Creation working towards the balance and harmony in the Universe.

Ohén:ton Karihwatéhkwén: The words that come before all else, or the Thanksgiving Address, expressing our gratitude, responsibilities, and relationship towards the rest of Creation.

Onkwehónweh: The original people, and the term used by the *Haudenosaunee* to designate ourselves and other Indigenous Peoples.

Onkwa'nihtenha Iethinónhna: 'We take care of Our Mother' – The suggested name for the working group formed to proactively address environmental issues in the community. This multidisciplinary group would be mandated and empowered to enable our community to fulfill our responsibilities to the natural world.

Ship: From the Two Row Wampum Treaty, the ship is the symbolic vessel of the non-indigenous people travelling down the river of life on Turtle Island. It contains all elements of the culture, which must be respected in commitment to the agreement.

Tioweró:ton: Kahnawake's northern territory shared with Kanesatake. In *Kanien'kéha* it means 'the windy place', or 'where the wind is coming from different directions'.

Traditional Person: The term used in Kahnawake to identify someone who associates with the ways of the Longhouse. Different interpretations of a traditional person exist depending on the individual.

Tree of Peace: The Great White Pine Tree symbolizing the union of the Iroquois Confederacy or Haudenosaunee from the time of the Peacemaker. The weapons were buried beneath the tree, and the eagle sits atop the tree to warn the Nations of impending danger.

Turtle Island: The *Onkwehónweh* designation for North America, based on our Creation story which tells us that our home was created on the back of the Great Sea Turtle from the time when the Skywoman fell from the Skyworld.

Acronyms

EMS: Environment Management System

HETF: Haudenosaunee Environmental Task Force

ISO: International Standards Association

KEPO: Kahnawake Environment Protection Office

MCK: Mohawk Council of Kahnawake

MEM: Masters in Environment and Management

RRU: Royal Roads University

THE WORDS THAT COME BEFORE ALL ELSE

The Words That Come Before All Else, also called the Ohén:ton Karihwatéhkwén or the Thanksgiving Address, is an integral part of the daily experiences and actions of our people, to remind ourselves of the responsibilities given to us by the Creator. This is the expression of an ancient worldview and way of life that has been carried throughout the generations. Each expression is unique in that it reflects the individuality of the speaker, but at the core are the common values of respect for all our relatives of Creation. These words are best spoken in our traditional language from which the full expression of the principles and relationships can be most accurately understood. However, I will do my best to present these words in English, one of the many languages now heard in our traditional territory.

The Ohén:ton Karihwatéhkwén is expressed here to provide the context through which we see and relate to the natural world, the parts of which cannot be understood without considering the whole. It is an integral part of our lives and expresses our responsibilities to the natural world, which all humans share. Our fulfillment of these responsibilities has gradually been compromised in the course of the last few centuries. The Ohén:ton Karihwatéhkwén forms the core framework through which we can renew our fulfillment of these responsibilities in our current context, and as such forms the basis of this thesis.

Opening Words

Listen closely for a short while so we can offer words of greeting and respect to all of Creation. These are the words that come before all else, where we acknowledge all of our relations in Creation who share the same home on our Mother the Earth and provide us with

the continuing support we need to live here. We are deeply grateful for every part of Creation and express these words so that we will always remember the responsibilities given to us by the Creator to care for our Mother the Earth and all of her children. With these words, we bring our minds together as one, in commitment to the responsibilities that we all need to fulfill here on this Earth.

Teiethinonhwerá:ton ne Onkweshón:'a

*First, we offer our greetings to **all the people**. We bring our minds together and greet each other as human beings. We are but one small part of the family of Creation, each family member having a particular responsibility to fulfill here on Earth. Our stories tell us that humans were created last, and dispersed across many different parts of the Earth to live and form families and societies. The Onkweshónweh were created here on Turtle Island, on the back of the Great Sea Turtle who offered himself as a home for the Skywoman when she fell from the Skyworld. We were given the responsibility to care for the rest of Creation and ensure that the cycles of life continue.*

Teiethinonhwerá:ton ne Iethi'nisténha tsi iohontsá:te

*We offer our greetings to our **Mother the Earth**. When the Skywoman's daughter died giving birth to twin boys she became one with the Earth. We say that she is the Mother of all things, because her twin sons helped to create all things on the Earth, including humans last of all. We all come from her and return to her, with the matter and energy of ourselves and all our relatives being regenerated over and over into a multitude of other life forms and processes. This is the physical manifestation of our kinship relationship to the rest of Creation, the family of all life, and the basis of our science. Our Mother the Earth was given*

the important responsibility to care for, and provide shelter and nourishment for all of her children.

Teiethinonhwerá:ton ne Kahnekarónnion

*We offer our greetings to **the waters**, the bloodlines of Mother Earth. The waters are living entities that allow life to grow, carry sustenance, cleanse and purify, and quench the thirst for all of Creation. All life forms are made up of this very same water, and it is our first environment in the womb. Just as a pregnant woman nourishes her baby through the substances that flow through her body, so to does all of Creation rely on the bloodlines of Mother Earth to survive. These are the responsibilities that were given to the waters by the Creator.*

Teiethinonhwerá:ton ne Kentson'shón:'a

*We offer our greetings to **the fish life and all other living things in the waters**. They are an important part of the web of life, cleansing and purifying the waters, and offering themselves as sustenance to support countless other life forms. These are some of the important responsibilities given to the water life by the Creator.*

Teiethinonhwerá:ton ne Ohtehra'shón:'a

*We offer our greetings to all **the root life**. The roots connect the plant life to our Mother the Earth, provide their strength and the vehicle through which their nourishment travels. The root life also provides sustenance, as nourishment and medicine, to many other parts of Creation, and in some cases they cleanse and purify the waters that pass through them. The symbolic White Roots of Peace of the Great White Pine Tree stretch out in the four directions*

of the Earth and welcome other Nations to take shelter under the Tree of Peace planted as a symbol of the unity of the Iroquois Confederacy. These are the important responsibilities given to the root life by the Creator.

Teiethinonhwerá:ton ne Ohonte'shón:'a

*We offer our greetings to all **the small plants and grasses**. They have many important roles in Creation that link them to all other life on Mother Earth. They provide sustenance, medicine, and shelter throughout their life and death. They are in return thankful to the animals, the insects, and the winds for spreading their seeds so they can reproduce, and to the lightning and the people for making habitat, through fire, for them to live. The small plants and grasses purify the air and provide oxygen for all other life forms to live. They protect the soil from eroding away, and also provide dyes, fibres and oils. If we pay attention and have a relationship with the plants, they will tell us what region we are in. These are some of the many important responsibilities given to the small plants and grasses by the Creator.*

Teiethinonhwerá:ton ne Ononhkwa'shón:'a

*We offer our greetings to all **the medicine plants**. They were given the important responsibility by the Creator to provide health and healing to all other life forms. The tobacco is the leader of the medicines and our direct link to the spirit world. People were given a very special relationship with the medicines. When we nurture this relationship, the medicines will come to us in our dreams to give us knowledge about how to heal and take care of ourselves. No medicine is bad, only misused by those who do not have a relationship with the plants. We offer respect to the medicines by addressing them with our name and*

explaining the purpose for which we request their assistance. We never pick the first plant we see for this is the leader that will show us where the other medicine can be found. We never pick more than we need, or during times when we have negative feelings. This is the foundation of a sustainable relationship with the medicine plants, to always ensure that we are not depleting them and making it difficult for them to fulfill the important responsibilities given to them by the Creator.

Teiethinonhwerá:ton ne Kahihshón:'a

*We offer our greetings to all **the berry plants**. The berry plants provide nourishment and medicine to all the creatures of Creation. Wild berries are very rich in nutrients. They have detoxification and astringent properties and help to cleanse the urinary tract. The wild strawberry in particular is a very important plant and is the first berry to appear every spring. In our Creation story the wild strawberry first grew as a gift from the grave of the Skywoman's daughter, who became one with the Earth and the Mother of all things. The berry plants are a special gift to the women and children whose role it is to gather the berries. For women in particular, the berries are a powerful medicine at all stages of life. These are some of the many important responsibilities given to the berry plants by the Creator.*

Teiethinonhwerá:ton ne Kaienthóhsera

*We offer our greetings to all **the natural food crops**. The Haudenosaunee people have been cultivating food since time immemorial. Our agricultural systems were highly developed due to our keen sense of observation and intimate relationship with the plants. The corn is the leader of all the food crops. It is one of the three sisters, planted in a symbiotic union*

with the beans and the squash. The corn brings water to the surface and provides support for the beans to grow, the rhizomes on the roots of the beans creates useable nitrogen for the corn and squash to grow, and the squash protects the other sisters from animals and insects. These are the ancient roots of the modern concepts of permaculture and companion planting. The natural food crops provide healthy nourishment to the people and other animals. In consuming the natural foods we join our physical and spiritual being with the plant. They have taught us what they need to grow and we have in return nurtured a special relationship with them. These are some of the important responsibilities given to the food crops by the Creator.

Teiethinonhwerá:ton ne Otsi'non:wa'shón:'a

*We offer our greetings to all **the insect life**. They are one of the most prevalent, ubiquitous, and biologically diverse parts of Creation. The insect life has provided much of the beauty and sustenance we experience in the world today, by pollinating the plants and helping Mother Earth to renew and regenerate herself. They help to clean and fertilize the forests, the fields, the waters, and even the small area in our backyard, by assisting in the decomposition process. Insects also provide important nourishment to many other parts of Creation. These are some of the important responsibilities given to the insect life by the Creator.*

Teiethinonhwerá:ton ne Kontirio

*We offer our greetings to all **the animal life**. They are our relations who helped to prepare the Earth, making it possible for people to live here. For this we are very grateful to them. In our Creation story, when the pregnant Skywoman fell from the Skyworld to the dark*

water world below, the waterfowl greeted her and softened her fall. The Great Sea Turtle offered his back as her home, and many other sea creatures dove down deep into the waters to find some earth for her to live on. Only the Otter was successful and placed a handful of earth on the Great Sea Turtle's back, which grew to form Turtle Island. From our very origins it is clear that without the help of the animals, we would not be here today. By relating to them in their natural environments, the animals help us to understand the natural world and each other. This is why the Onkwehónweh people based our family structures around the animals through our clans. The animals also offer themselves to provide sustenance, warmth, and tools, and they work to maintain the balance in the natural world. Every animal was given a very special role and responsibility by the Creator.

Teiethinonhwerá:ton ne Okwire'shón:'a

We offer our greetings to all the tree life. Trees are an important source of wisdom and symbolism for the Haudenosaunee people. Our Creation story tells us of a great tree that lived in the centre of the Skyworld, known as the Tree of Life or the Tree of Light. We are told by some that this tree provided many of the different fruits and medicines that we use today. It is through a hole at the base of this important tree that the curious Skywoman fell to the world below. As she fell she grasped at the roots and plants around this tree, which then covered her hair and under her finger nails. This is why many of our plants, such as the tobacco, come directly from the Tree of Life in the Skyworld, maintaining our close connection to our ancient relatives. The trees provide the same life giving functions here on Earth. They clean and cool our air and provide oxygen for life to exist. We say they are the lungs of our Mother the Earth. The trees provide sustenance and medicines, and are the source of an indeterminate amount of products that people use in the world today. The trees

hold the water and nutrient rich soil in place for the many life forms that make it their home, and provide shade and shelter for many animals, insects, and birds. The white pine tree in particular, a tree that stands far above the others, was chosen to provide the symbolic shelter to the Haudenosaunee Nations when we came together in peace. These are some of the many important responsibilities given to the trees by the Creator.

Teiethinonhwerá:ton ne Otsi'ten'okón:'a

*We offer our greetings to all **the bird life**. The birds were the first creatures to greet the Skywoman and cushion her fall from the Skyworld. We are told that the bird life was created to bring joy to the rest of Creation. They wake us with their beautiful songs and lead us in welcoming the new day so we will always remember to offer our thanksgiving. The eagle was chosen as their leader and sits atop the Haudenosaunee Tree of Peace to warn the Nations of any impending danger. The birds help the plants to reproduce by spreading their seeds and pollen, and they maintain balance in the plant, insect, fish, and small mammal populations who provide their sustenance. The birds also offer themselves to provide nourishment and warmth. These are some of the many responsibilities given to the bird life by the Creator.*

Teiethinonhwerá:ton ne Kaié:ri Nikawerá:ke

*We offer our greetings to **the Four Winds**. The winds help the plant life to reproduce by spreading their seeds and pollen. The winds coming from the four directions refresh and purify our air. They bring the changing seasons and the changing weather. They carry the clouds that bring the rains, and dry the land so we can plant our crops. The winds also carry the air that all life forms need to live and breathe. The same air is shared by all*

creatures on this planet as it is moved around the globe by the winds. In this way, the winds connect us to each and every other life form on Mother Earth - past, present, and future.

These are some of the important responsibilities given to the winds by the Creator.

Teiethinonhwerá:ton ne Ietsiso'tho:kon Ratiwé:ras

We offer our greetings to our Grandfathers the Thunderers. The Thunderers come from the West carrying with them the lightening and the rains for all life to grow. They cleanse and renew the Earth each spring. The responsibilities given to our Grandfathers the Thunderers are associated with great power. They can bring life and destruction all at once. We are told that the Thunder Beings have four identities, three to strike the ground, and the fourth to direct their work. If we fail to fulfill our responsibilities to them, the fourth Thunder Being will stop directing their work, allowing them to strike at random and causing much destruction on Earth, until one day it will strike fiercely from the East and they will all return to the land of the Creator. We welcome the Thunderers when they return in the spring by burning tobacco and thanking them for continuing to fulfill the important responsibilities given to them by the Creator.

Teiethinonhwerá:ton ne Ietsi'sótha Ahsonthenkha Karáhkwa

We offer our greetings to our Grandmother the Moon. In our Creation story the moon is the Skywoman, the grandmother of all things, and of the twins who created the balance of life on the Earth. Our Grandmother the Moon takes care of everything that lives upon her daughter the Earth. She controls the rhythm and flow of all water on Earth, and regulates the cycles of life. She has a special relationship with all females and ensures the proper conditions for all reproduction to occur. Our Grandmother the Moon also guides us in our

cycles of planting, and of harvesting our crops, berries, and medicines. These are some of the many responsibilities given to our Grandmother the Moon by the Creator.

Tentsitewanonhwera:ton ne Shonkwahtsi:'a Tiekkehnekha Karáhkwa

We offer our greetings to our Elder Brother the Sun. While the Moon and Earth are associated with the cool, patient, and nurturing characteristics of the women, the Sun is associated with the hot-tempered, providing, and protecting instincts of the men. All characteristics are needed for our society to be balanced, and both men and women should balance these characteristics within themselves. Our Elder Brother the Sun is vital for all life to exist. He is the light of the Creator, and provides light for all to see, warmth for all to live, and energy for all to grow. Our Elder Brother the Sun also provides us with the incredible gift of a clean and endless supply of energy used by humans. These are some of the many important responsibilities given to the Sun by the Creator.

Teiethinonhwerá:ton ne Iotsistohkwarónnion tsi Tkaronhiá:te

We offer our greetings to all the stars in the sky. Their beauty fills the night sky and sparkles in the morning dew. The stars have been our teachers and navigators since time immemorial. They warn us of flood and drought, and their movement guides us in planting and harvesting. One of our stories tells us of the special relationship of the children and the stars. This story happened at a time when the adults forgot the importance of including the youth in our ceremonies and decision-making. Despite their struggles to convince the adults and elders, the youth knew that it was their responsibility to learn these teachings. They started to create their own ceremonies in the forest. We are told that the power of their song and dance lifted them into the sky where they became the Seven Dancers, a constellation

known to the Greeks as the Pleiades. Today the Seven Dancers remind our people of the importance of including the children and the youth in all aspects of our culture. These are some of the important responsibilities given to the stars by the Creator.

Tentsitewanonhwera:ton ne Shonkwaia'tison Ka'sahsthenserako:wa

Sa'oiera

*We offer our greetings to **the Creator, the Great Natural Power**. The Creator formed the delicate balance and harmony that exists in the universe. The Creator gave all parts of Creation equally important responsibilities to carry out in order to maintain this balance and harmony. Humans are the youngest of Creation with much to learn from all the rest. We are grateful for all the gifts offered by the Creator that allow us to be here, and acknowledge our responsibilities to the rest of Creation to ensure that the cycles of life can continue.*

Closing Words

Now I have done my best to offer greetings and respect to all of Creation. If there is anything that I forgot or did not include here, please take the time to address them in your own way. Remember these words as you explore the study presented here to develop a protocol to renew the fulfillment of our responsibilities to the natural world.

CHAPTER 1: THE RESEARCH

1.1 Research Question

How can Indigenous principles and frameworks be used as a basis for the active fulfillment of our responsibilities to the natural world?

1.2 Research Significance

In the past humans understood our roles and responsibilities within the systems of life. However, today humans are the only creature on Earth that has strayed from the original responsibilities given by the Creator, and we can see the imbalance this is creating in the world. The balance and harmony we once had in our relationships with each other and with the natural world have been seriously impacted, and the health of people at all levels is suffering.

Throughout the past centuries, our Peoples have been faced with a multitude of impacts on all aspects of our traditional structures, contributing to the changes in our relationship with the natural world. Most of the problems we see emerging in our communities today (illness, poverty, depression, substance abuse, vandalism, etc.) stem directly or indirectly from this growing physical and spiritual disconnection from the natural world and its gifts.

Throughout the many years of attempting to adjust to the changes in and around our communities, we have found that the Western-based tools imposed upon our communities have had very limited success in solving our increasing problems. These tools do not

adequately acknowledge, recognize, or address the true source of our problems. The evolution of a reliance on these imposed institutional structures, frameworks and approaches has even further eroded our value system, and has created a growing spiral of problems. Although useful on certain levels, current formulations of environment assessment, risk assessment, environmental legislation, and Environment Management Systems (EMS) have not addressed our more critical concerns about the eroding human relationship to the rest of the natural world.

We are currently rediscovering, re-examining, strengthening, and revitalizing our traditional structures for re-implementation in our communities, and for greater relevance in addressing the issues we are facing today. In order to develop an environmental plan that is holistically appropriate to our people, we must mould structures that rely on the principles that emanate from within our own traditional value systems.

This research is significant because it provides a timely and culturally-relevant framework towards renewing our responsibilities to our Mother the Earth, all of her children, and the faces yet to come. The Environmental Responsibility Protocol presented here builds upon the teachings and work of many Indigenous Peoples and individuals, and draws from the Western science that can complement and work with our Indigenous knowledge and science. It is a starting point for discussion in our communities and beyond.

1.3 Research Methodology

In order to develop an Environmental Responsibility Protocol that will work for our communities, the primary source of information must be from the perspective of our

traditional teachings and the very important principles they embody. The protocol must also be strengthened and further empowered by harmonization with the thinking and plans of the other Onkwehónweh communities and Nations, and draw from the Western science that can complement our Indigenous science.

1.3.1 Literature Review

The literature reviewed for this study was drawn primarily from unpublished documents and reports written within the circle of work in Indigenous institutions and traditional bodies. Meeting minutes, internal study reports and statistics, school curriculum outlines, newspaper articles, and opinion papers from Kahnawake and other Haudenosaunee communities were consulted. Inspiration and direction were also drawn from documents published by the Haudenosaunee Environmental Task Force, the Native North American Travelling College, and other Haudenosaunee cultural writings.

