The Georgian Bay Coast Trail: Utilizing Case Studies to ensure Implementation of Sustainable Trail development within the Georgian Bay Littoral Biosphere Reserve

by

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Abstract:

This report is a comprehensive look at the theory and practice of how a coastal trail system, embedded within a protected area, can bring sustainable economic and community development to the surrounding region.

The purpose of this study was to research past practice, define the terms and issues, and assemble recommendations for use in the development of a sustainable coastal trail system along the eastern shores of Georgian Bay, Ontario. Both the West Coast Trail (WCT) and the Bruce Trail have achieved world recognition for their success and were thus chosen as the two major case studies for this report. In addition to their international reputation: their coastal characteristics; general topography; and the similarity of organizational challenges made them ideal models for the Georgian Bay Coast Trail concept. Both of the established trails provide valuable insights that will assist the Georgian Bay Coast Trail advisory committee to create a sustainable coastal trail within the UNESCO Georgian Bay Littoral Biosphere Reserve.

The research question acts as an umbrella, which covers many concepts, ideas, and issues that may arise when developing a trail. Such a questions include:

What are the key considerations for the development of a sustainable coastal trail that will contribute to sustainable community development? Specifically, how do the experiences of the Bruce Trail and the West Coast Trail inform the development of the Georgian Bay Coast Trail?

To obtain unbiased data and to ensure a thorough examination of the available resources, the overall process included a literature review, case study analysis, site visits, and semi-

structured interviews. All aspects provided the insights that resulted in the recommendations section within the paper.

The recommendations, to be presented to the Georgian Bay Coast Trail advisory committee, focuses on key themes and includes a five step guideline on how to achieve long-term success. Acknowledging the role of First Nations peoples in the process and the need for protocol agreements are among the five. Safety is also discussed in terms of Search and Rescue (SAR), Emergency Medical Services (EMS) planning, in addition to the health of all related ecosystems by implementing sustainable low impact development (LID). Appropriate strategies are presented that would assist in assuring that all three aspects are addressed.

The conclusions outline the top three lessons learned that the Georgian Bay Coast Trail advisory committee may take from this study: the importance of safety in all aspects; the necessity of sustainable trail development; and the detailed process of establishing partnerships with all local interest groups, especially First Nation communities.

Chapter 1.0: Introduction

"This country is beautiful and good, and we must follow its course."
- Samuel de Champlain 1613

The term ‘Earth’s Blanket’ is a well-known Nlaka’pmx First Nation expression that has been pasted down for generation along the southern Interior of British Columbia. The phrase describes our many biotic and abiotic ecosystems and landscapes that span across the Country (Turner, 2005). Such a strong metaphor signifies an attitude towards Earth and the plants growing upon its vegetative and fertile ‘Blanket’ (Turner, 2005). However, it also helped to shape the behavior, morals and values of the Nlaka’pmx people, as they

depended on the 'Earth's Blanket' for their survival. Further, these words "conveyed a positive, direct, and reciprocal relationship between these people and their environment, in which the consequences of wrongful actions are seen to be immediate and direct (Turner, 2005). Thus, the 'Earth's Blanket' also supports the need for sustainable living and sustainable development, as it can now remind our Nation of the many imperative connections between humans and their natural environment. The United Nations Educational, Scientific and Cultural Organization (UNESCO) have made it their goal to encourage the concept that sustainable living practices are a possible reality within entire communities. In fact, "each Biosphere Reserve provides opportunity for cooperative and participatory community-led projects and serves as a potential model to demonstrate innovative approaches to conservation and sustainable development" (Liipere, 2002). Therefore, within the Georgian Bay Littoral Biosphere reserve and along the rugged eastern coastline of Georgian Bay the concept of a sustainable trail system has the opportunity to be discovered along the astounding landscape that is the 'Earth's Blanket' of Georgian Bay.

Trails are an opportunity to create long-term successful partnerships, encourage economic sustainable development, provides new experienced for environmental education, an inviting location to exercise for the local region and visitors, and it also provide jobs in the construction and operation phases. Trails bring tourism into a community and create cultural awareness and education. There are many opportunities for science and Traditional Ecological Knowledge (TEK) to be used in a symbiotic fashion during all phases of the implementation for the sustainable trial.

The Georgian Bay Coast Trail (GBCT) is a vision inspired by the West Coast Trail (WCT), and could bring the Georgian Bay region sustainable economic development, but also sustainable community development. Many ideas, lessons, and alternatives that were noted during the research stage of this study are outlined and it will be up to the GBCT advisory committee to create a successful partnerships with the three First Nation Communities located along the proposed trail route, but also by following the advice given by expects to make sure situations such as Search and Rescue in remote locations, and low impact development are implemented and maintained. It is my intent that the research that has been accomplished during this study will help the GBCT advisory committee to promote this concept of creating a sustainable trail in the region, but to also be aware of potential obstacles and how to ensure a successful long term partnership with all involved parties. This study addressed questions concerning safety, economic and environmental benefits/issues, First Nation partnerships, how to initiate healthy relationships, and how to develop a sustainable trail within a protected area. To gather comprehensive results I attended numerous site visits, conducted personal interviews, and completed a detailed review of the literature.

The structure of this paper begins during Chapter 2 with a background report of the GBCT concept and the two case studies, which consist of the WCT and the Bruce Trail. This section is followed by the methods in Chapter 3, describing how the research was triangulated to make certain the data obtained was as credible as possible. Chapter 4 reviews the literature with the following themes; protected areas, community sustainable development, education and outreach, and Traditional Ecological Knowledge and wisdom (TEKW). During Chapter 5 there is an overview of the conceptual Framework

followed by findings and results in Chapter 6. The analysis is discussed during chapter 7 while the report recommendations for the GBCT advisory committee can be found in Chapter 8.

Chapter 2.0: Background

On November 5 2004, 347 000 hectares of land, including the extensive shoreline and open water on the eastern coast of Georgian Bay, was designated by UNESCO as the Georgian Bay Littoral Biosphere Reserve. This designation makes it one of thirteen in Canada (The Georgian Bay Land Trust, 2006).

Within the UNESCO designated Georgian Bay Littoral Biosphere Reserve there are ample opportunities for eco tourism, various tourist attractions, education and research experiences, and for all to become involved in the goals of a sustainable development and lifestyle. The Georgian Bay Coastal Trail (GBCT) is a separate initiative that is in partnership with the Georgian Bay Littoral Biosphere Reserve and it is the GBCT that I am interested in studying on many levels.

A thesis study allows a researcher to determine, analyze, and assemble recommendations for the Georgian Bay Littoral Biosphere Reserve on how the GBCT could be developed on the basis of the WCT and the Bruce Trail. It is my intent to use the WCT and the Bruce Trail as a foundation in ensuring that the GBCT creates a collaborative system of Ecosystem-based policy making/management, partnerships environmental education, and TEK during is decision making process. The GBCT initiative will bring local awareness to the UNESCO Biosphere Reserve and act as a glue to help create bonds between sustainable development, sustainable economic development, and education/outreach for

the Eastern Coast of Georgian Bay. There will be many businesses and entire communities that will thrive off of the benefits of hosting a rugged coastal Trail. The GBCT concept will open new opportunities and encourage communication gaps to be sealed within in the UNESCO Biosphere Reserve. While hiking the WCT in August of 2006 I had noticed the low impact development along the trail when looking at the trail infrastructure. There was much to be learned from the WCT that would in turn help the GBCT concept be as successful. I found that the WCT could have benefited from interpretative information along the journey, or perhaps even an evening program at designated campsites. Environmental education, experiential education, and hands-on interactive learning is the very best way to get everyone involved, engaged, and feeling as if they have had a meaningful experience -- academically and personally. Further, TEK is a very powerful tool that can enhance a common ecological understanding of a region and lead to a deeper understanding of the various perspectives from which an area and its uses are viewed (Huntington, 2001).

The GBCT advisory committee needs to be aware of sacred or traditional areas before trail development occurs. The First Nations were not consulted after Parks Canada claimed the area as Pacific Rim National Park, and during trail planning and construction burial grounds and sacred areas were disturbed. Such mistakes must be avoided during the GBCT development. By working with the local First Nation communities in Georgian Bay, a partnership can be created modeling the Quu'as partnership on the West Coast with Parks Canada. Jack Little, a Canadian Biosphere Reserves Association (CBRA) council member, is confident that collaborative agreements and working long term partnerships like the Quu'as can be achieved for the GBCT. There is a huge

opportunity to learn from other trails and even create national partnerships not only within the trails system, but also from one community to the other on a national level. Such partnerships would incorporate how First Nation communities plan on being involved before, during, and after completion, whether it be through eco-tourism, tourist attractions and shops, management, or taking a stewardship role. The idea of promoting and creating 'sustainable trails' can ensure that such opportunities are available for First Nations and to others that wish to be involved in the planning and development stages. For the purpose of this study a sustainable trail concept is obtained by seeking a partnership between the public sector, the private sector, First Nations, and NGOs and other elements of civil society. As a result, environmental resources will be preserved and respected, which will lead to the benefits of economic and community sustainable development. This is achieved though developing and implementing trail systems that cater to the needs of sustainable development, conservation, and research / monitoring.

The case studies demonstrate how large coastal trail systems are developed and how plans can be made for future. The GBCT already has some major obstacles and it is still only a concept, therefore, the case studies will provide guidance on how to deal with each situation as they present itself.

2.1 Research Question:

What are they key considerations for the development of a sustainable coastal trail that will also contribute to sustainable community development?

Specifically, how do the experiences of the Bruce Trail and the West Coast Trail inform the development of the Georgian Bay Coast Trail?