Several relevant books published by Indigenous authors from Turtle Island were drawn upon. In particular the work of Dr. Taiaiake Gerald Alfred, a Mohawk scholar from Kahnawake, contributes an important historical perspective of our community, and expresses the urgency for us to re-examine and re-integrate our traditional frameworks. The research presented here builds upon the work of Dr. Alfred with a focus on the evolution of our relationship to the natural world. Further, the work of Indigenous scholars Dr. Gregory Cajete and Vine Deloria Jr. provides valuable thought around Indigenous science and education, which is expanded upon in this model of environmental responsibility for Kahnawake.

Where available, Indigenous-authored primary literature published in conventionally recognized journals were referred to. Currently only a small but growing body of such literature exists. James Ransom of the Mohawk Nation, along with Kreg Ettenger, have published their research towards Indigenous and non-indigenous environmental cooperation, by drawing from the *Kahswéantha*, an important 17th Century treaty expressing this relationship. The *Kahswéantha* (or Two Row Wampum) is used in this research as a symbol to demonstrate the different frameworks that originally shaped the treaty and emerged from the Indigenous / non-indigenous relationship. The Two Row Wampum is used here as a model for environmental responsibility and cooperation. This research also draws from another collaborative effort among Indigenous and non-indigenous scholars, which explored gaps in current risk assessment and risk management practices from an Indigenous perspective, and suggested means to address these gaps (Arquette, Cole, Cook, LaFrance, Peters, Ransom, Sargent, Smoke, Stairs, 2002).

Other primary literature, government publications, and reports, were referred to in this study for the purpose of comparing the environmental relationships, frameworks, and management approaches being undertaken from different perspectives. Drawing from the principles of the *Kahswéantha*, this literature also served to uncover collaborative opportunities between Indigenous and non-indigenous sciences.

1.3.2 Oral Accounts, Discussions, and Experiences

While the written literature was an important source of information and inspiration, my first hand experience of my culture, growing up, living and working in the community, has fuelled the majority of the content of this study. Much of the information gathered for this

study was drawn from oral accounts and informal discussions with various Onkwehónweh people (elders, youth and adults), as well as meetings, workshops, and encounters with other Haudenosaunee people. I also participated in and drew a significant amount of inspiration from the Haudenosaunee Environmental Task Force (HETF) workshops aimed at developing a “culturally-based set of standards and processes for environmental protection” (Ransom and Ettenger, 2001, p.223).

1.3.3 Community Surveys

Two community surveys were conducted for this study to gain current and first-hand input to direct the research on environmental responsibility. The first survey was comprised of a key person analysis, and the second survey sought a more random cross-section of community input.

Community Survey #1: Key Person Analysis

The first survey was carried out at the onset of the research between October and December 2001. It consisted of face-to-face interviews with fourteen (14) individuals in the community who are currently involved or have in the past been involved with the evolution of the Kahnawake Environment Office. The individuals surveyed ranged in age from early twenties to late sixties (20's-60's), and encompassed a diversity of spiritual and political orientations, and lifestyles.

The main goal of this first survey was to involve community members in the development of the Environmental Responsibility Protocol from the onset of the research, and to get some

preliminary direction for the research focus. The questions asked were qualitative and open-ended covering topics such as:

- the various roles and responsibilities within the community towards environmental protection;
- environmental concerns that should be addressed in Kahnawake;
- feedback on Kahnawake Environment Protection Office projects and services;
- community environmental awareness and involvement issues;
- the development, implementation and enforcement of laws in Kahnawake, both traditional and non-traditional; and,
- ideas for the use of our traditional values and frameworks to address the impacts on our territories, and to protect the natural world for the future generations.

The information generated from these interviews helped to guide the subsequent research focus for this study.

Community Survey #2: Random Assessment

The second survey was carried out in January 2003, to gain a more random cross-section of opinions on the concepts of environmental values and responsibility. It also served to extract an environmental focus and expand on surveys carried out by Dr. Taiiake Alfred on membership issues in 1990 and 1991, and on self-government in 1992 (Alfred, 1995, p.196 and p.201). Two thousand (2,000) surveys were distributed to the community through the post office boxes, and to various key areas in the community including the Kahnawake Environment Protection Office (KEPO), the Mohawk Council of Kahnawake (MCK), the Kateri Memorial Hospital Centre, Kahnawake Shakotia'takehnhas Community Services (KSCS), the Youth Centre, two youth groups, and the Kahnawake Survival School

(KSS). The one-page survey is included in Appendix D. The three main goals of the survey were the following:

1. To uncover the main environmental concerns in the community, the perceived causes and accountability for these problems, and determine the preferred solutions for addressing them.
2. To gauge the connection the different age groups make between their personal definition of a “traditional person”, values towards the natural world, and the translation of these values into their lifestyles.
3. To obtain more community perceptions on the traditional concept of responsibility to the natural world.

A prize incentive was offered to obtain a greater cross-section of respondents. One hundred and seventy two (172) surveys, or 8.6% of the total surveys distributed, were completed. This represents approximately 2% of the total population of Kahnawake. The age distribution of completed surveys is included in Figure E-1 in Appendix E. The surveys were sorted and analyzed by age, traditional affiliations and values, and the translation of these values into current-day lifestyles. From this information, basic trends about environmental responsibility were extracted. Some of the results and general trends from this survey are discussed in Chapter 2.

1.4 Research Context

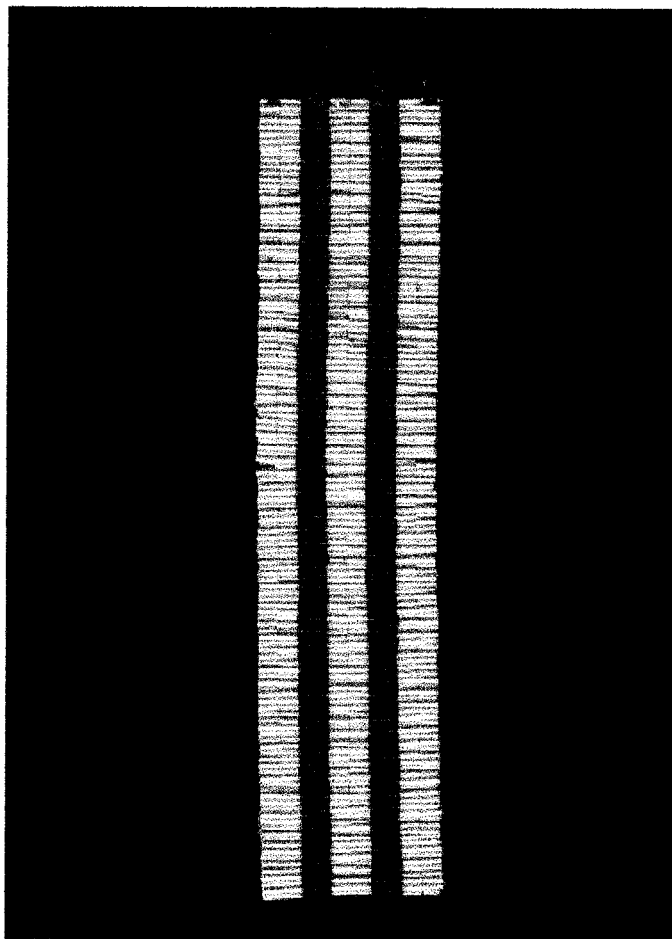
This research took place in the context of the Mohawk community of Kahnawake, known to us as the ‘village on the rapids’. The Mohawk people, or Kanien’kehá:ka - People of the Flint, as we refer to ourselves, are the Keepers of the Eastern Door of the Iroquois

Confederacy. Identified as Haudenosaunee or People of the Longhouse, the Confederacy came together several thousand years ago when the Peacemaker helped to bring our Nations to one mind through his message of peace, power, and righteousness. The Haudenosaunee Nations joining the Mohawk territory to the south and west are the Oneida, Onondaga, Cayuga, Tuscarora, and the Seneca who are the keepers of the Western Door. The *Kaianere'kò:wa'* or the Great Law of Peace forms the foundation of our relationship with each other and the natural world, and is the basis of our social, political, and spiritual life. Our families are structured around clans passed through the female lineage. In this system there is a balanced sharing of responsibilities between the men and the women, and all people are free to participate in decision-making, which must reflect the needs of at least Seven Generations in the future. The Great Law is complemented by the *Ohén:ton Karihwatéhkwén* or Thanksgiving Address, which expresses the traditional responsibilities given by the Creator. These responsibilities are acknowledged daily by some, seasonally through ceremonies, and at the start and end of gatherings.

With the arrival of Western society to Turtle Island, new agreements were formed to elicit peaceful coexistence. The *Kahswéntha*, or Two Row Wampum Treaty, a Nation to Nation agreement originally made between the Mohawk and the Dutch in the 17th Century, to this day still represents the basis of a respectful relationship between the Indigenous Peoples and the Western society of Turtle Island (see Figure 1-4). The two parallel purple lines of the wampum represent the river of life that flows throughout our territories. The 'canoe' of the Indigenous Peoples, and the 'ship' of our neighbours, travel in a parallel path on this river of life. Within each of our symbolic vessels we carry the elements of our respective cultures, such as knowledge systems, principles, economy, education, art, health,

worldview, government, language, land ethic, family, and oral traditions (James Ransom, personal communication, January 23, 2003). The river of life is adequately large enough for both of us to travel without crossing over to disturb the contents of the other vessel, though we may occasionally help each other and work together when both parties agree. In this manner, the integrity of each vessel can be maintained, while learning and drawing from each other in mutually respectful fashions. The three white rows of the *Kahswéntha* symbolize the principles of peace, good mind, and strength, the spirit with which this agreement must be maintained.

Figure 1-4: Kahswéntha, Two Row Wampum



(Beaded reproduction made by author)

Unfortunately, we have seen the spirit of the Two Row Wampum gradually erode as our neighbours imposed their political, social, and religious frameworks within our communities. Today the relationship with our neighbours is variable and often volatile, primarily due to their lack of recognition and ongoing violations of the Two Row Wampum Treaty. For Kahnawake, some of the many violations of the *Kahswéntha* include: the imposed Indian Act; the suppression of our spirituality through forced Christianity; negative experiences from residential schools; the general loss of traditional land base such as the seaway expropriations in the 1950's; the increasing development around and traffic through our community; the pollution from surrounding industries; the ongoing jurisdictional disagreements; and more recently, the 'Oka Crisis' in 1990 – just to name a few examples.

Today only three Haudenosaunee communities still possess our traditional form of government with Chiefs and Clan Mothers as the sole governing body. All other Haudenosaunee communities have been forced or co-opted to elect Band Councils (Canada side) or Tribal Councils (U.S. side), or have a combination of elected and traditional governments (HETF, 1995). The current political / institutional context of Kahnawake has many layers, the main three being the elected Mohawk Council of Kahnawake (MCK), the Indian Act, as well as the *Kaianere'kò:wa'* and traditional bodies (Alfred, 1995). The elected MCK system administers the funds, provides essential services to the community, and negotiates on a political level. The Quebec-Kahnawake Relations and Canada-Kahnawake Relations negotiations currently underway by the MCK are seen as a direct result of a mandate by the community in 1979 to cut the ties to the Indian Act and return to traditional government. Community members have expressed varied degrees of support

or dissatisfaction with the direction being taken by the MCK in this process, and the negotiation period was recently extended for another four years as an attempt to seek consensus in the community. The traditional bodies in Kahnawake are currently operating in three "Houses" with varying opinions and interpretations of traditional government. Recent years have seen small steps towards a more unified traditional movement.

Although the traditional territory of the Kanien'kehá:ka stretches along the south shore of the St. Lawrence River from Montreal all the way down to Albany, New York, today our seven communities are spread throughout what is commonly known as Quebec, Ontario, and New York State. Known as "Indian Reserve No. 14" to the Federal government, the Mohawk community of Kahnawake is located on the south shore of the St. Lawrence River across from the city of Montreal. Although our community is physically located in Canada, we identify ourselves not as Canadians, but as members of the Kanien'kehá:ka Nation of the Haudenosaunee. The community has more than 1,800 homes, more than 7,000 community members, and about 300 businesses and organizations. The current land base of Kahnawake is 12,500 acres, not including the land claims still under dispute and discussion (MCK Comprehensive Land Use Proposal, October 2001, Unpublished Works).

In the past, lands were communally used and cared for. However, since the imposed government surveys of 1882, the land of Kahnawake was divided into privately owned lots, with certificates of possession given to eligible community members who apply for land. Today there are more than 4,000 lots and 7,000 certificates of possession arranged in a "jigsaw puzzle-like fashion" (MCK Comprehensive Land Use Proposal, October 2001, p.6, Unpublished Works). Much of this privately owned land is inaccessible or locked up in

undivided estates, with some large tracts owned by single individuals or families. The remaining land in the community is common land that is managed by the Mohawk Council of Kahnawake.

The predominant land use in the community is for housing and small businesses. Much of Kahnawake's current land base is also taken up by golf courses, or left unusable by past unauthorized dumping activities. With our limited land base and fast growing demands for housing and other uses, the pressures on our land and its inhabitants are intensifying. Today the community is crisscrossed by numerous 'rights-of-way' that were expropriated throughout the years by the government of Canada for roads, railway lines, a seaway, transmission lines, and bridges. In addition to the constant passing of ships, trains, and planes, more than 100,000 commuters per day pass through our community (MCK Comprehensive Land Use Proposal, October 2001, Unpublished Works).

Tioweró:ton, our northern territory shared with the Mohawk community of Kanesatake, is comprised of approximately 19,500 acres of land, lakes, streams, forest and wildlife mostly in its natural state. This territory serves as a place to carry out our traditional activities such as hunting, fishing, and gathering medicines and foods. All the land in *Tioweró:ton* is held in common, with families using certain areas for traditional activities or summer cabins. The ecological pressures on this natural area are increasing with the growing numbers of cabins and visitors each year. Some of the concerns with this increased usage are: increasing requests to open new areas for cabin construction, the proliferation of garbage, over-fishing and over-hunting, the extensive use of all-terrain vehicles, the diversion and crossing of creeks, and the disturbance of other sensitive areas.

The Kahnawake Environment Protection Office (KEPO) was established in 1987 as part of an evolving movement in the community of Kahnawake to address the increasing impacts on the natural world in and around our territories. A detailed history and evolution of the KEPO is provided in Appendix B. Today the KEPO supplies vital environmental advice and services to the community, while providing environmental leadership in fulfilling our responsibilities as caretakers of our Mother the Earth (see Appendix C for KEPO Strategic Framework). The Environmental Responsibility Protocol presented here forms part of a growing need to formalize processes for environmental decision-making, based on the traditional frameworks of our community and our Nation.

CHAPTER 2:

THE EVOLUTION OF ENVIRONMENTAL RESPONSIBILITY: A PERSPECTIVE FROM KAHNAWAKE

The *Ohén:ton Karihwatéhkwen* is the traditional framework through which we acknowledge the responsibilities given by the Creator to maintain the balance and harmony in the universe. We express these words of Thanksgiving so we will always remember the fundamental interconnections we have with the extended family of Creation in working towards this goal. The respect we offer through these words is subsequently intended for transference to our actions and lifestyle. However, the words of the Thanksgiving have often lost the spirit of their intent, as we struggle to make sense of all the changes that have occurred on Turtle Island over the last five centuries. The literature reviews, community surveys, informal interviews, and experiences gained from this study have contributed valuable insight into the current concerns of the people, our values, and the

expression of these values in our lives. The issues uncovered in this research, as explored through the framework of the *Ohén:ton Karihwatéhkwen*, leads to the areas of focus required to actively renew the fulfillment of our responsibilities to the natural world.

2.1 The People

It is truly amazing that the Haudenosaunee people have survived to this day throughout all the social, economic, political, and environmental impacts we have been subjected to throughout the last five centuries. In Community Survey #2, respondents expressed a wide range of concerns about our environment (see Table E-1 in Appendix E), with pollution of our water, land and air ranking foremost in people's minds. Sources of pollution from activities all around our community, as well as from within our community were mentioned as contributing to the compromised quality of our environment. The survey responses demonstrate an overall feeling that although industrial pollution is a major concern, individuals have an important role to play in the disharmony in the natural world. The choices people make on a daily basis that impact the environment, and the associated values shifts that are occurring in our community, were the next most frequent concerns expressed in the survey.

Of particular interest is a distinct category that emerged in the surveys, specifically addressing the actions and values of the youth in our community. Most of the concerns in this category were expressed by the youth themselves. They often linked the local youth problems of vandalism, drugs, and alcohol, to the disconnection they feel from the adults and elders. Many of the youth respondents expressed concern about the deterioration in

these important intergenerational interactions, and the decreased transference of values associated with the culture, the language, and the natural world.

Other environmental concerns expressed in Community Survey #2 related directly to the violations of the Two Row Wampum Treaty. Many respondents expressed a general sense of frustration resulting from the loss of our traditional land base from the many expropriations throughout our history, and the associated loss of our traditional activities. The incredible poem on Page *i*, from Kahnawake's youth magazine (*Revolution*), sadly but accurately sums up the feeling of many people in the community about this issue. In addition, the rapid development in and around our community has sparked concerns about the resulting loss of natural environments to accommodate the needs of the non-human family of Creation. Concerns about increasing environmental health problems in our community, and observations of Climate Change impacts were also expressed.

In relation to culpability for the environmental concerns expressed in the survey, most respondents held all people accountable for the problems we now face in our community, both for directly causing them or for allowing them to happen (see Table E-2 in Appendix E). The accountability of the Canadian and Quebec governments was also mentioned by respondents, and interestingly, many of the youth held the MCK responsible for the existing environmental problems in our community. This could be related to the general disillusion the youth expressed about the lack of responsibility on the part of the adults, towards the youth and future generations. The majority of survey respondents felt that all people should personally take responsibility to prevent ongoing impacts to the natural world. However, the survey respondents charged the MCK and KEPO, as well as the

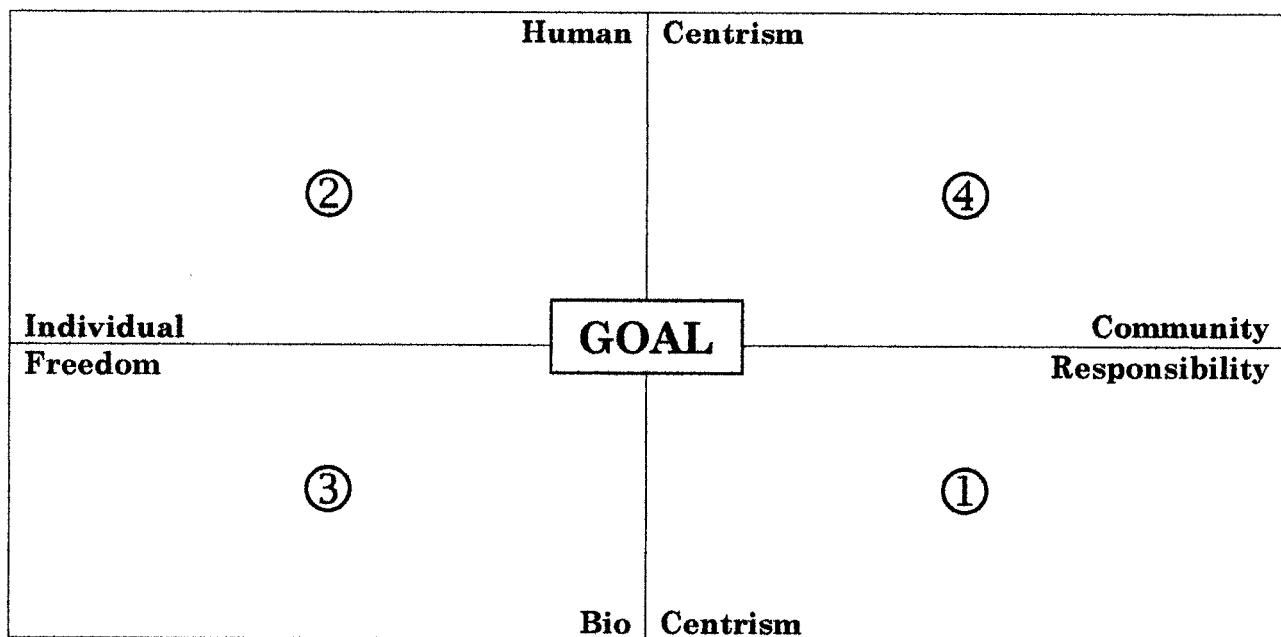
polluters themselves, with the responsibility to find and carry out practical solutions to our current environmental problems.

The environmental values expressed by the survey respondents closely reflect the principles of our traditional teachings (see Table E-3 in Appendix E), with the predominant values acknowledging our responsibilities to care for and respect our Mother the Earth. However, how to actually fulfill these responsibilities in our daily lives has proven to be where most people find confusion. A great majority of the survey respondents stated that they actively express their environmental values in their daily lives by recycling and by not littering (see Table E-4 in Appendix E). It is clear that fundamental elements of our traditional teachings are missing as very few respondents expressed the importance of nurturing a connection to the natural world in their daily lives. This is the key to where humans have failed in our duties to the natural world. In our vastly changed world of individual rights, technological fixes, influential media, and easy access to unsustainable products, we struggle to understand how to go about fulfilling our responsibilities to the natural world.

Figure 2-1 demonstrates the many different value systems that have emerged within the range from human-centric (humans as separate from or above the natural world) to bio-centric (humans as part of the natural world), and from a focus on individual freedom to a sense of community responsibility. In the past, our community value system was based on a sense of community responsibility within the greater family of Creation (Quadrant ①). However, under the imposition and mixing of different ideas, values, institutions, and approaches, our value system has shifted to Quadrant ② where we now focus more on human rights and individual freedom. This value shift has significantly changed the

way we relate to each other and to the rest of Creation. As anticipated in the evolution of any culture, it is unrealistic to expect our community to return to the exact value system we once possessed in Quadrant ①. An important goal for all humans in the world today would be to undergo a value shift reflecting a balance between human-centrism and bio-centrism, and individual freedom and community responsibility.

Figure 2-1: Human Value Systems



(Adapted from Management and Protection of Aboriginal Lands Workshop, Allan Wolfleg, April 2002, Banff Centre for the Arts)

In working towards this central goal in Figure 2-1, the solutions proposed by the survey respondents clearly indicate a desire for access to more meaningful information, alternatives, and community involvement in environmental issues (see Table E-5 in Appendix E). Although there's an inherent desire to fulfill our responsibilities, there's limited meaningful information to guide us, and limited access to sustainable and affordable alternatives to choose from. In our community, our lifestyle choices have

become limited as we strive to survive on a small fraction of the lands that used to sustain our peoples. Today, as we struggle to maintain our language and culture, we are losing the connection between these and the natural world around us. A desire was also expressed in the survey to find ways to nurture connections between our traditional values, language, and the natural world, and to improve the resources, structure, and knowledge base for the KEPO and other community organisations to help the community to do so. Different forms of environmental legislation, incentives, disincentives, enforcement mechanisms, and accountability were also suggested to address the actions of those people who have in the past or are currently compromising the health of the natural world. In addition, some would like to see the creation of development criteria that reflects our responsibilities to the natural world and the future generations, with community-wide participation towards this goal.

Since time-immemorial, Indigenous governance systems have functioned by integrating all aspects of the culture, including not only the political sphere, but also the relationship with the natural world, the value system, and the spirituality. It is this holistic approach that has perpetuated the responsibilities to the natural world throughout the generations.

Today we are struggling to maintain this same holistic approach and must ensure that, while respecting and making use of the knowledge gained through Western approaches, we reformulate our governance structures from the perspective of the 'canoe' in the spirit of the Two Row Wampum. Ultimately it is paramount that we find ways to de-colonize our minds (Alfred, 1999) and renew the responsibilities given to us by the Creator. Through the format of the *Ohén:ton Karihwatéhkwen*, the following explorations of the changes in the non-

human natural world, contribute a holistic picture of the issues we need to address to restore our relationships with them.

- ★ **ISSUES FOR THE PEOPLE:** Human Connection to the Natural World, Values, Responsibilities, Community and Intergenerational Relationships, Education, Language, Culture, Health, Risk Assessment, Administration, Governance, Jurisdiction.

2.2 Our Mother the Earth

Today humans have an increasingly disconnected relationship with our Mother the Earth. Colonial borders have been carved all across the Earth, cutting up the world into a multitude of 'jurisdictions', a meaningless concept to the natural world. Other governments have placed their borders right through our traditional territories on Turtle Island, superficially separating and creating difficulties in accessing and collaborating with our families on the other sides of these borders. This foreign relationship to the land extended into our community, when in 1882 land ownership was introduced in Kahnawake, and our community was subdivided into a multitude of small parcels for individual ownership (Alfred, 1995, p.56).

In Kahnawake we still live with this legacy through the perceived 'right' to at least a quarter acre ($\frac{1}{4}$) lot, and the drive of some individuals to acquire more and more land for development and financial investments. This introduced way of thinking has not only created individualistic values, it has also shifted our spiritual, emotional, physical and intellectual value of the land, towards a relationship that is primarily economically driven. A testimony of this, is the existence of numerous contaminated landfill sites in the

community where waste was dumped for many decades from mostly unknown non-local sources, either for the financial gain of local landowners, or surreptitiously by non-local dumpers. Although this activity was halted by the community in 1987, and a Landfill Policy is now in operation, other such initiatives like leaking gas stations and mismanaged scrap-yards continue to pollute our community. Today these old landfills and contaminated sites cover a significant proportion of our land base, and cause countless risks to the current and future generations, and all our relations in the natural world. In addition, one of the most prevalent business ventures in Kahnawake are golf courses. The numerous manicured and chemically-laden landscapes virtually devoid of natural habitat and wildlife, has carved a new relationship with the natural world as a source of entertainment, under sterile and controlled conditions. In addition to the pollution, all of these activities have also reduced our land-base available for carrying out traditional activities such as agriculture, gathering medicines, and hunting.

Today we are faced with the rapid development and growth of our community on a limited land-base. We must look to our roots to find appropriate ways to address the needs of our community in ways that allow the natural world to carry out the responsibilities given by the Creator. The Kanata Healthy Housing Project in Kahnawake is one such initiative which seeks not only to provide sustainable alternatives to develop our physical space, but also to renew our connection to the natural world and to each other through collaborative land use and appropriate social-cultural initiatives. Although struggling to find active financial, technical and moral support within a system conditioned to think inside the Western box, the Kanata Healthy Housing Project provides an important springboard upon

which to model the future sustainable livelihood of the community and other territories on Mother Earth.

- ★ **ISSUES FOR OUR MOTHER THE EARTH:** Human Relationship with Mother Earth, Land Management, Land Use, Landfill, Past and Present Land Pollution, Waste Management (Garbage, Recycling, Composting, Hazardous Waste), Environmental Site Assessments, Environmental Impact Assessments, Planning and Development

2.3 The Waters

Today the actions of humans are preventing the waters from fulfilling their duties. The life force of the waters is being threatened by the countless sources of pollution, the re-direction of water for human activities, and the massive 'harnessing' of water to meet the human needs for energy. The community of Kahnawake has a long history and intimate connection with the water. In our language, Kahnawake means 'village on the rapids'. Our people were well known for our knowledge of the waters, and ability to connect with its flowing spirit through highly skilled river-rafting on what is currently called the Lachine Rapids of the St. Lawrence River. We also drew a significant amount of our sustenance and economy from the waters. In the recent past of our parents' childhood, the river was a place for fishing, family gathering, bathing, washing and the primary source of drinking water. In the 1950's all this changed when the single most devastating event in our community's recent history cut us off from the river. In 1955-56, the federal government set in motion the process to expropriate virtually all of Kahnawake's riverside land and prime farmland (over 1,000 acres) (MCK Comprehensive Lands Use Proposal, October 2001, Unpublished Works) for the establishment of a seaway transportation route between Montreal and the Great-Lakes. The community's desperate efforts to prevent this catastrophic event were

futile as people were deceived or forcibly removed from their homes (Alfred, 1995). The day the St. Lawrence Seaway was opened remains a vivid memory for some who tearfully recount the water rushing through the channel that was dug into our Mother, straight through our territory (Selma Delisle, Native Youth Movement event presentation, Kahnawake Survival School, August 2002). Some express that “as we have been driven from the river, everything that is associated with being Mohawk has been impacted” (HETF, 2000, p.40). The legacy of genocide, and destruction of the natural world continues as the St. Lawrence Seaway Authority is now talking about expanding the seaway.

For our generation, the connection to the river is all but gone, and the anger and frustration it has created still lives on in our community. Our current generations know only the polluted waters and the large ships that pass so close to our homes at all hours of the day and night. One elder succinctly recounts the gradual disconnection from the waters and how when he was growing up water was referred to in our language as Ohné:kanohs, or ‘the cool waters that sustain us’. When he first went to school it became simply water, or in French l’eau, and when he reached high school it became H₂O, a rational breakdown of its component parts and a final severance from the living force within our Mother the Earth (Tiorahkwathe, personal communication, January 15, 2003).

However, our ancestral connection to the water is still acknowledged in all generations today, as water was recently recognized as the most important environmental concern in our community (Community Survey #2, January 2003). The main concerns associated with the water include pollution of the river from surrounding industry, passing ships, water diversions and low water levels, inadequate sewage treatment, the pollution of our

groundwater from the contaminated landfill sites and careless individual activities, the dredging or filling of our creeks, ponds, and wetlands and associated loss of habitat, and the ongoing disruption of the natural water cycles.

★ **ISSUES FOR THE WATERS:** Human Relationship with the Waters, Connection to the River, Shoreline Health, Wetlands, Water Quality, Drinking Water, Waste Water Treatment, Water Quantity, Water Drainage

2.4 The Fish Life

Humans are also seriously impairing the ability of the fish life to fulfill their duties, as they are impacted by over-fishing, pollution, and over-development. The financial greed associated with commercial fisheries has in some cases wiped out entire populations who become unable to regenerate their families. In addition, fish habitat and spawning grounds are being destroyed by development and exposure to poorly treated sewage, and the health of the fish themselves is suffering due to exposure to a wide variety of harmful chemicals in the waters.

Although fishing was an important traditional activity in our community, all of these impacts have significantly reduced our ability to carry out our traditional relationship with the fish. We have only a handful of fishermen left in our community who feed their families, supply the community, and in some cases obtain an income from fishing. Canada and Quebec continuously try to impose fish 'quotas' on our people, and subject us to their definitions of our traditional activities and of healthy fish populations.

The loss of our fishing activities and related diet has led to a host of other health and social problems in our community. A fish quality study conducted in Kahnawake in 1997 showed that the fish are safe to eat, but with certain limitations. It is a difficult task to convince people that eating fish from the polluted St. Lawrence waters is better for their health than eating greasy fast food. However, the question remains: why should we be forced to choose between two generally unsafe sources?

- ★ **ISSUES FOR THE FISH LIFE:** Human Relationship with the Fish and Other Water Life, Fish Population Health, Fish Habitat, Spawning Grounds, Fishing Activities, Fish Consumption

2.5 The Root Life

Human development activities are polluting the earth and decreasing the areas where the root life can live and thrive. The community of Kahnawake is no exception to the development trend as the natural areas are landfilled, paved, and built over at an ever-increasing rate. The popularity among our youth of the use of all terrain vehicles, especially in our northern territory of Tioweró:ton, has led to the compaction, erosion, and destruction of numerous sensitive areas where the root life once thrived. One elder recounted that the Onennoron (Sweet Flag), an important physical and spiritual medicinal root once prevalent in our community, has been mostly covered over by the contaminated landfill sites, and is now very difficult to find (Tiorahkwathe, personal communication, January 15, 2003).

Just as our physical roots are threatened by human activity so too are the roots of the Tree of Peace, which are being damaged by the disunity in our communities. Our prophecies tell us that one day the weakening of the roots will cause the Tree to fall, and when our Chiefs

cannot hold it any longer it will be our children and our youth who will rush to support it, straighten it, and strengthen it again (Tom Porter, HETF Workshop, June 16, 2002). This is why it is very important that our adults and elders recognize the necessity of educating our children, from our own perspectives, in the ways of our language, culture and values. The adults must be integrally involved in this process themselves, not only in their thoughts, but in their actions as well. Many of our youth recognize their responsibility to protect the roots of the Tree of Peace and have clearly expressed the urgency of passing these values on to them (Community Survey #2, January 2003) so they will be able to fulfill this responsibility when they are called upon.

★ **ISSUES FOR THE ROOT LIFE:** Human Relationship with the Root Life, Soil
Compaction and Erosion, Health of the Confederacy

2.6 The Small Plants and Grasses

Most people have forgotten the important relationship we have with the small plants and grasses, and are making it very difficult for them to fulfill their responsibilities. The development and the introduction of foreign species that is occurring throughout the world is seriously compromising the diversity of the small plants and grasses. Although biodiversity is now a common catch-word in the Western world, most activities still promote monocultures (ex. conventional agriculture, manicured lawns, parks, municipal landscaping, and the use of herbicides to kill naturally occurring 'weeds'). This disconnection from the small plants and grasses is also starting to occur in Kahnawake where the numerous golf courses and increasing prevalence of manicured lawns have created monocultures of energy-intensive foreign grasses. For development initiatives, sometimes wetlands are filled in, or entire yards are cleared and covered with landfill and

sod, thus creating lifeless areas devoid of all the small plants and grasses, as well as the insect, bird and wildlife habitat that once prevailed there. Although herbicide use in the community is strongly discouraged, the golf courses and some individual homes and businesses still use them regularly, not only killing the useful plant species that are native to an area, but also exposing other life forms to the contamination.

★ **ISSUES FOR THE SMALL PLANTS AND GRASSES:** Human Relationship with the Small Plants and Grasses, Diversity, Invasive Species, Herbicides

2.7 The Medicine Plants

Today we are fortunate that there are still people among us who nurture our relationship with the medicines. Unfortunately, many of us are no longer listening to what the medicines have to say. What is often considered a weed to be paved over or removed from the yard or garden could actually be a very important medicine. We are told that when we stop giving thanks to them, the medicines will return to the Skyworld and cease to exist here on Earth to the detriment of all of Creation. Although some medicines, once common in our community, are more difficult to find, they are still growing strong in some areas and are waiting for us to renew our relationship with them. However, many people have turned to Western medicine, which promotes treating the symptoms, rather than prevention through whole health and healing the root cause of the problem. With Western medicine and ideologies at everyone's fingertips, people feel justified to continue living stressful and unhealthy lives with destructive habits.

Fuelling this trend are the influential and powerful pharmaceutical companies, which are inching through every part of the world to find new 'drugs' that are isolated from plants and

later synthetically produced to mimic certain plant properties. Not only does this approach disregard all the wisdom and nourishment from the whole plants themselves who have been growing since time immemorial to perform specific roles, it could also render the plants and their habitat 'obsolete' and therefore not in need of protection. This approach also makes 'obsolete' the wisdom of the Indigenous Peoples who have known and used these plants since time immemorial, and replaces it with patents. The databases of traditional knowledge that are being compiled across the world (ex. the World Intellectual Property Organization – WIPO, Centre for Traditional Knowledge in Ottawa) can easily be misused and misunderstood by those without the life context of the knowledge. Instead of compiling and compartmentalizing the knowledge, the focus should instead be on strengthening the ability of Indigenous communities to continue applying the knowledge in healthy environments.

★ **ISSUES FOR THE MEDICINE PLANTS:** Human Relationship with the Medicines, Traditional Medicine Knowledge, Habitat, Use, Misuse.

2.8 The Berries

In Kahnawake as in other areas, pollution and development are impacting the health and prevalence of the berry plants. The relationship with the wild berries is being lost as people turn to the chemically laden, genetically modified, and imported fruits in the grocery stores. Many people no longer acknowledge the importance of the berries. Some pass them by without a thought or pluck them out to plant non-native and inedible flower gardens. We have much work to do to renew our relationship with the berry plants. In the Kanata Healthy Housing neighbourhood in Kahnawake, plans are being made to design natural landscapes filled with edible wild species of plants that are indigenous to our area. With

this we can return the role of berry gathering to the women and children who can be the ones to begin nurturing our relationship with the berry plants again.

- ★ **ISSUES FOR THE BERRIES:** Human Relationship with the Berries, Habitat, Genetic Modification, Chemicals.

2.9 The Natural Food Crops

Beyond some small individual gardens, and a community garden project through the Kahnawake Environment Protection Office, the important traditional activity of agriculture is very rare in our community. Our relationship with the natural food crops is being replaced with the consumption of greasy fast food, chemically-laden fruits and vegetables, and genetically modified foods that threaten to mix with our heritage crops and change them forever. These activities are a very serious threat to our natural foods and are making it difficult for them to continue fulfilling the responsibilities given to them by the Creator.

The media and society in general are sending some very confusing messages to our people about the food they purchase and feed their families, with little or no factual information about the impacts these foods are having on their health, the health of the environment, and on their relationship with the natural world. Although once primarily reliant on agricultural staples of corn, beans, and squash, today a common meal choice in Kahnawake would almost always consist of some sort of beef, chicken or pork dish, accompanied by the highly promoted 'french-fry'. Today, by following the lead of our neighbours and the 'pyramid food guides' they promote, we are eating far more meat than is healthy for us. In fact, a recent article in Scientific American reported important flaws in the USDA Food

Pyramid, and further research is being carried out to re-evaluate recommendations related to dairy, fat, carbohydrates, and meat consumption (Willett and Stampfer, 2003). Although meat is an important traditional food for us, in the past we only took and ate the wild game that we needed to survive. Today even some of our traditional foods (ex. cornbread and corn soup) are now commonly served with steak and pork respectively, which has become infused in the minds of our people as traditional foods as well. The shift to this unhealthy diet is creating countless physical, emotional, intellectual and spiritual problems in our communities. Some of the more common health problems are diabetes, heart disease and hypertension. In fact, diabetes has become so prevalent in Kahnawake and elsewhere that the Kahnawake Schools Diabetes Prevention Project (KSDPP) recently underwent a significant expansion of its community-based prevention, education, and research programs.

The Whole Health Initiative is a Haudenosaunee project that responds to the concerns about the loss of our natural foods, the compromised health of the natural world, and the associated diminishing health of our people. The goal is to stimulate and empower a Confederacy-wide movement to reverse the impacts of the unhealthy generations since imposed colonization, and to support projects that work towards this goal of Whole Health. One of the current projects under development through this initiative is a Haudenosaunee Food Guide based on our traditional foods in harmony with the natural cycles of the seasons. A computer program is currently being developed in each Nation and language, which the schools can draw upon when teaching the children about nutrition. The Haudenosaunee Food Guide will also strengthen our traditional practices by providing information about growing, harvesting, cleaning, preparing, and relating to the natural

foods, and convey the importance of striving towards a healthy environment for them to grow (Haudenosaunee Runner Newsletter, Spring 2002, Unpublished Works). Support for initiatives like this is vital to the future health of all people, and can help us to re-learn how to create balance and harmony in our diet, whole health, and environment.

★ **ISSUES FOR THE NATURAL FOODS:** Human Relationship with the Natural Foods, Agriculture, Gardening, Preparing Traditional Foods, Diet and Health

2.10 The Insect Life

Insects are highly adaptable and many can survive through very traumatic events and unhealthy situations. However, humans are wreaking havoc on the natural world, continuously disturbing the balance the insect populations have established over countless generations. Today the insect life is an often forgotten part of Creation, and when not forgotten the relationship with people is usually one of disgust or fear. Besides butterflies or dragonflies, which were given the social status of beauty, insects are almost always seen as pests. The intensive agriculture practices of this day are wiping out entire populations of insects with their pesticides only to find that they come back even stronger with a new generation of resistant relatives. As new chemicals are developed for agriculture across the world and harming the local balance in the natural world, the past pesticide use is being naturally transported to the faraway arctic environments where the plants, animals, and traditional foods of the Indigenous Peoples of that region are being polluted. While Western science focuses their research on assessing the risk of pesticide use, they neglect the more important research on balanced and healthy agricultural practices through working with the natural cycles of the Earth. Although pesticide companies have found many reasons why harmful chemicals are so 'essential' to modern agriculture, Cuba is one

example of a country that has completely transformed its agricultural system from a crisis situation, to sustainable, organic, small-scale and economically viable agriculture production (Funes, 2002). Given the current direction of agricultural research and subsidies, it will likely take such a crisis situation for the rest of the world to see the benefits of this approach.

In Kahnawake one practice that is very damaging to the balance created by the insect life, is the dredging or filling of the creeks and swamps. In order to ease the flow of the water in the creeks and prevent flooding, the common practice is to remove all the debris using heavy machinery. Many other creeks and wetlands are needlessly filled in, in order to make way for new development, when the planning could have incorporated these beautiful and important natural features into the design instead. Because few visible and well-known species live in these areas, little thought is given to these activities that eradicate countless insect, fish, amphibian, and reptile species, and their habitats. Although the impacts of these actions are not seen immediately, over the years, these areas become more and more devoid of all the life forms that were supported by these species. Humans must take the time to understand and experience the important life forms that support the balance of these ecosystems.

Recently, with the growing threat of the West Nile Virus in our region, many people are calling for the eradication of mosquitoes that carry the disease. The impacts such eradication will have up the food chain and on the balance in the natural world must be seriously contemplated. Whatever actions are chosen over the next few years must take into account the important roles and responsibilities of the insect life.

- ★ **ISSUES FOR THE INSECT LIFE:** Human Relationship with the Insect Life, Insect Population Health, Habitat, Pesticides, West Nile Virus

2.11 The Animal Life

Today many people look upon the animals as commodities for the mass production of food products, as interesting things to look at in the zoos and aquariums, or as expensive products in the black-market trades. Humans have a very selective relationship with the animals, choosing to admire and seeking to protect only those who have some sort of social appeal or monetary value. Today our young people are relating to the animals only by seeing them on TV, in zoos or in aquariums. Although we are told that this helps the youth to learn about the animals, when we place the animals in these un-natural and often unhealthy environments, we are killing their spirit by preventing them from fulfilling their important responsibilities in the natural world. It's not possible for our young people to form healthy relationships or respect for the animals in these un-natural environments.

Many of our young people have never experienced hunting for their own food, nor the appreciation and respect that is offered to the spirit of the animals for giving themselves to us so we can survive. Few people are aware of the disrespect offered to the animals who suffer in factory farms, pumped with chemicals and unhealthy foods, before their questionable meat makes it to the grocery store and our dinner tables. Most of these animals were offered disrespect throughout their whole lifetimes for the sole purpose of making it to our dinner plates. A respect and acknowledgement for the life and spirit of the animal who offered itself to us is a very important responsibility that is being forgotten.

In our prophecies we are told that if we stop appreciating and giving thanks to the animals for all that they do in Creation, the Turtle who is supporting the Earth upon which we live will begin to shake, and the animals will return to the Creator's land, causing much death, sadness and unrest here on Earth (HETF, 2000). We are already seeing this prophecy being fulfilled today with the extreme natural events and the rapid extinction of species. It is very important that all people recognize the role we are playing in preventing the animal life from fulfilling their important responsibilities.

- ★ **ISSUES FOR THE ANIMAL LIFE:** Human Relationship with the Animal Life, Wildlife Health, Diversity, Habitat, Hunting and Consumption, Livestock, Foreign Species.

2.12 The Tree Life

Many people have forgotten the important functions of the trees and have cleared countless forests to satisfy the growing demand for tree products. These once biologically rich areas are often irreparably destroyed, or replaced with monocultures of trees for future exploitation. New methods of 'sustainable forest management' are emerging. However, these management regimes are frequently still devoid of an intimate knowledge and respectful relationship with the trees and all the life they support. Often the use of younger growth trees and alternative plant products, such as from hemp or straw, is less destructive to the natural world than the removal of the trees who have invested much more time and energy in creating the delicate balance around them. Such alternatives should be more intensely explored in order to halt the alarming loss of the world's forests.

When looking at an aerial photograph of Kahnawake, it is like a green oasis surrounded by a sea of development. However, due to the increasing development in our community, there are very few old or secondary growth forests left in Kahnawake. Recently under the guise of 'sustainable forest management', some of the last remaining white pine elders in our community were cleared by an individual to build his home. The loss of these natural areas was ranked by community survey respondents as one of the top five areas of concern about our environment (Community Survey #2, January 2003). Today trees are often considered only as obstacles in development activities, such as in housing development for example. Greater collaboration amongst all departments and disciplines involved in development should be occurring, in order to consider the natural conditions of a site early in the planning phase.

One of the main causes for our thoughtless destruction of the trees is the disconnection we have experienced from our tree relatives. We have started to forget their names and their important roles in Creation. The black ash (*éhsa*) for example, an important tree for traditional activities such as basket making, was once prevalent in our region and is now very rare. We must find ways to get to know our tree relatives again. Our northern territory (Tioweró:ton), which is still mostly in its natural state, provides a vast source of wisdom about the natural world for us to learn from, and it should be respected as such.

★ **ISSUES FOR THE TREE LIFE:** Human Relationship with the Tree Life, Tree Diversity, Habitat, Forestry, Alternative Plant Products

2.13 The Bird Life

Today the birds are being impacted by development, habitat loss, pollution, and the introduction of species that were brought here from other parts of the world. These new birds are taking over the habitat of the birds that are indigenous to our area. The balance created by our indigenous birds is being disrupted, making it difficult for them to fulfill the responsibilities given to them by the Creator. With so much noise pollution all around us, many people have forgotten the names and distinct songs of the bird life. Even when we can hear their songs we forget to listen, our minds being distracted by the things society tells us are more important. If we listen carefully, the birds are a constant reminder to us to be grateful.

- ★ **ISSUES FOR THE BIRD LIFE:** Human Relationship with the Bird Life, Bird Habitat, Diversity, Invasive Species

2.14 The Four Winds

Human activities are sending harmful substances into the air, and the winds are being forced to transport this pollution around the planet. Today the world has recognized the global phenomenon of Climate Change as one of the most pressing environmental problems of our era. Because we are simultaneously destroying our forests that help to assimilate these gases, this problem is being compounded to dangerous degrees. This abstract concept might seem exaggerated in our area where the only impacts we directly experience are the drastic weather changes. However, as the ice caps quietly melt, and the sea level rises, entire island nations are in danger of losing their food sources to the salt water before being completely submerged under the sea. This and other air pollution impacts are making it

very difficult for the winds to fulfill the important responsibilities given to them by the Creator.

Although surrounding industry and traffic through our community play a major role in the air pollution problem, the community recognizes that all individuals are also to blame by the transportation, heating, energy, and consumer choices we make every day. In the January 2003 Community Survey, personal actions and lifestyle was ranked as the second biggest area of concern in our community, with much of that concern associated with our common choice of large polluting vehicles, and the overuse of our vehicles (see Table E-5 in Appendix E). In fact, from recent research conducted by Tewatohnhi'saktha, Kahnawake has 2953 registered vehicles. That means that most Kahnawake households have two or more vehicles (Bud Morris, personal communication, February 10, 2003). In addition, the non-local traffic flowing through our community every day, not only contributes to our air pollution problem, but also endangers individuals choosing alternative transportation methods like biking, walking and roller-blading. This sends a very clear message to our planners of the need for more paths throughout our community, to allow for these healthier transportation activities to take place safely.

As a collaborative effort between the Kahnawake Environment Protection Office and Tewatohnhi'saktha (our local economic development organization), a wind energy feasibility study is currently researching options, gathering wind data, and seeking training opportunities to develop a renewable energy industry in our community. With the winds that come off the river, and the winds in our northern territory, Tioweró:ton (which means 'the windy place' or 'where the wind comes from many directions'), a gift of energy is

provided to us by the winds. It is up to our people to accept this incredible gift and incorporate it into the future planning of our territories.

- ★ **ISSUES FOR THE WINDS:** Human Relationship with the Winds, Air Pollution, Transportation, Climate Change, Indoor Air Quality, Wind Energy

2.15 Our Grandfathers the Thunderers

Today human activities are making it difficult for the powerful thunderers to fulfill their responsibilities. They are being forced to carry chemicals with them and rain it back down on the Earth, to bring fire to drought-inflicted areas, and they are being called upon at strange times and in strange places because of the drastic weather changes humans are causing related to Climate Change. The Indigenous Peoples of the Arctic regions are telling us that they are being visited by the Thunder Beings in the fall for the first time, and in our community we notice the thunderers arriving earlier in the spring. The people are causing much unrest among the powerful thunderers. Humans must recognize that there are forces in the universe that are much more powerful than us, or the western technologies we develop to protect us. Instead, we must listen to what these natural forces are telling us, and renew our relationship with the natural world to find the solutions.

- ★ **ISSUES FOR THE THUNDERERS:** Human Relationship with the Thunderers, Acid Rain, Climate Change, Fires

2.16 Our Grandmother the Moon

From the waters at the doors of life, such as the follicular fluid that bathes the primordial ovum, the dew on the grass in the dawn and dusk, to the waters of the great oceans, she causes them all to rise and fall. (HETF, 2000, p.139).

An ancient prophesy told Indigenous Nations that a time of great destruction will follow when the eagle lands on the moon. In 1969, the expression of the first human to step on

our Grandmother was “the eagle has landed”. Today humans are disrupting the natural rhythms created by our Grandmother through all the un-natural light at all times of the day and night. Humans are also disrupting the natural reproductive cycles and the delicate precision with which our Grandmother works, through the recent western-scientific experiments with genetic modification and cloning. We are polluting the waters that our Grandmother guides, including the breast milk of our women, and natural link to our future generations. A recent study conducted in Akwesasne found high levels of PCBs in breast milk from the polluting industries around them. “The analysis of Mohawk mother’s milk shows that our bodies are, in fact, a part of the landfill” (Mother’s Milk Project, Katsi Cook, Mohawk Midwife, Unpublished Works).

- ★ **ISSUES FOR THE MOON:** Human Relationship with the Moon, Reproductive Health, Pollution

2.17 Our Elder Brother the Sun

Today humans are making it very difficult for the Sun to fulfill his duties. The chemicals we are sending into the atmosphere are trapping his heat near the Earth and producing severe climatic changes, and other chemicals are creating holes in the delicate ozone layer that protects our Mother the Earth. Some of the sun’s harmful rays are now reaching the Earth, causing countless health problems to humans, and harming the rest of Creation, who have no means to protect themselves.

Humans are also creating energy and weapons that can mimic the powerful heat of the sun here on Earth. Nuclear energy and weapons are a serious threat to all life on this planet. The Indigenous Peoples of the South Pacific are a testimony of the damages that are

transmitted across many generations as a result of the nuclear tests that were conducted in their backyards by far-away governments. The harmful waste produced by nuclear energy facilities, a form of energy supported by the government of Canada, is stored for the unborn faces to deal with for countless generations into the future.

Despite the disrespect humans are offering to our Elder Brother the Sun, he also provides us with the incredible gift of heat and power. Energy from the sun can be used to replace the other harmful energy sources people are choosing today like nuclear, mega-hydro, and coal. However, Canada's ongoing support for nuclear energy and mega-hydro power as 'clean' energy sources sends much doubt that such a boost to the poorly developed renewable energy industry will occur anytime soon. In addition, the Hydro Quebec monopolistic supply of cheap power in our area provides little financial incentive for renewable energy to be supported here. Despite the financial risks involved, our community is seeking to develop a renewable energy industry to provide more self-sufficiency for our people and respect to our natural world. It is up to us to take the lead in accepting the gifts being presented to us by our Elder Brother the Sun.

★ **ISSUES FOR THE SUN:** Human Relationship with the Sun, Ozone Depletion, Ultraviolet Radiation, Nuclear Energy Issues, Solar Energy

2.18 All the Stars in the Sky

Today many of our people have forgotten the language of the stars, and as such have forgotten the important lessons they teach us to direct us and guide our planting. Our story of the Seven Dancers constellation reminds our people of the importance of including the children and the youth in all aspects of our culture. However, in a Community Survey

conducted in January 2003, it is apparent that the youth are once again feeling ignored, and are calling to the adults and elders to remember their responsibilities to the youth. Some say that there will come a time when the roles will change and the youth will begin to take the hands of the adults and the elders to lead them into the future. When this happens it is important that the adults and the elders listen and accept with humility what the youth have to say. Some say there will be a leader that will stand out among the young people. His mind will be stronger than any human being. People will dislike him because they will dislike what he has to say, but he will get the message across (Tommy Mattinas, Ojibway elder, Longhouse discussion, December 7, 2002). It is in renewing our relationship with our young people that we can in turn renew our relationship with our star relatives in the sky, who will continue to remind us of this responsibility into the future.

★ **ISSUES FOR THE STARS:** Human Relationship with the Stars, Guidance for Planting, Guidance of the Youth, Light Pollution

2.19 The Creator, the Great Natural Power

We extend our respect and gratitude to the Creator for the patience he has had with the people living on the Earth. Many have lost their ties to each other and to our relatives in the natural world, and have subsequently failed to fulfill their duties in ensuring that the cycles of life continue. We extend our commitment to the responsibilities given to the people by the Creator, to renew our connection with the natural world, and find new meaning for our responsibilities in the world we live in.

★ **ISSUES FOR THE CREATOR:** Human Relationship with the Creator, Thanksgiving, Spiritual Connections

2.20 Closing Words

The format of the *Ohén:ton Karihwatéhkwen* enabled the expression of the main issues of concern in our community. These are the priority issues to be addressed in restoring the active fulfillment of our responsibilities to the natural world. Through an analysis of the environmental frameworks that have emerged from the 'ship' and the 'canoe', Chapter 3 provides guidance on the development of a culturally-appropriate Environmental Responsibility Protocol for Kahnawake.

CHAPTER 3:

TOWARDS ENVIRONMENTAL RESPONSIBILITY: AN ANALYSIS OF ENVIRONMENTAL FRAMEWORKS FROM THE SHIP AND THE CANOE

The purpose of this chapter is to examine the application of the frameworks that have evolved to address the environmental problems apparent in the world today. It has been the common assumption that the frameworks developed in the 'ship' would also be appropriate for Indigenous Peoples in the 'canoe' because we are experiencing similar environmental problems in our communities. Although the ecological manifestations of the problems might seem similar in the 'ship' and in the 'canoe', many of the resulting impacts are quite different in Indigenous communities as our whole spiritual, emotional, political, and social structures are simultaneously impacted because of their direct link to the health of the natural world around us. The breakdown of Indigenous systems occurs parallel to the collapse of our environmental systems.

The adoption and implementation of the 'ship' frameworks, although perhaps well-intentioned, has caused a great degree of confusion in our communities due to the resultant clash in worldviews. Western perspectives of environmental law, risk assessment, and management, all based on a science that is objectively disconnected from the natural world, are the primary approaches in North America to address the human disruptions of the natural world. These approaches, although beneficial in many ways, also serve to further disconnect people from their duties to the natural world since values and relationships are removed from the decision-making. A common Western framed solution to address environmental problems is succinctly expressed in Brander (2000, p.300):

The best hope is to address environmental problems using the tools that have proved successful in the recent past in raising the quality of human life: application of a sensible economic policy based on an understanding of incentive effects, opportunity costs, and market forces, and, most importantly, ongoing development of scientific and technological knowledge.

This worldview places the interests of humans above the rest of Creation, and relies on technological fixes to mask deeper problems in relating to the natural world. In the Indigenous worldview, all of Creation is important, and the solutions lie in renewing our respectful relationship with the rest of Creation. The intention here is not to pit one worldview against the other, but instead to show how the Indigenous worldview is compromised by accepting the frameworks of a worldview that is not our own.

Although the source and magnitude of impacts on the natural world have changed significantly since the time of colonization, the frameworks that have traditionally been used by Indigenous Peoples are still very relevant to address these evolving problems today. As expressed by Dr. Gerald Taiaiake Alfred, the goal is to re-discover, re-examine, and re-introduce our own frameworks to meet the needs of our communities today:

Native societies are abandoning institutions and values which were imposed on them by force or through the insidious operation of assimilation programs. They are re-examining the roots of their own Native political institutions and the canon of Native thought in a conscious effort to re-discover a set of values and political principles. (Alfred, 1995, p.7)

In the spirit of the *Kahswéntha*, Figure 3-0 illustrates the parallel environmental frameworks that have emerged from the perspectives of the 'ship' and the 'canoe'. An analysis is carried out regarding the various approaches for: 3.1) Education about the natural world, 3.2) Assessing the health of the natural world, 3.3) Addressing environmental problems, and 3.4) Managing our interactions with the natural world. These frameworks will be explored, compared, and complemented by each other, to recommend an Environmental Responsibility Protocol that is appropriate for our community.

Figure 3-0: A Comparison of Environmental Frameworks from the Perspectives of the 'Ship' and the 'Canoe'.

Peace	Frameworks from the 'Ship'	Good Mind	Frameworks from the 'Canoe'	Strength
	3.1 Western Science by Classroom Education		3.1 Indigenous Science by Creative Participation	
	3.2 Risk Assessment		3.2 Whole Health Indicators	
	3.3 Human Rights and Environmental Legislation		3.3 Human Responsibility and Traditional Justice	
	3.4 Environmental Management Based on ISO 14001		3.4 Environmental Responsibility Based on Thanksgiving	

3.1 Education About the Natural World

Ship: Western Science by Classroom Education

One reason that scientists examine non-Western knowledge on an ad hoc basis is the persistent belief held by Western intellectuals that non-Western peoples represent an earlier stage of their own cultural evolution – often that tribal cultures represent failed efforts to understand the natural world (Deloria, 1999, p.41).

To this day, this is the perspective conveyed in Western educational institutions. Lessons on the history of modern science almost always jump from the ‘undeveloped’ ways of the ‘primitive thinkers’ to the progress of the ‘great intellectuals’, who logically and objectively developed hypotheses and theories about the natural world without the ‘bias’ imposed by cultural values and spirituality. This way of thinking compartmentalized the natural world and allowed for whole science curricula to be taught through textbooks and objective experiments removed from the natural world. This was supported by Western religious beliefs of the material world being ‘spiritless’, thus justifying the “God-given right of dominion over nature” (Cajete, 2000, p.54).

This hierarchical ideology is still present today, and in some instances even in the very educational institution supporting this thesis. The second year *ES610 Natural Resource and Environmental Policy* course for this Masters program used a textbook that states:

Much of the debate over environmental issues is confused, ideological, or purely emotional in its appeal... one encounters naïve and emotional appeals to end pollution, sometimes in combination with a generalized attack on Western technology as the source of all ecological evil. Some utopian notion of a natural lifestyle is sometimes held out as the objective. Unfortunately, mankind has had considerable experience with natural lifestyles and they were not very pleasant. As Hobbes observed, man in his (or her) natural state lives a life that is nasty, brutish, and short, and does not have much leisure for enjoying nature or anything else. (Brander, 2000, p. 253, 300)

This way of thinking perpetuates the notion that Western thinking is objective and therefore superior, and that the spiritual connection inherent in the Indigenous

relationship with the natural world is naïve, unpleasant and utopian. It also implies that the human relationship with nature is purely for enjoyment when modern technology provides moments of leisure, and completely ignores important human responsibilities to the natural world.

As expressed by Indigenous writer and professor, Gregory Cajete, mainstream education moulds all students to fit into the mainstream society. Students generally emerge from this “straitjacketed” education as being unable or afraid to think creatively (Cajete, 2000, p.45). “Essentially, modern education conditions a person to be oriented to consumerism, rationalism, detachment, individualism, and narcissism” (Cajete, 2000, p.62). Thus mainstream education supports the very way of thinking that has led to the ecological crisis of the world today. When Indigenous youth leave our communities for education they are immediately exposed to this way of thinking. If they are not properly equipped with the tools rooted in their cultural worldview to critically analyze this way of thinking, they will eventually come to accept it as truth to be implemented when they return to their communities.

Although the schools in Kahnawake have come a very long way since the time of the imposed residential schools and Christian-run institutions, some of these educational frameworks are still present and continue to influence the school curricula. A brief analysis of the curricula in Kahnawake schools produced the following analysis (curriculum materials provided by the Kahnawake Education Centre):

- Although given a firm basis in cultural thought through the social sciences, our youth are given limited opportunity to connect with the natural world in a

meaningful way. The curriculum is mostly classroom-based. Field trips provide some opportunities for walks in the community to relate to our surroundings, however other field trips such as visits to the zoo, perpetuate the Western concept of a detached relationship with nature in a tamed environment.

- The science curriculum currently being promoted in the schools by the Kahnawake Education Centre (the Alabama Integrated Science Program), models itself on a Western scientific teaching approach of an objective relationship to the natural world. Although the knowledge is beneficial to our youth in many ways, this modern description of science “leaves out the sacredness, the livingness, the soul of the world” (Cajete, 2000, p.x).
- The Thanksgiving Address is present in some schools on a daily basis, however it is often recited by rote memory, giving the students minimal opportunity to understand or connect the words they are saying to their responsibilities to the natural world in their daily lives.
- The knowledge and usage of our language is an important tool for describing and understanding the relationship of our ancestors with the natural world. The knowledge of our language is increasing significantly through our youth. However, often when they leave the schools they are exposed mostly to English, and are not given a chance to relate the language to their daily lives and relationships.

Overall, Kahnawake students today are given a much more holistic understanding of the natural world rooted in our cultural values, than their parents and grandparents were in their school experiences. However, the development of a more meaningful relationship with the natural world, as understood and expressed through their daily thoughts and actions, is

required to equip them in making their own critical analysis of the world when they enter mainstream education outside the community.

Today very few of our young people are entering the science fields, and there is a serious gap of trained people in these areas, especially related to the natural sciences. By equipping our youth with our language and an understanding of the natural world through participation in it, they will be able to make their own culturally-based assessment of the science they are exposed to in their higher education. With this strong base, our schools will be in a better position to encourage students to enter the scientific fields and fill the needs in our community.

Canoe: Indigenous Science by Creative Participation

In the not so distant past of our ancestors, the natural world itself was the classroom for conveying an infinite wisdom from all parts of Creation as they fulfilled their responsibilities.

To gain a sense of Native science one must participate with the natural world. To understand the foundations of Native science one must become open to the roles of sensation, perception, imagination, emotion, symbols, and spirit as well as that of concept, logic, and rational empiricism. (Cajete, 2000, p.2)

It is from being an integral part of this Creation through observing, listening, tasting, smelling, and feeling, that Indigenous Peoples developed our knowledge - our science.

Today, with predominantly Western scientific models in our classrooms, many of our people have forgotten how to relate to the natural world, and no longer trust our ability to observe and synthesize information from our natural surroundings. Some reject the notion of participation in the natural world because they equate it with a return to “the pre-modern, hunter-gatherer existence of our ancestors” (Cajete, 2000, p.23). However, all cultures

evolve, and it is our greatest challenge today to find ways to transmit the wisdom and participatory ways of our ancestors to our modern lifestyles.

The terms 'ecology' and 'environmental science' are modern-day interpretations of the world around us, based mostly on a reactionary approach to the harms being inflicted on the natural world. 'Sustainable development' is an even newer term in the Western world, which essentially describes an ancient way of thinking and planning for the Seventh Generation. In Indigenous languages there are no nouns for these terms, and instead descriptions are used that reflect our active relationship with the natural world since time immemorial. For example, a description for 'ecologist' in Kanien'kéha would be *ronthkén:'se tsi nahò:ten iónh:ne* – meaning, 'they observe every living thing', including all parts of Creation as described in the *Ohén:ton Karihwatéhkwen*. A description for 'environmentalist' would be *thatihné:'s ne shaotiiera'shón:'a* – meaning, 'they support all things that are natural on this Earth' (Tekaneraten:sere, personal communications, 2002). As can be understood through our language, it is the relationship to the natural world, the active participation with it, that are key in Indigenous science.

The Ahkwesahsne Freedom School has developed a science curriculum, which focuses on intergenerational communication, cooperative and interactive learning, and the incorporation of cultural values. Recently the students were awarded the U.S. President's Environmental Youth Award for their development and implementation of a Wetland Restoration Project on the school grounds (James Ransom, personal communication, January 23, 2003, and Indian Time newsletter, April 25, 2002, Unpublished Works). Another Haudenosaunee participatory education model was developed in a Tuscarora

school, which recently implemented a classroom vermi-composting program, combined with a school garden and nature trail (James Ransom, personal communication, January 23, 2003). Such examples can provide important models for our schools in Kahnawake and elsewhere.

This limited analysis provides some preliminary observations for strengthening Indigenous science educational models among our youth, while drawing upon important knowledge to be gained from Western science. Based on the recommendations expressed in Chapter 4, and the existing literature on Indigenous science (see Cajete's books), a more in-depth analysis should be done to develop a plan of action for science education reform in Kahnawake schools.

3.2 Assessing the Health of the Natural World

Ship: Human and Ecological Risk Assessment

According to the definitions from the second year *ES 581 Toxicology and Risk Assessment* course for this Masters program, toxicology is the study of the fate and effects of toxins, and risk assessment is the study of the risks associated with exposure to the toxins on ecological or human health. In risk assessment studies, threshold levels are established for exposure to certain toxins, below which no adverse impacts are expected (ES 581, Unit 3 Overview, MEM Program, Royal Roads University, Unpublished Works), and of course above which, impacts can occur. From the perspective of the 'canoe', the primary problem with risk assessments is its focus on "justifying acceptable levels of risk" instead of on the important tasks of nurturing relationships with the natural world, prevention, and remediation.

“Scientists and activists alike have questioned the purpose of risk assessment, suggesting that it appears to justify harm inflicted on certain people by using the vocabulary of science to draw attention away from the need for action.” (Arquette et al., 2002, p.259).

From an Indigenous perspective, current risk assessment models are inappropriate because they assess protection levels for the average healthy adult person, whereas Indigenous communities are equally or more concerned with protection of pregnant women, children, elders, and the natural world. In a risk assessment problem formulation assignment for the same RRU *Toxicology and Risk Assessment* class, students were asked to identify stakeholders involved in the assessment of risk. In relation to a local environmental problem, I included various groups in the community, the present and future generations of people, and the rest of the natural world. The professor responded: “Point taken, but the stakeholder needs to be a person or groups of people that assume responsibility for the protection of the flora and fauna” (ES581, Assignment Unit 4, MEM Program, Royal Roads University, Unpublished Works). This comment reaches to the core of the clash in worldviews between cultures, where for Indigenous peoples, humans and the natural world are part of the same family. The natural world is actually a stakeholder in the assessment of all problems in our communities because of the integral wisdom conveyed to us through our relationship with the rest of Creation.

Current risk assessment models also make the assumption that there are no health effects when the exposure to certain toxic substances is eliminated. For us this means eliminating our traditional diets, medicines, and the traditional activities associated with them.

Although exposure to certain toxic substances is reduced, these changes have caused

countless other impacts on our social, spiritual, emotional, and physical health (Arquette et al., 2002). In some recent discussions about the St. Lawrence River in our sister Mohawk community of Akwesasne, a 'distinguished' toxicologist congratulated the community for virtually eliminating the consumption of local fish and wildlife from their diet, and thus reducing the health effects from PCB exposure. The risk assessment models currently being used in Western science express a very limited view of health, and do not consider the countless health impacts and social problems created when Indigenous Peoples are forced to abandon our traditional diets and activities. These models must be re-evaluated with the participation of Indigenous Peoples in order to provide true assessments of our health (Arquette et al., 2002).

Canoe: Whole Health Indicators Assessment

From the perspective of the 'canoe', human health is integrally linked to the health of the natural world, the human relationship to the natural world, and to each other. In a collaborative effort between the University of Ottawa, the Assembly of First Nations, and three Indigenous communities in Canada (Akwesasne, Little Red River Cree Nation, and Miawpukek First Nation), the basis for the appropriate assessment of community health has been established. Instead of focussing on the absence of disease as in conventional risk assessments, Community Life Indicators are developed focussing on "the spiritual and cultural attributes of a community that contribute to its wellness" (Grafton, 2001, p.4.3). In this project, these indicators are chosen based on the holistic components of the medicine wheel, and health is achieved when all realms are balanced. In assessing community health, both Life and Disease Indicators are examined in order to uncover the strengths and weaknesses in the community. For example, if the Disease Indicator is 'the increasing

rate of diabetes', a Life Indicator would be 'returning to a more traditional diet' (Grafton, 2001). As such, practical solutions can be expressed to bring more balance to the system, and barriers to wellness can be uncovered that need to be addressed. The further development of such models is vital for the appropriate assessment of the whole health of our communities and the natural world.

A paper entitled *Holistic Risk-Based Environmental Decision Making: A Native Perspective*, was published in 2002 by Indigenous professionals in the environment and health fields to highlight some of these problems and recommend appropriate solutions. The main recommendation from this paper was to integrate human health and ecological risk for more holistic assessments. In doing so, human health must itself be given a more holistic definition based on the Indigenous worldview of a balance between physical, mental, spiritual, social, and cultural well-being, as well as the health of the natural world (Arquette et al., 2002).

3.3 Addressing Environmental Problems

Ship: Human Rights and Environmental Legislation

Environmental legislation from the 'ship' has undergone much transformation throughout the years, from an initial focus on controlling pollution, to pollution prevention, and recently to the concept of sustainable development. Within all of these approaches however, there is the fundamental belief that environmental protection must be balanced with economic growth, and some environmental degradation will inevitably occur as a 'trade-off' or 'externality' (Hughes et al., 1998). There is no consistent value system or

relationship with the natural world associated with these approaches. As such, people will relate to the natural world through the laws that set limits on the harm that can be inflicted on the natural world. This approach is not sustainable because people will act favourably towards the natural world not because they have a respectful relationship with it or an understanding about its crucial role in their survival, but because the laws force them to do so. Furthermore, imprisonment or fines as the chosen forms of punishment, do not contribute to the resolution of the root cause of the problem.

The focus of environmental law is on the rights and interests of humans. In this approach, the natural world is essentially 'rightless'. Beyond the legally enforceable environmental standards, any harm being inflicted on the natural world will be judged almost exclusively by the amount of harm it inflicts on humans, and only if the humans can prove that they have legal standing to make a case in the first place (Hughes et al., 1998). Different environmental philosophies, such as deep ecology, have been shifting the thinking towards "biocentric equality" – "the premise that all things in the biosphere have an equal right to live and blossom and to reach their own individual form" (Hughes et al., 1998, p.25). However, there has yet to be an associated recognizable shift in the laws of the 'ship'.

A "cosmological clash" occurs when the environmental laws from the 'ship' are implemented in our communities, because Indigenous Peoples "believe not in the equality of all people, but in the equality of all of Creation." (HETF, 2000, p.156) "The manifestations and roots of the Native sense of democracy run much deeper than the modern American political version of democracy today in that all of nature, not only humans, has rights." (Cajete, 2000, p.53). It is for these reasons that the environmental laws from the 'ship' have had

very limited success in solving some of the many environmental problems we're experiencing in our communities today.

According to federal government practices and policies, Indigenous communities are given limited freedom to enact our own laws on issues that are internal, integral to our culture, or essential to our operations. When it comes to issues that the government might have a financial interest in such as natural resources, hunting, fishing and trapping rights, land management, agriculture, and property rights, the Indigenous community is subjected to negotiations and limitations (Hughes et al., 1998). In the event of a conflict between the Indigenous laws and the federal or provincial laws, the primary law-making authority remains with the federal or provincial government. The Indian Act states that "the council of a band may make by-laws not inconsistent with this Act or with any regulation made by the Governor in Council or the Minister" (Indian Act, 1989, Section 81(1)). Such instances could relate to environmental protection, assessment and pollution prevention, fisheries co-management, and migratory birds co-management (Hughes et al., 1998, p.75). This violates the spirit of the Two Row Wampum Treaty and subjects Indigenous communities to laws from the 'ship'. In Kahnawake, we maintain and exercise our inherent right to fulfill our responsibilities to Creation in our own ways, and seek to develop environmental legislation and justice mechanisms from the perspective of the 'canoe'.

Canoe: Human Responsibility and Traditional Justice

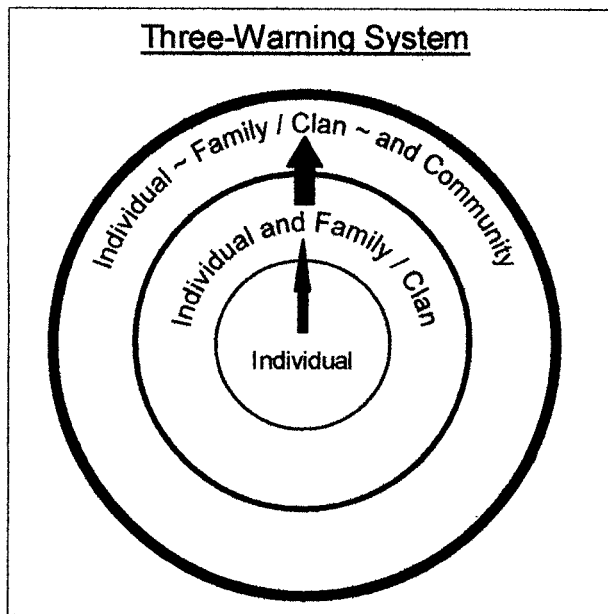
As described throughout the *Ohén:ton Karihwatéhkwen*, the foundation of our relationship with the natural world is in understanding and acknowledging our purpose in the universe, and in fulfilling our responsibilities to all of Creation. "The strength of the Haudenosaunee

comes not from everyone knowing their place and trying to be the same in society, but from everyone knowing their purpose and carrying out their responsibilities” (HETF, 2000, p.158). A strong rooting in this sense of responsibility will provide our people with the foundation needed to guide our communities towards balance and harmony. Re-instilling this sense of responsibility is a long-term and sustainable solution to solving the environmental problems we are experiencing.

As Haudenosaunee, we needed no police or armies to control or govern our people, because we had faith in the ability of an individual person in the Confederacy to know and understand their responsibility to the Creator. ... The Great Law of Peace is our political attempt to fulfill this responsibility (HETF, 2000, p.155).

In the past, any people who strayed from their responsibilities were given a warning from their family, clan, or other individuals, to help them to realize that their actions were causing some harm. If the wrongdoer continued on the same path, the circle of influence increased, and their whole family or clan would be notified. In this sense, they would be influenced through their family support network to change their harmful ways. If the individual still did not address their problematic actions, the circle of influence would increase to the whole community. At this point the individual would be made aware of how their actions were impacting a wide circle of people and the extended family of Creation. A resolution can be achieved when the concerns are expressed in a respectful manner. This is called the Three-Warning System, as depicted in Figure 3.3-1. In very rare cases in the past, if the individual chose to continue in their harmful ways, they would be banished from the community. Banishment, though rare in the last Century, has been carried out in Kahnawake for other offences. A draft Banishment Law is currently under discussion in the community, and although controversial, is being considered as part of the traditional justice system.

Figure 3.3-1: The Three-Warning System



The Three-Warning System is very effective in coming to a sustainable and long-term solution to some harmful action because the individual is influenced by a wider circle of concern. He or she is exposed to the rationale behind the concern, and proposed solutions to correct the situation. This system is still very relevant today, and a form of this was suggested several times by community members in the January 2003 Community Survey - to publicize details about environmental offenders in the community when all other warnings have failed.

The Three-Warning System can function well in relation to harms against individuals because their concerns can be directly expressed by the individuals themselves. However, harms against the environment are much more difficult to address because the environment cannot speak for itself. In the past, the people acknowledged and practiced

our responsibility to speak out for the environment. However, before such a time when this can be successfully renewed in our communities, this study is proposing the establishment of a working group to speak for the natural world. The suggested name for this working group is *Onkwa'nihstenha Iethinónhnhha*, which means 'we take care of Our Mother'. Eventually, when the health of our clans is restored, this working group could be based on the clan system. In the meantime, participants could be chosen from a variety of disciplines and interests in the community having some knowledge or interest in speaking for particular aspects of Creation. This multidisciplinary group would be mandated to enable our community to fulfill our responsibilities to the natural world. This can be done in positive and proactive ways through education and recognition for environmental projects and achievements, and also reactively, to address concerns that are brought to the table in relation to harms to the natural world. When deemed appropriate, *Onkwa'nihstenha Iethinónhnhha* could apply the Three-Warning System, and at each level invite the individual causing the harm to participate in a form of traditional dispute resolution.

Various alternative dispute resolution methods are currently being explored by the MCK and the Court of Kahnawake (Final Report on the Administration of Justice in Kahnawake, Tonya Perron, 2000, Unpublished Works). *Sken:nen A'onsonton*, meaning 'to become peaceful again', describes Kahnawake's Alternative Dispute Resolution (ADR) program. This program focuses on restorative justice as a means of accepting responsibility for an offence and healing wounds, as opposed to retributive justice where the victim and wrongdoer have no active role in the 'solution'. Trained volunteers use mediation or sentencing circles to address past behaviours, bring healing and restore peace (Dale Dione, Rontahonhsiiósthá Workshop, Kahnawake, May 28, 2003).

The most appropriate dispute resolution mechanism for environmental concerns would be the sentencing circles in which all members of the *Onkwa'nihstenha Iethinónhnhha* working group, and any other individuals impacted by the harm, would respectfully express their concerns and propose solutions to remedy the problem. This process would require patience and would take place until consensus can be reached. The only way the process could be terminated is if the individual inflicting the harm withdraws. If this occurs, or if the individual chooses not to participate in the traditional dispute resolution offered, they will have chosen to enter the realm of the 'ship' and be subjected to existing Federal and Provincial environmental legislation and repercussions.

Before such a time as environmental responsibility can be successfully restored in our community, environmental legislation should be developed and empowered from within Kahnawake, to empower the *Onkwa'nihstenha Iethinónhnhha* working group, and ensure that adequate and appropriate protection is offered to the natural world. A recent review by the HETF of tribal environmental codes, concluded that unfortunately very few Indigenous communities have managed to transfer the traditional values expressed in their environmental policies, into enforceable environmental protocols that reflect traditional justice and knowledge (Gray-Kanatiyosh, 1998). All environmental legislation developed in Kahnawake should be from the perspective of the 'canoe,' and must ensure that the traditional values and knowledge of our environment be integrated. Figure 3.3-2 summarizes the model for traditional justice being proposed by this study to address harms being inflicted on the natural world.

Figure 3.3-2: Justice Frameworks from the 'Ship' and the 'Canoe'

Justice from the 'Ship'		Justice from the 'Canoe'
No common value system		Responsibility as a core value
↓		↓
Lawmakers and Enforcement Agencies		<i>Onkwa'nihstenha Iethinónhaha</i> Working Group
↓	← No Resolution ←	↓
Laws		Three Warning System and Communal Laws
↓	← No Resolution ←	↓
Punishment		Traditional Dispute Resolution
↓		↓
No Long-Term Solutions		Appropriate Long-Term Solutions

Although this justice system will help our community, and maybe others, to deal with the problems being caused by our own people, this will not address the much larger onslaught of environmental impacts from all around us. A significant shift in thinking must occur from within the 'ship' as well. Today even mainstream environmental law texts are now advocating for "fundamental changes in humankind-environment relationships" (Hughes et al., 1998, p.3). There seems to be a growing recognition that "negative trends cannot be corrected through improvements in material efficiency and traditional 'end-of-pipe' waste treatment alone", and that "sustainable development will likely require significant change in social attitudes and expectations and in the structure of the industrial economy" (Hughes et al., 1998, p.3). In a recognized effort to address these concerns, the United Nations has recently declared the next decade, from 2005 to 2015, to be the Decade of Education for Sustainable Development. Hopefully, the development of a respectful relationship with the

natural world, and the recognition of the human responsibility to ensure that the cycles of life continue, will be integral to the educational efforts in this decade and beyond.

3.4 Managing our Interactions with the Natural World

Ship: Environmental Management Based on ISO 14001

In recent years, Environment Management Systems (EMS) have become the primary tool evolving in the 'ship' to address growing environmental concerns from human activities, products, or services, and to formalize responsibilities to the environment. The basic framework of an EMS, adapted from ISO 14001 and RRU's *ES660 Environmental Management Systems*, is presented in Figure 3.4-1. Although the EMS framework is a valuable tool for creating awareness and action to address environmental interactions, it is not always successful because it is subjective to the value system of the EMS developers and users. While an EMS can meet the technical requirements of the International Standards Association (ISO), it can still fail to adequately address human and environmental concerns if broader impacts to the natural world over the long-term are not considered. In some cases, an EMS can even serve as a means to justify irresponsible activities.

In order for the EMS tool to be truly valuable in the 'ship' and in the 'canoe', it must be based on a human value system that balances individual human needs, with a respectful relationship in the natural world and to each other in our communities (see 'GOAL' in Figure 2-1, in Chapter 2). It must also be acknowledged that it is the people that need managing, not the environment.

Figure 3.4-1: Environmental Management Frameworks from the 'Ship' and the 'Canoe'



Canoe: Environmental Responsibility Based on Thanksgiving

The EMS framework from the 'ship', presented in Figure 3.4-1 can be used successfully in the 'canoe' if it is based on our traditional principles and relationships with the natural world. The Bad River Band of the Lake Superior Tribe of Chippewa Indians developed and implemented an EMS consistent with ISO 14001 and with their tribal environmental policy and goals. After a significant amount of time and effort to gain widespread commitment to the initiative, a participatory approach was used by the community to develop the Tribal Environmental Management System (TEMS), which now operates in their community (Evers, 1999).

A similar approach has already been initiated within the Kahnawake Environment Protection Office. In 1997, a Gap Analysis of the KEPO's current environmental management practices was carried out. Although useful in identifying important procedures to improve the KEPO operations and develop greater consistency with ISO 14001, the Gap Analysis was undertaken by a non-local consultant who lacked the cultural connection and knowledge required to integrate frameworks from the 'canoe'. In May 2002, environmental strategic planning with many community stakeholders helped to form the mission, vision, and values of the KEPO, which guides our work today (see Appendix C). It is from this point that the research for this study builds. Based on the past initiatives of the KEPO, and the exploration of the *Ohén:ton Karihwatéhkwen* in Chapter 3, the main environmental issues / aspects that the KEPO and other community organisations are facing in Kahnawake are described in Table 3.4-1.

Table 3.4-1: Aspects / Issues for the Natural World in Kahnawake

THE PEOPLE	Human Connection to the Natural World, Values, Responsibilities, Community & Intergenerational Relationships, Education, Language, Culture, Health, Risk Assessment, Administration, Governance, Jurisdiction
MOTHER EARTH	Human Relationship with Mother Earth, Land Management, Land Use, Landfill, Past and Present Land Pollution, Waste Management (Garbage, Recycling, Composting, Hazardous Waste), Environmental Site Assessments, Environmental Impact Assessments, Planning and Development
THE WATERS	Human Relationship with the Waters, Connection to the River, Shoreline Health, Wetlands, Water Quality, Drinking Water, Waste Water Treatment, Water Quantity, Water Drainage
THE FISH LIFE	Human Relationship with the Fish and Other Water Life, Fish Population Health, Fish Habitat, Spawning Grounds, Fishing Activities, Fish Consumption
THE ROOT LIFE	Human Relationship with the Root Life, Soil Compaction and Erosion, Health of the Confederacy
THE SMALL PLANTS & GRASSES	Human Relationship with the Small Plants and Grasses, Diversity, Invasive Species, Herbicides
THE MEDICINES	Human Relationship with the Medicines, Traditional Medicine Knowledge, Habitat, Use, Misuse
THE BERRIES	Human Relationship with the Berries, Habitat, Genetic Modification, Chemicals
THE NATURAL FOODS	Human Relationship with the Natural Foods, Agriculture, Gardening, Preparing Traditional Foods, Diet and Health
THE INSECT LIFE	Human Relationship with the Insect Life, Insect Population Health, Habitat, Pesticides, West Nile Virus
THE ANIMAL LIFE	Human Relationship with the Animal Life, Wildlife Health, Diversity, Habitat, Hunting and Consumption, Livestock, Foreign Species
THE TREE LIFE	Human Relationship with the Tree Life, Tree Diversity, Habitat, Forestry, Alternative Plant Products
THE BIRD LIFE	Human Relationship with the Bird Life, Bird Habitat, Diversity, Invasive Species
THE FOUR WINDS	Human Relationship with the Winds, Air Pollution, Transportation, Climate Change, Indoor Air Quality, Wind Energy
THE THUNDERERS	Human Relationship with the Thunderers, Acid Rain, Climate Change, Fires
THE MOON	Human Relationship with the Moon, Reproductive Health, Pollution
THE SUN	Human Relationship with the Sun, Ozone Depletion, Ultraviolet Radiation, Nuclear Energy Issues, Solar Energy
THE STARS	Human Relationship with the Stars, Guidance for Planting, Guidance of the Youth, Light Pollution
THE CREATOR	Human Relationship with the Creator, Thanksgiving, Spiritual Connections

As per Table 3.4-2, the following step-by-step description provides the elaboration required to develop the Environmental Responsibility Protocol for Kahnawake:

- Step 1: The potential impacts that may result from each environmental aspect listed in Table 3.4-1 should be described.
- Step 2: A significance grid, based on the values established by the KEPO strategic planning (see Appendix C), should be established in order to prioritise the impacts.
- Step 3: Achievable objectives and targets should be established for all priority impacts.
- Step 4: Management programs should then be developed to address the priority impacts. Emergency management plans should also form part of this step.
- Step 5: Depending on the impact being addressed, different community organisations, departments, and individuals would be involved. These responsibilities should be assigned and included in the job descriptions or company policies, as applicable.
- Step 6: Human, technological and financial resources, as well as any data gaps should be identified. Currently, much work is required by the KEPO to develop a greater understanding of our community and northern territory, through research, ecological inventories, and GIS mapping.
- Step 7: As discussed in Section 3.3, the legal and traditional justice framework should be established to adequately address each prioritized impact, and empower the *Onkwa'nihstenha Iethinónhaha* Working Group.
- Step 8: Implementation plans should be developed and involve significant consultation with the community.
- Step 9: Reporting and documentation needs should be established.

- Step 10: Provisions should be made for a periodical review of the Environmental Responsibility Protocol by management (*Onkwa'nihtenha Iethinónhna* Working Group, KEPO), and by the community in general.
- Step 11: And finally, improvements should be made based on recommendations from the review process, to ensure continuous improvement of the Environmental Responsibility Protocol.

This Environmental Responsibility Protocol framework presented here is intended to elicit long-term solutions for all of the issues explored in this study, based on the spirit of our traditional teachings and our responsibilities to our family of Creation.

CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS

This research clearly demonstrated the continued potential of our traditional frameworks to enable our people to fulfill our responsibilities to the natural world, and ultimately restore the balance and harmony in Creation. The following recommendations, drawn from the explorations of this study, provide a starting point to initiate discussions for implementing the research findings in Kahnawake.

4.1 Education and Community Involvement

The primary recommendations from this research relate to education, awareness raising, communication, and community involvement in environmental initiatives:

- Widespread publicity on the Environmental Responsibility Protocol is imperative to generate further discussion and lead to its ultimate implementation.
- Develop a communications plan to carry out extensive environmental education, communication, and community involvement.

- Provide accessible environmentally sound examples, alternatives, and incentives, such as the Kanata Healthy Housing Project, the Wind Energy Project, etc. The Kanata Healthy Housing Neighbourhood should be promoted as a model for future development in Kahnawake.
- Develop a quarterly environment newsletter (1 per season), which would communicate Environment Office activities, local and global environmental issues, provide environmentally-sound alternatives, and involve a wide cross-section of contributing writers.
- Initiate an environmental issues seminar series.
- Carry out a more in depth analysis of the Kahnawake education system and develop a plan of action to incorporate Indigenous science education in Kahnawake schools.
- Encourage and guide our youth to make and trust their own observations and assessments of the natural world.
- Provide an understanding of Western science in the schools but focus on Indigenous science through participation in the natural world.
- Encourage youth to express their own versions of the Thanksgiving Address and to share and discuss these with their families and classmates.
- Nurture connections between traditional values, language, and the natural world.
- Develop enhanced language education programs geared to parents and other adults to enable the students to bring the language home with them to apply it in their daily lives.
- Provide youth with opportunities for participation in environmental projects, and mentoring relationships with adults and elders.

- Initiate a youth group which focuses on the important linkages between traditional values, relationships, language, and our modern lifestyles.
- Encourage Indigenous youth to enter science fields by participating in career fairs and by involving them in environmentally-related projects.

4.2 Whole Health Assessment

Another set of recommendations evolved around the holistic assessment of the health of our community:

- A community-wide visioning exercise should be carried out to enable the development of whole health indicators in Kahnawake.
- The incorporation of these whole health indicators into current risk assessment models can lead to the development of more appropriate models for risk assessment in our community.
- A scenarios building exercise should be carried out to look into the possible futures of our community for each possible value-set and direction we choose to follow (as in Figure 2-1). This will provide information to guide the whole health goals of our community.

4.3 Environmental Justice

The development of an appropriate justice model and environmental legislation for Kahnawake is required to address the growing impacts on the natural world. The primary recommendations related to these issues are as follows:

- Establish a community-based multi-stakeholder working group (*Onkwa'nihstenha Iethinónhnha*), and outline responsibilities and terms of

reference, including the use of the Three Warning System and sentencing circles.

Develop a 'Praising System' to be carried out by the working group, which acknowledges and praises the good work of community members and groups towards fulfilling our traditional responsibilities.

- Develop environmental legislation that incorporates and integrates our traditional values and naturalized knowledge system.
- Any efforts to establish development criteria and designated land use criteria should be a highly participatory process.

4.4 Relationships

Throughout the research, the need to nurture respectful relationships with each other and the natural world emerged. The following recommendations summarises these relationships:

- Develop & nurture relationships among all community departments, organisations, institutions, youth groups, etc. for promoting responsibility and participation in the natural world.
- Develop and strengthen relationships with other Indigenous communities for greater collaboration, especially Haudenosaunee communities.
- Promote an appropriate consultation model and strengthen the capacity for the community to apply this model to express our concerns and needs.
- Develop and strengthen relationships with surrounding neighbours for mutual understanding and respect, and collaboration on environmental issues while keeping in mind ethical research standards in Kahnawake.

- Participate in initiatives related to the International World Decade of Education for Sustainable Development.

4.5 Structure and Capacity of KEPO

Another important subset of recommendations relates to the improvement of Kahnawake Environment Protection Office resources, structure, and relationships in the community.

These recommendations are seen as imperative in order to enable and empower the KEPO to implement this research and fulfill its mission for the future health of our community:

- The KEPO and *Onkwa'nihstenha Iethinónhna* Working Group should be consulted on all environmentally-related issues and be involved in the decision-making for all development in Kahnawake. Organisations should mould programs to reflect our traditional value system with the *Ohén:ton Karihwatéhkwen* as an integral part of all operations.
- The knowledge base of our territories should be improved through more research, studies, ecological inventories, and data compilation into GIS maps.
- The KEPO structure should be revised so that it can have greater independence and adequate involvement in environmental advocacy, lobbying, and activism at all levels, and a stronger relationship with the longhouses, the schools, and the community in general, as well as to all MCK departments, especially Conservation, Emergency Preparedness, and Environmental Health.
- The human and financial resources of the KEPO must be improved to enable the organisation to carry out the needs of the Environmental Responsibility Protocol, now and for the faces yet to come.

4.6 Future Research Needs

Most of the recommendations above will require future efforts. However, the most immediate research needs include:

- Elaboration of Kahnawake's environmental issues based on the Environmental Responsibility Protocol Framework (Steps 1-11 of Table 3.4-2).
- Community consultations on the Environmental Responsibility Protocol and the development of a plan of implementation.
- A comprehensive review of the science education curricula in Kahnawake schools in order to develop a plan to better integrate Indigenous science.
- The development of a comprehensive Environmental Communications Plan to be carried out by the KEPO.
- Ecological inventories and other environmental studies, and GIS mapping of our territories, to enable more informed decision-making.

4.7 Research Implications

This research has far-reaching implications in the operations of all community departments, organisations, and institutions, and the daily lives of all individuals in Kahnawake. It will require a significant amount of time and effort to communicate the Environmental Responsibility Protocol to the community, integrate feedback, and to eventually implement the Environmental Responsibility Protocol in the community. The main challenge will be for the community to embrace the recommendations made in this study and integrate them into their daily lives.

Although this research was geared towards uncovering specific solutions for the community of Kahnawake, these research findings can be used as a model in other communities and adapted for their own unique situations. Hopefully this research can contribute in some small way to solving the environmental crisis we are all facing in the world today.

Underneath all the different approaches and value systems around the world, we all share the same responsibilities as human beings, on this Earth that we pass on to our future generations.

The days of rich farming, good air, and fine fish will return to the reserve, only if we are willing to fight today. Environmental protection must be the battle cry of our people. We, the Mohawk people, will not stand quietly by, as the environment and our culture are lost. You can expect to hear from us in the future.

FOR THE EARTH IS OUR MOTHER, AND SHE WEEPS.

(HETF, 1995, p.24)

REFERENCES

- Alfred, G. T. 1995. *Heeding the Voices of our Ancestors – Kahnawake Mohawk Politics and the Rise of Native Nationalism*. Oxford University Press, Don Mills, Ontario, 220 pp.
- Alfred, G. T. 1999. *Peace Power Righteousness – An Indigenous Manifesto*. Oxford University Press, Don Mills, Ontario, 174 pp.
- Arquette, M., Cole, M., Cook, K., LaFrance, B., Peters, M., Ransom, J., Sargent, E., Smoke, V., Stairs, A. 2002. *Holistic Risk-Based Decision Making: A Native Perspective*. *Environmental Health Perspectives*, 110(2): 259-264.
- Blanchard, D. 1980. *Seven Generations: A History of the Kanienkehaka*. Kahnawake Survival School, Kahnawake.
- Brander, J. A. 2000. *Government Policy Towards Business - Third Edition*. John Wiley & Sons Canada, Ltd., Toronto, Ontario, 498 pp.
- Cajete, G. 1994. *Look to the Mountain*. Kaviki Press, Skyland, NC, 247 pp.
- Cajete, G. 1999a. *Ignite the Sparkle: An Indigenous Science Education Model*. Kaviki Press, Skyland, NC, 233 pp.
- Cajete, G. (Editor). 1999b. *A People's Ecology – Explorations in Sustainable Living*. Clear Light Publishers, Santa Fe, NM, 283 pp.
- Cajete, G. 2000. *Native Science: Natural Laws of Interdependence*. Clear Light Publishers, Santa Fe, NM, 315 pp.
- Deloria, V. Jr. 1999. *Spirit and Reason*. Fulcrum Publishing, Boulder, Colorado, 384 pp.
- Environment Canada Aboriginal Affairs Branch. 1999. *Report on Traditional Knowledge*. Prepared by Gaspe Tarbell Associates, Canada.
- Evers, P. 1999. *ISO 14001 and the American Indian Reservation*. *Greener Management International: The Journal of Corporate Environmental Strategy and Practice*, 28:42-49.
- Funes, F., Garcia, L., Bourque, M., and Rosset, P. 2002. *Sustainable Agriculture and Resistance: Transforming Food Production in Cuba*. Food First Books, Oakland, California, 307 pp.
- George-Kanentiio, D. 2000. *Iroquois Culture and Commentary*. Clear Light Publishers, Santa Fe, NM, 224 pp.

- Grafton, Q. 2001. *Community Health Indicators: First Year of the Project Final Report*. Prepared for Health Canada by The Institute of the Environment (University of Ottawa), Mohawk Council of Akwesasne, Little Red River Cree Nation, and Miawpukek First Nation. Project No. HQ-00/01-009-SI.
- Gray-Kanatiyosh, B. 1998. *Report on Tribal Environmental Codes (#1 and #2)*. Prepared for the Haudenosaunee Environmental Task Force.
- Guyette, S. 1996. *Planning for Balanced Development – A Guide for Native American and Rural Communities*. Clear Light Publishers, Santa Fe, NM, 312 pp.
- HETF (Haudenosaunee Environmental Task Force). 2000. *Words that Come Before All Else – Environmental Philosophies of the Haudenosaunee*. Native North American Traveling College, Akwesasne, 160 pp.
- HETF (Haudenosaunee Environmental Task Force) and Annunziata, Janice W. 1995. *Haudenosaunee Environmental Restoration: An Indigenous Strategy for Human Sustainability*. Indigenous Development International, Cambridge, England, 161 pp.
- Hotinonsionne – The People of the Longhouse. *Kaianerekowa – The Great Law of Peace*. White Roots of Peace, Mohawk Nation at Akwesasne.
- Hughes, E.L., Lucas, A.R., and Tilleman, W.A. 1998. *Environmental Law and Policy – Second Edition*. Edmond Montgomery Publications Limited, Toronto, Ontario, 630pp.
- Indian Act. 1989. R.S., 1985, c.I-5, amended by R.S., 1985, c.32 (1st Supp.), R.S., 1985, c.27 (2nd Supp.), R.S., 1985, c.17, 43, 48 (4th Supp.). Minister of Supply and Services Canada.
- Laird, E. 2003. *Farmers Versus Biotech: Saskatchewan farmers unite to protect organic agriculture*. *Alive*, January (243):13.
- Macklem, P. 2001. *Indigenous Difference and the Constitution of Canada*. University of Toronto Press, Toronto, Ontario, 334 pp.
- MCK (Mohawk Council of Kahnawake). 2000. *Final Report on the Administration of Justice in Kahnawake*. Prepared by Tonya Perron, Kahnawake.
- MCK (Mohawk Councils of Kahnawake and Kanesatake). 2000. *Tioweró:ton Guidelines*. Kahnawake, Kanesatake.
- MCK (Mohawk Council of Kahnawake). 2001. *Canada Kahnawake Relations Draft Document: Confirming Kahnawake Jurisdiction of Kahnawake Territory*.

- North American Indian Travelling College. 1984. *Traditional Teachings*. North American Indian Travelling College, Cornwall Island, Ontario, 101pp.
- Porter, T. 1993. *Clanology: Clan System of the Iroquois*. Native North American Traveling College, Akwesasne, 58 pp.
- Ransom, J. W. and Ettenger, Kreg T. 2001. *'Polishing the Kaswentha': a Haudenosaunee view of environmental cooperation*. *Environmental Science and Policy*, 4:219-228.
- Smith, L. T. 1999. *Decolonizing Methodologies – Research and Indigenous Peoples*. University of Otago Press, New Zealand, 208 pp.
- Willett, W., and Stampfer, M. 2003. *Rebuilding the Food Pyramid*. *Scientific American*, 288(1):64-71.

THE WORDS THAT COME BEFORE ALL ELSE

Now we have come to the end of this study. For this short time, we have brought our minds together to explore the concept of environmental responsibility. Many ideas have been presented here for further discussion. As we each return to our respective families and work, it is hoped that these concepts will continue to be explored in our own unique contexts. Let us bring our minds together again to acknowledge all of Creation that continues to enable us to be here.

Teiethinonhwerá:ton ne Onkweshón:'a - the people

Today humans have many different ways of expressing our relationship to the natural world and to each other. The respectful recognition of Indigenous science and governance systems, and holistic, collaborative approaches among all human beings towards education, justice, and environmental management is the only means to sustainably reverse the harmful trends that have been set by humans. Our elders tell us that if people ever stop giving thanks and being grateful to all of Creation, that the other life forms will also stop performing their responsibilities here on this Earth and return to the land of the Creator. We are seeing this happen today with the rapid extinction of species. We extend our thoughts to all people, so that we might bring our minds together to again find balance and harmony in our relationships, and ensure that the cycles of life continue for the faces yet to come. And now our minds are one.

Teiethinonhwerá:ton ne Iethi'nisténha tsi iohontsá:te - Mother the Earth

We extend our greetings to our Mother the Earth and give thanks to her for her resilience in the face of all the impacts she and her children must bear. As humans we acknowledge the contributions we make to this pain, and the roles we must all play to bring balance and harmony to the natural world. And now our minds are one.

Teiethinonhwerá:ton ne Kahnekarónnion - the waters

We extend our greetings, respect and thanks to all the waters who continue to dutifully fulfill the responsibilities given to them by the Creator. We bring our minds together to acknowledge the contributions we all make to the difficulties being experienced by the waters in accomplishing their duties. We accept the role we must all play to renew our relationship with the waters, and bring back the balance and harmony to the bloodlines of our Mother the Earth. And now our minds are one.

Teiethinonhwerá:ton ne Kentson'shón:'a - the fish life

We extend our greetings to the fish life who continue to fulfill the responsibilities given to them by the Creator despite the impacts being inflicted upon them by human activities. We bring our minds together in the understanding that our traditional relationship with the fish life must be renewed in order for our people to be healthy, and the fish life must be granted the respect they deserve by continuously working towards providing them a safe and clean home. And now our minds are one.

Teiethinonhwerá:ton ne Ohtehra'shón:'a - the root life

We extend our greetings to all the root life. We are very thankful that the root life continues to fulfill the responsibilities given to them by the Creator, even while being threatened by human activity. We bring our minds together to acknowledge the important role of the root life, and accept our role in ensuring that they can continue to meet their responsibilities. And now our minds are one.

Teiethinonhwerá:ton ne Ohonte'shón:'a - the small plants and grasses

As elsewhere, we have much work to do in Kahnawake to renew our relationship with the small plants and grasses. Although they are small and silent, they were given some very important responsibilities by the Creator. They continue to perform their duties so the rest of Creation can continue to live here. We bring our minds together to acknowledge the small plants and grasses for their persistence and resilience. We recognize our contribution to the difficulties the small plants and grasses are having in fulfilling their responsibilities, and bring our minds together to restore our relationship with them. And now our minds are one.

Teiethinonhwerá:ton ne Ononhkwa'shón:'a - the medicine plants

We extend our greetings and thanks to all the medicines for continuing to fulfill their responsibilities despite the disrespect they are being offered by current human activities and choices. We bring our minds together to find ways to renew our relationship with the medicines so that they will again find balance and harmony in fulfilling their duties here on Earth. And now our minds are one.

Teiethinonhwerá:ton ne Kahihshón:'a - the berries

We extend our greetings and appreciation to the berry plants for all the hard work that they do in continuing to fulfill the responsibilities given to them by the Creator. We bring our minds together and accept our responsibility to help the berry plants to fulfill their duties, by renewing our relationship with them and ensuring that they have many clean and healthy places to live. And now our minds are one.

Teiethinonhwerá:ton ne Kaienthóhsera – the natural food crops

We extend our greetings and thanks to the natural foods for continuing to fulfill the responsibilities given to them by the Creator, despite the extreme difficulties they are experiencing due to human activities. We bring our minds together to renew our relationship with our natural foods, for the future health of our people and the rest of the natural world. And now our minds are one.

Teiethinonhwerá:ton ne Otsi'non:wa'shón:'a - the insect life

Instead of ignoring or consciously trying to eradicate insects from our environment, we need to remember the vital role they play in the renewal, reproduction, sustenance, and balance of the natural world. We extend our thanks to the insect life for continuing to fulfill their duties and acknowledge the important responsibility all people have to renew our relationship with the insect life. And now our minds are one.

Teiethinonhwerá:ton ne Kontírio - the animal life

We send our greeting to all the animal life for having the strength to survive through the impacts they have suffered at the hands of humans. We bring our minds together to find

ways to renew our respectful relationship with the animal life so we can once again recognize them as our teachers. And now our minds are one.

Teiethinonhwerá:ton ne Okwire'shón:'a - the tree life

We extend our greetings to the tree life and express our gratitude for continuing to fulfill the responsibilities given to them by the Creator, in spite of the demands being placed upon them by the people. We bring our minds together to work towards renewing a respectful relationship with the trees. And now our minds are one.

Teiethinonhwerá:ton ne Otsi'ten'okón:'a - the bird life

We extend our greetings to the bird life for continuing to fulfill their responsibilities despite our deaf ears, and despite all the things that are impacting them. We bring our minds together to acknowledge our role in renewing a respectful relationship with the bird life so that they can continue to fulfill their important responsibilities. And now our minds are one.

Teiethinonhwerá:ton ne Kaié:ri Nikawerá:ke - the Four Winds

We extend our greetings to the winds and thank them for continuing to fulfill their responsibilities, and even presenting new energy opportunities despite the difficulties humans are causing them. We bring our minds together to acknowledge the role we each play in contributing to the hardships faced by the winds. We commit to find ways to renew a respectful relationship with our wind relatives so that they can continue fulfilling the responsibilities given to them by the Creator. And now our minds are one.

Teiethinonhwerá:ton ne Ietsiso'tho:kon Ratiwé:ras - our Grandfathers the Thunderers

We extend our greetings to Our Grandfathers the Thunderers and offer our respect to them for the work that they do in fulfilling their original responsibilities. We bring our minds together to always remember to acknowledge the power of our thunder relatives. And now our minds are one.

Teiethinonhwerá:ton ne Ietsi'sótha Ahsonthenkha Karáhkwa - our Grandmother the Moon

We extend our greetings to our Grandmother the Moon with extreme gratitude and respect for all that she does to continue fulfilling the responsibilities given to her by the Creator. We bring our minds together to renew our respectful relationship with our Grandmother the Moon so that we can help her to once again find balance and harmony in the work that she has to do. And now our minds are one.

Tentsitewanonhwera:ton ne Shonkwahtsi:'a Tiekhehnékha Karáhkwa - our Elder Brother the Sun

We extend our greetings and thanks to our Elder Brother the Sun who tirelessly works to ensure that life continues here on Earth, despite the difficulties being created by humans. We bring our minds together to acknowledge the role we play in renewing a respectful relationship with our Elder Brother the Sun so the balance can be restored for him to continue fulfilling the responsibilities given to him by the Creator. And now our minds are one.

Teiethinonhwerá:ton ne Iotsistohkwarónnion tsi Tkaronhiá:te - all the stars in the sky

We extend our greetings and thanks to all the stars in the sky who continue to carry out their duties even at a time when the people have forgotten how to communicate with them. We bring our minds together to acknowledge the hard work we must do to reconnect with our youth, and in turn, renew a respectful relationship with our star relatives as our wise teachers. And now our minds are one.

Tentsitewanonhwera:ton ne Shonkwaia'tison Ka'sahtsthenserako:wa Sa'oiera - the Creator, the Great Natural Power

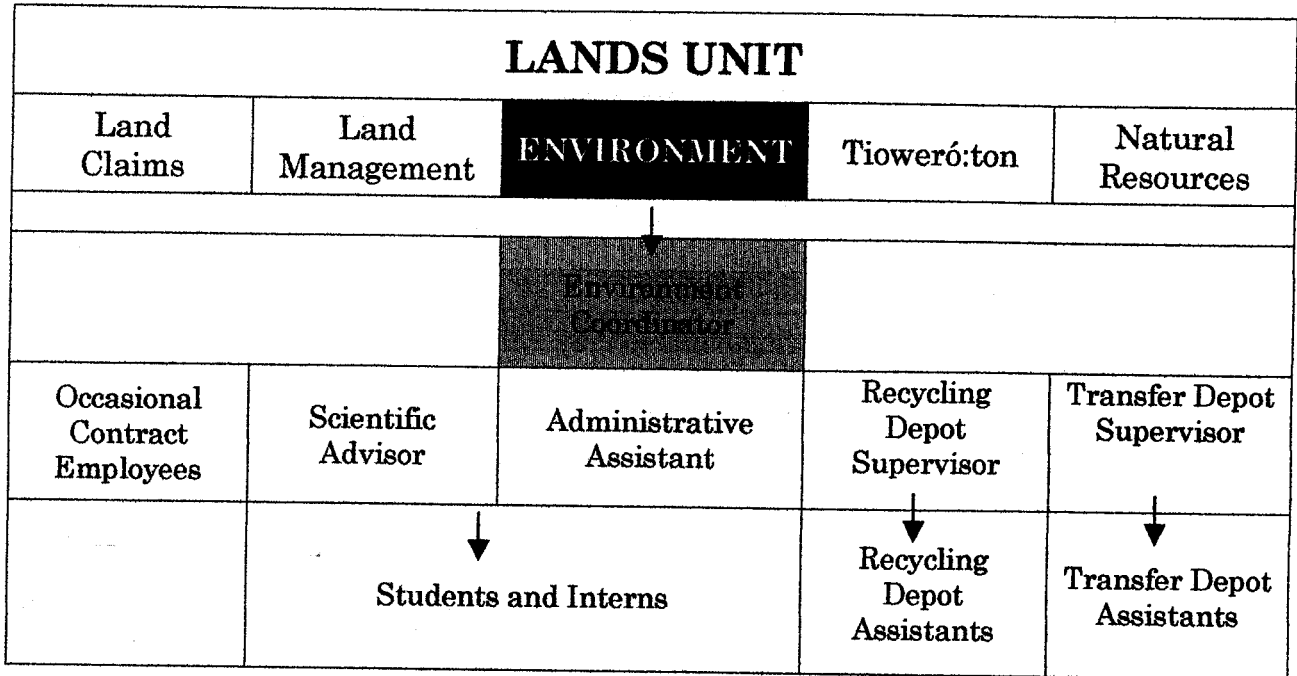
We extend our respect and gratitude to the Creator for the patience he has had with the people. We bring our minds together to accept the hard road ahead of us in finding our place of balance and harmony in the natural world again. And now our minds are one.

Closing Words

I hope I have succeeded in bringing our minds together to understand the things we are facing today, and I invite you to explore and further discuss the ideas presented here. With these words we extend our greetings and thanks to the rest of Creation for continuing to fulfill the responsibilities given to them by the Creator in spite of the difficulties the people are causing them. We bring our minds together to renew our respectful relationship with the rest of Creation, as our wise teachers, so we can once again bring harmony and balance to ensure that the cycles of life continue. And now our minds are one.

Éhtho niohtónha'k ne onkwa'nikón:ra.

APPENDIX A: KEPO ORGANIZATIONAL STRUCTURE



APPENDIX B: HISTORY AND EVOLUTION OF THE KEPO

In the time of our ancestors, the concept known today as 'environmental activism' was part of the way of life, based on the respectful relationship and inherent sense of responsibility to the natural world. The increasing impacts on the natural world experienced by the generations since colonization, has created the need for a new level of environmental activism in our communities, based on the simultaneous struggle for our own survival as Peoples. In the early 1980's the basis for this new era of environmental activism was formed in Kahnawake by a group of traditional people, primarily women, who mobilized a community-wide effort to stop Project Archipel, an initiative that would have completely destroyed the remaining life force of the St. Lawrence River for hydro-power and the sale of the water to the United States. Discussions were held at the Longhouse in Kahnawake and were sent to the Longhouse in Akwesasne and the Grand Council. A decision and formal statement was made to fight this project. Significant lobbying efforts were made by the community for the next seven years, all throughout the region and in the States where the water was to be sold. Through this lobbying, a recreation initiative was established on the rapids to show people first hand the great power of the river so they could feel and understand the importance of saving it (Selma Delisle, personal communication, February 4, 2003). Federal funds were obtained to study the impacts of this Quebec project on the community and the natural world. The Kahnawake Research Development Program (KRDP) as the group became known, was also used to address the growing environmental concerns in the community.

By 1986, the community had contributed to the successful “shelving” of Project Archipel (Eva Johnson, personal communication, February 4, 2003). The funding for the KDRP ended. With no financial support for environmental protection, there were fears that the community would once again become vulnerable to environmental abuse. However, through ongoing lobbying and protests, and with the guidance of the already established environment group in Akwesasne, the group continued to increase its efforts towards “fighting to protect and better our environment”. This later became the slogan of the Kahnawake Environment Protection Committee (KEPC), which was established in June 1987 as an effort primarily by several traditional women to halt and address the harmful dumping and burning activities that were occurring in the community.

The original membership of the KEPC was generally comprised of around ten people from various sectors of the community: one biologist, one Community Health Representative, two Mohawk Council of Kahnawake Band Councillors, two traditional representatives, one technical services representative, and three to five members from the community in general. All of these positions were on a voluntary basis with one salaried Coordinator for the office, later known as the Kahnawake Environment Protection Office (KEPO). The first action of this group was to create landfill guidelines, which later became policy, by drawing from existing Canadian and Quebec laws from the ‘ship’, traditional frameworks, and obvious community needs for environmental protection (Lee Scott-McComber, personal communication, February 4, 2003). Since this time, the community has seen the need for more laws of this nature as more of our people have stepped over into the ‘ship’ way of thinking, as reflected in their actions and disconnection from the natural world.

Originally funded through various projects and the women of the Longhouse, the scope and needs of the Kahnawake Environment Protection Office soon grew and funding was sought to establish a recycling program and carry out more environmental education. A recycling drop-off program was initiated in 1988 (Lee Scott-McComber, personal communication, February 4, 2003). Although the compilation of statistics for the recycling program has been sporadic, a clear increase in community recycling is occurring based not only on these figures, but also on the increased labour required to pick-up, sort, and deliver the materials. Today the recycling program is a major success with door-to-door pick-up twice per week, and is one of the KEPO's better-known and utilized services in the community (author's survey, January 2003).

In the late eighties and early nineties funding was sought to establish a permanent environmental resource centre in Kahnawake. Eventually a decision was made to form a more collaborative administrative and funding relationship with the Mohawk Council of Kahnawake (MCK) and since 1991 the KEPO has been considered a Department within the MCK. The Environment Office was originally placed under Public Works administration of the MCK because of the waste management responsibilities.

Eventually, the voluntary membership participation of the Kahnawake Environment Protection Committee (KEPC) decreased. There was a feeling that the Environment Office was fulfilling its duties as best it could without the need for a committee, and there was also a high level of frustration due to the lack of support to move some files forward. The KEPC gradually disbanded itself in the mid 1990's (Eva Johnson, personal communication, February 4, 2003). Today the MCK's Land Management Committee addresses some

environmental concerns. However its primary mandate is related more to land administration issues, and some environmental problems are not thoroughly addressed in this forum. The establishment of an interdisciplinary and intergenerational environmental working group (*Onkwa'nihtenha Iethinónhna*) is discussed in Chapter 3.

Through the MCK restructuring process in 1998-1999, the Environment Office was shuffled to become part of the new Lands Unit. Some initial suggestions through the restructuring were to place Environment as a unit all its own, or to develop a 'Community Enhancement' unit which could include Environment, Solid Waste/Recycling, Landfill, Natural Resources, Tioweró:ton, Land Management, Conservation, and Animal Protection. Unfortunately, this holistic unit was eventually split and re-shuffled. Conservation and Animal Protection became housed under the new Community Protection Unit, which also includes Emergency Preparedness, Fire Arms, Peacekeepers, Environmental Health and Safety, and the Fire Department. Unfortunately, the Kahnawake Environment Protection Office currently has a very limited relationship with Conservation, Emergency Preparedness, Environmental Health, and Animal Protection. Stronger links are anticipated as the departments evolve, especially with Conservation, which now acts only as a volunteer auxiliary police force (Warren Lahache, personal conversation, February 11, 2003).

The Lands Unit, where Environment is currently housed, also comprises Land Management, Land Claims, Natural Resources, Landfill, and Tioweró:ton. Except for the environmental protection role in Tioweró:ton, the relationship between Environment and the Lands Unit is quite ambiguous, as the Unit currently functions primarily as an administrative body for lands transactions. However the comprehensive land use planning

process anticipated in the near future is expected to increase the relevancy of the Environment Office mandate within the Lands Unit (Dean Montour, personal conversation, January 27, 2003).

Although administratively and financially linked to the MCK, the Kahnawake Environment Office is politically linked to all entities in the community to ensure an impartial relationship with all people. The original mandate of the KEPO was as a proactive educational, advocacy, and lobbying group leading the community towards the fulfillment of our traditional responsibilities to all of Creation. However, within the current framework of the MCK, the KEPO is somewhat limited to the position of a technical/scientific body from which expertise is drawn when the perceived need arises. It is difficult to act as a lobby group from within the system that is currently causing some of the problems being addressed. The KEPO has consistently maintained its position on the need for an independent and "arms-length" relationship with the MCK to ensure the flexibility and impartiality in fulfilling its mandate for all people in the community (Eva Johnson, personal communication, February 4, 2003).

Throughout the years the demands on the Environment Office have increased significantly. In addition to the waste management and recycling coordination, the KEPO has initiated and coordinated countless studies about the environmental quality and related health concerns in the community. It has also been involved in environmental education, hosting summer students, researching and compiling a local medicines book, coordinating a community garden, hosting an annual health and harvest fair, tree give-aways, and addressing the general concerns of community members. The KEPO provides environment

assessments and other scientific advice on various development initiatives in the community, based not only on Western scientific training, but also on the traditional knowledge of our area and our traditional teachings. One of the recent successful initiatives of the KEPO is the collaboration with the Kahnawake Housing Department to develop and promote the Kanata Healthy Housing project, which addresses not only the environmental health and soundness of the physical structures and landscape in our community, but also the health of the lifestyle and social relationships in a proposed neighbourhood of healthy homes.

In 2002, the KEPO hosted a Strategic Planning Session with participants from many different disciplines and groups in the community. This was the first time that such a formalized planning activity had been initiated to address the progress and future direction of the Environment Office. The strategic framework from this session is included in Appendix C. At this session, a recognizable shift in thinking was apparent as the mission changed from “fighting to protect and better our environment”, to “providing environmental leadership to the community in fulfilling our responsibilities as caretakers of our Mother the Earth”. This demonstrated the need for more emphasis on the ‘canoe’ way of thinking, and the collective responsibility of the community towards the natural world. The positive and essential contributions of the Environment Office were acknowledged at this planning session, as was the urgent need to strengthen the capacity of the KEPO to effectively fulfill its growing mandate into the future.

Currently the KEPO employs one coordinator, one scientific advisor, and one administrative assistant. The recycling depot employs one supervisor and seven (7)

individuals employed primarily through various subsidized 'make-work' programs, and occasionally the assistance from compensatory work programs through the Court of Kahnawake and outside courts. The transfer depot, for the temporary storage and proper disposal of large waste items and household hazardous waste, employs two (2) people. Students are funded by youth employment programs in the summer, and occasionally special projects enable the hiring of individuals on contract. However, according to the Kahnawake Education Centre data, there are currently no students from the community studying in the area of the natural sciences. Stronger links with the schools and youth groups are required to increase the capacity of the community to address our growing environmental concerns and needs into the future.

APPENDIX C: KEPO STRATEGIC FRAMEWORK

KAHNAWAKE ENVIRONMENT PROTECTION OFFICE STRATEGIC FRAMEWORK

May 2002

Our Mission

To provide environmental leadership to the community in fulfilling our responsibilities as caretakers of our Mother the Earth.

Our Vision

Our vision, based on Mohawk traditional values, is to promote the protection, respect and improvement of all aspects of the environment.

Through increased resources, awareness and community responsibility we will succeed in the restoration and preservation of our Mother Earth for the future generations.

Stakeholders	Our Values
<p>Kahnawake Community Households Businesses</p> <p>Kahnawake Territories Kahnawake Tioweró:ton</p> <p>Kahnawake Organizations MCK KSCS (Environ.l Health Serv.) KSDPP KEDA KMHC</p> <p>Mohawk Council of Kahnawake Chiefs Community Protection Unit Lands Unit Capital Unit Public Works Unit Legal Services</p> <p>Funding Agencies Visitors External Counterparts</p>	<p><i>Caring</i> Caring for each other extends to caring for Mother Earth</p> <p><i>Responsibility</i> Our actions or decisions must demonstrate a responsible organization that will model for the community how to take back responsibility. We will start with a few and ripple out the movement.</p> <p><i>Respect</i> Respect is the cornerstone to responsibility, reliability, commitment and integrity. Respect is essential to building support for your goals and the partnerships needed to carry them out.</p> <p><i>Community</i> Everything starts with and by the people. We will keep the present and future community at the core of all decision-making.</p> <p><i>Seven Generations Thinking</i> We will always consider future generations in our efforts as well as the present needs of the community.</p> <p><i>Integrity</i> We value honesty and the ability to walk your talk, and know if we practice this we will build a strong relationship with the community and our partners.</p> <p><i>Competent</i> Doing the work well is a source of pride and we will continue to build capacity in our organization and the community so skills will match our efforts.</p>
Levels Of Responsibility	<p><i>Cooperation</i> Teamwork leads to a higher quality of success and community support.</p> <p><i>Wisdom</i> We learn from our experiences, failures, and successes and then apply this learning to all that we do.</p> <p><i>Holistic Thinking</i> Everything and everyone is related, this connection is the core to creation.</p> <p><i>Positive Role Model/Leadership</i> Walking your talk is the best way to lead.</p> <p><i>Good Relationships</i> Shaping respectful partnerships will help to build a movement of responsibility and assist KEO to achieve its vision.</p>
<p>Community Mohawk Council of Kahnawake Executive Committee Lands Unit Committee Management Staff Volunteers Partners</p>	

APPENDIX D: COMMUNITY SURVEY #2 - QUESTIONS

The Kahnawake Environment Office is conducting a Very Brief Survey on the community's views about how we should proceed into the future to protect our natural world.

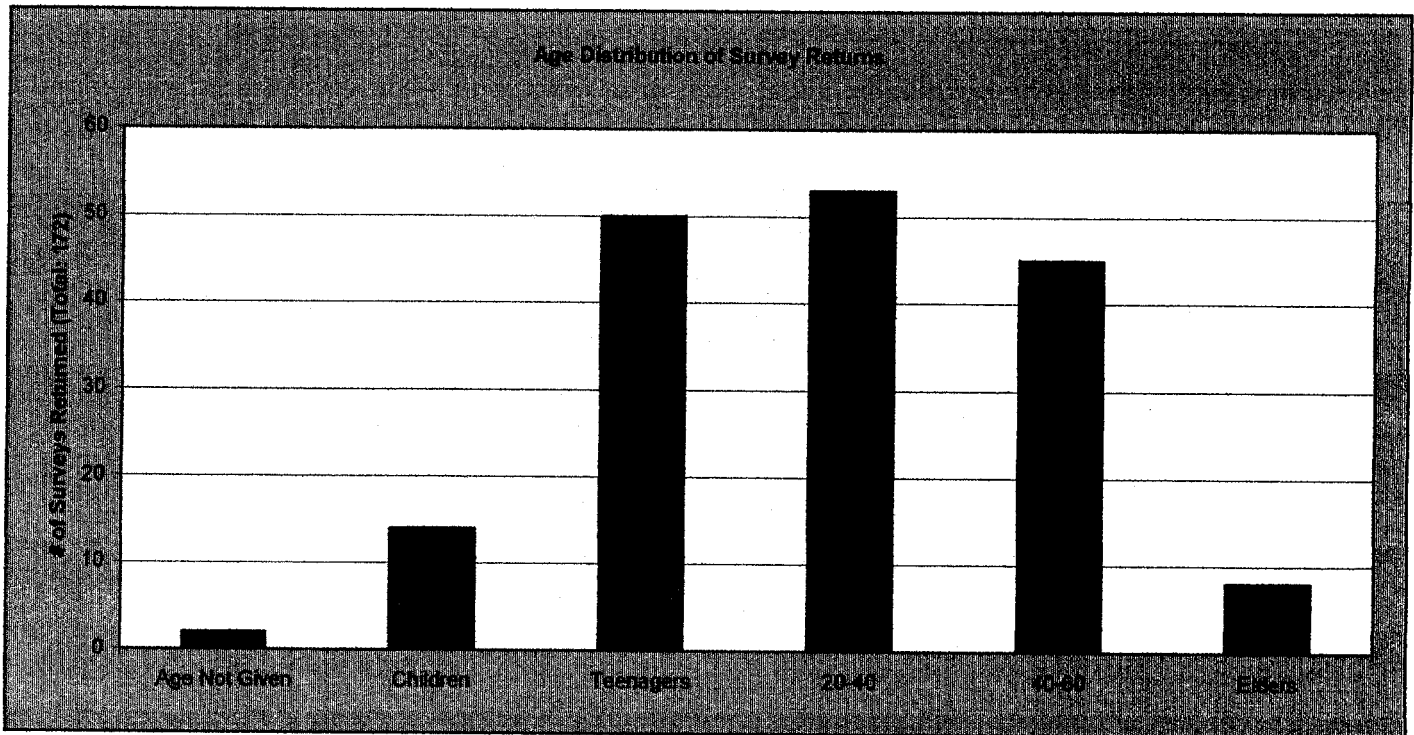
Please answer all the questions by 12:15 noon Friday JANUARY 24, 2003 and return to any of the boxes found at the Post Office, the Environment Office, or various community buildings. If you have any other comments, or would like an electronic version please email Environment@mck.ca

You will be entered in a draw to win a \$100 Shop-Kahnawake Gift Certificate... to be drawn at 3:00 pm on January 24. To be eligible, enter your initials and PO Box number below: Note: These surveys are anonymous.

1. What are your three biggest concerns about our environment in Kahnawake?
2. Generally speaking, who do you feel is responsible for creating most of the environmental problems we face in our community?
3. In your opinion, who do you believe should be accountable for solving our environmental problems in Kahnawake?
4. Do you feel that, as a Mohawk, you possess environmental values that differ from our neighbours? Yes No Not Sure
5. If yes, can you list three values that differ?
6. How do you live these values on a daily basis?
7. Do you consider yourself to be a traditional person? Yes No Not Sure
8. Is the Ohén:ton Karihwatéhkwén an integral part of your lifestyle? Yes No
9. Who do you feel is responsible for protecting our environment?
10. In your opinion, what is the best way to renew the overall sense of responsibility towards our environment in Kahnawake?
11. Any other comments?

APPENDIX E: COMMUNITY SURVEY #2 - CHARTS AND GRAPHS

Figure E-1: Age Distribution of Survey Returns (Community Survey #2)



*Table E-1: Community Concerns Related to the Environment in Kahnawake
(Community Survey #2)*

Community Concerns Related to the Environment in Kahnawake (In order of frequency expressed)	
Concerns	Details
1. Pollution / Environmental Quality	<ol style="list-style-type: none"> 1. Water pollution 2. Landfill issues 3. Pollution in general around us 4. St. Catherines Industrial Park 5. Air Pollution 6. Other
2. Personal Actions / Lifestyle Choices	<ol style="list-style-type: none"> 1. Litter / garbage 2. Choice of / overuse of vehicles 3. Poor recycling habits 4. Waste 5. Other
3. Changing Values	<ol style="list-style-type: none"> 1. Apathy / lack of respect 2. Drugs / alcohol / crime 3. Focus on economic development 4. Human-centred / individualistic decision-making 5. Loss of traditional activities 6. Loss of connection to each other and natural world 7. Other
4. Loss of Traditional Territory	<ol style="list-style-type: none"> 1. Expropriated corridors (highways, seaway, railway, hydro, etc.) 2. Loss of land base for traditional activities 3. Loss of access to the river and other seaway issues
5. Development / Loss of Natural Areas	<ol style="list-style-type: none"> 1. Loss of wooded areas, wetlands and habitat due to development 2. Loss of wildlife
6. Youth / Future Generation Issues	<ol style="list-style-type: none"> 1. Vandalism / attitudes / actions of teenagers 2. Adults / elders not passing on language / values to youth 3. Other
7. Environmental Health	<ol style="list-style-type: none"> 1. Higher incidence of illnesses (scleroderma, diabetes, etc.) 2. Traditional food issues and current eating habits
8. Climate Change	<ol style="list-style-type: none"> 1. Weather changes / heat / dry conditions

Table E-2: Responsibilities Associated with the Environmental Problems in Kahnawake (Community Survey #2)

Responsible For: (In order of frequency expressed)		
Causing	Solving	Preventing
1. Everyone - by contributing or allowing it to occur	1. The MCK and KEPO	1. Everyone is responsible for protecting our environment
2. Any Polluters	2. All Polluters	2. Everyone, MCK & KEPO
3. Local Polluters	3. All Community Members and the MCK	3. MCK & KEPO
4. Non-local polluters	4. Federal / Provincial Governments	4. A Combination of these plus the Longhouses and schools
5. The MCK	5. A Combination of these	
6. A Combination of these plus the Canadian Government		

Table E-3: Environmental values expressed by Kahnawakeró:non (Community Survey #2)

Environmental values expressed by Kahnawakeró:non (In order of frequency expressed)
1. Responsible as Caretakers of Mother Earth
2. Respect for Mother Earth
3. Future generation / long-term thinking
4. Kinship relationship with Creation
5. Value natural world for survival
6. Connection to the land / to our traditional territories
7. Offer Thanksgiving to natural world
8. Participation in ceremonies / connection to language / passing on traditions
9. Social ties / value each other
10. Keep our surroundings clean

11. Collective rights and responsibilities over individual rights
12. Live in harmony with the natural cycles / conserve values
13. Health of natural world = health within / holistic systems & interconnections
14. Land use, not ownership
15. Natural world valued over money
16. Other

Table E-4: Ways Kahnawakerónon are incorporating environmental values in their lifestyle (Community Survey #2)

Kahnawakerónon Incorporate Environmental Values into Lifestyle By: (In order of frequency expressed)
1. Recycling *
2. Not littering, picking up litter *
3. Being aware and informing others about environmental considerations
4. Being aware and informing others about culture / language / traditional practices
5. Gardening, composting, planting
6. Sustainable transportation choices
7. Water and energy efficiency practices
8. Responsible consumer choices
9. No use of chemicals
10. Care for self and pass on healthy ways
11. Responsible food choices
12. Conserve, reuse, do not waste
13. Caring for animals in need

* Note: Actions 1 and 2 were expressed significantly more frequently than the rest.

Figure E-2: Kahnawakeró:non who identify as traditional people (Community Survey #2)

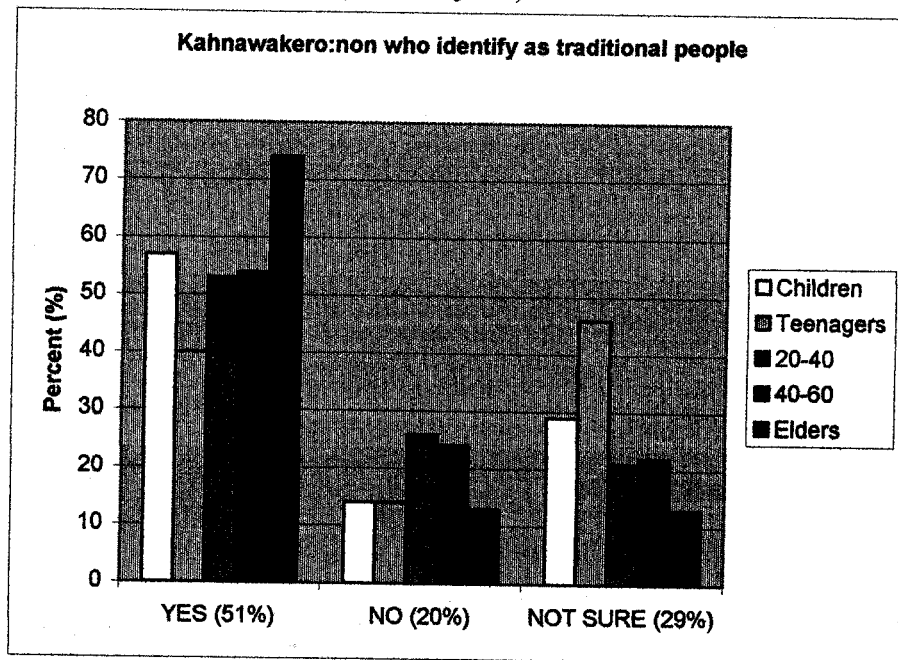


Figure E-3: Kahnawakeró:non who make Thanksgiving a part of their lifestyle (Community Survey #2)

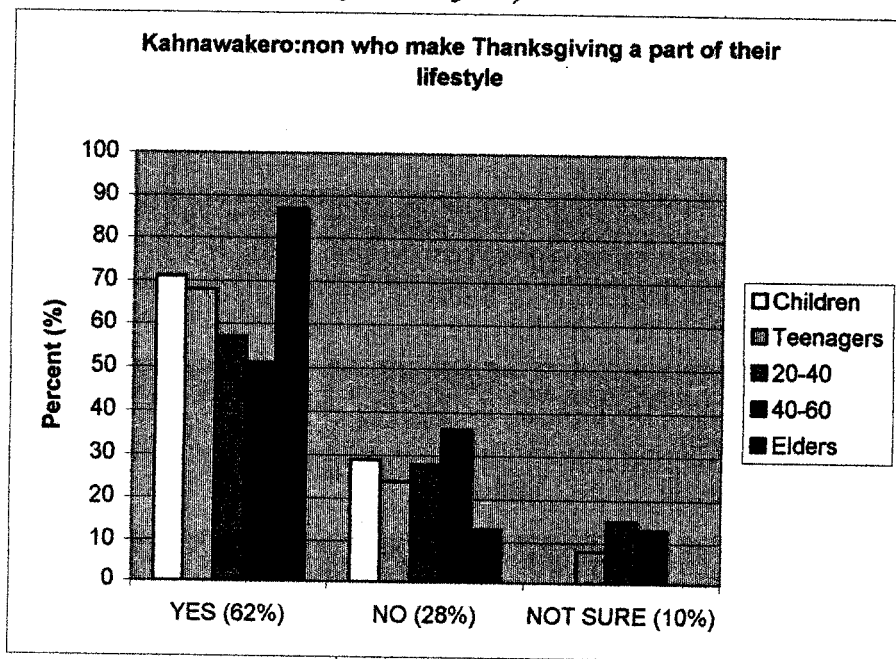


Table E-5: Community Suggestions to Help Renew the Sense of Responsibility to the Natural World (Community Survey #2)

Suggestions to Renew the Sense of Responsibility to the Natural World (In order of frequency expressed)
1. Extensive environmental education / communication / community involvement
2. Provide environmentally sound examples / alternatives / incentives
3. Legislation / fines / community service to deal with polluters
4. Improve resources and structure of KEPO
5. Nurture connections between traditional values / language & natural world
6. Establish development criteria / designated land use criteria
7. More research to develop a greater knowledge about our environment & health
8. Other