2.2 The Georgian Bay Coast Trail:

Georgian Bay is a 13000 square kilometer basin found in eastern lake Huron and is home to the 30000 islands (Georgian Bay Land Trust, 2007). Georgian Bay is known for being the longest freshwater coast in the world hosting some of the most inspirational sights and experiences, which is why famous Canadian artists, such as the *Group of Seven* frequented the area capturing the rugged beauty of the white pine and deep cold turquoise waters (Georgian Bay Land Trust, 2007). On the southwest side, the Niagara Escarpment hugs the Bay and it's vast limestone cliffs with Manitoulin Island bounding Georgian Bay in the northwest (Georgian Bay Land Trust, 2007). Georgian Bay is known for its undisturbed natural landscape and an abundance of healthy wildlife. According to the Georgian Bay Land Trust, the area has the highest diversity of reptiles and amphibian species in Canada (2007). With this pristine sanctuary only 150 kilometers north of a major the city, Toronto, it is an ideal get away during the summer and fall months. The tourist season boosts the local economy and the small towns and villages are looking for more ways to make the eastern coast of Georgian Bay the idyllic destination for weekends and holidays. It is for these reasons the GBCT concept is gathering more and more support (Kelly, 2007).

Recently, Kirsten Spence developed a concept of a 120-kilometer hiking trail along the rugged eastern coast of Georgian Bay. As seen in Figure 1, the GBCT would start in the village of Point Au Baril and travel along the coast north to the French River (Spence, 2006). The GBCT is planned to cross Crown Land, conservation reserves, and various First Nation Communities; therefore, it is in the best interest of the GBCT advisory committee to recommend that all parties are involved in the decision-making, all

planning sessions, each phase of development, feasibility studies, construction, maintenance and stewardship processes. The GBCT will be modeled after the West Coast Trail (WCT) and the Bruce Trail since they are both successful, internationally recognized, and are examples of sustainable community development and sustainable trail systems.

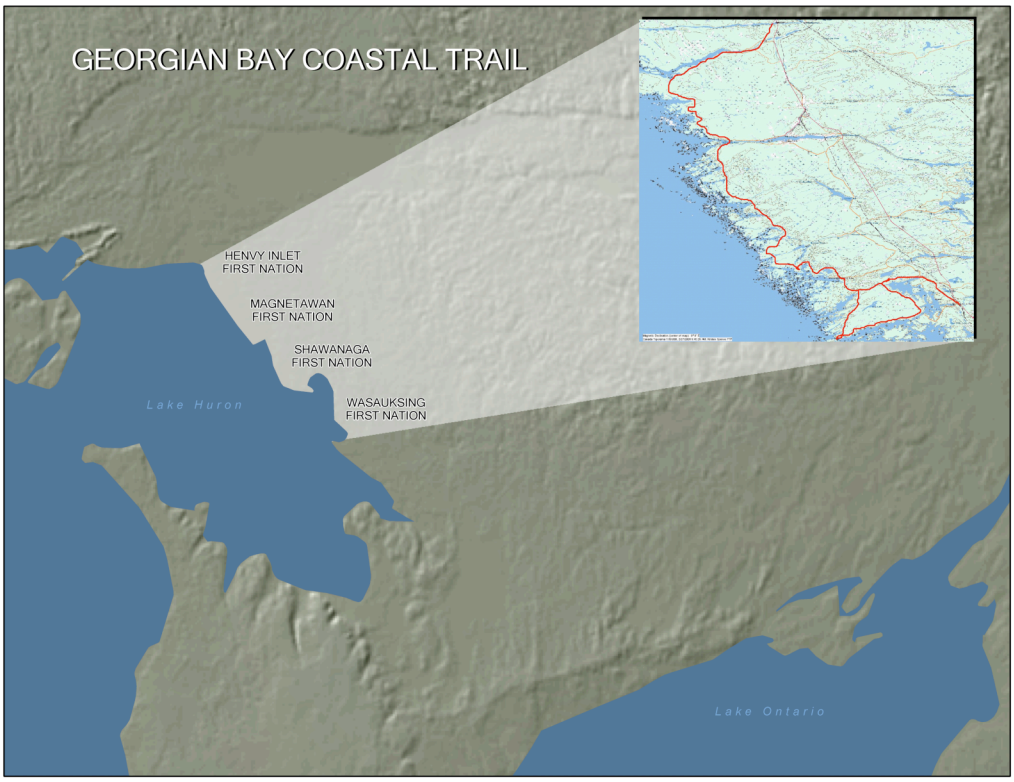

Figure 1: Map of the proposed GBCT (Spence, 2006)

Key stakeholders that have been contacted consist of the Township of Archipelago, the Georgian Bay Land Trust, the Pointe Au Baril Chamber of Commerce and the local First Nation communities. To date concerns include fire management, Search and Rescue resources, day-use access, and water/river crossings, yet all have been noted and will be

addressed. Currently, there is an advisory committee working to develop the organization and build the Board of Directors that will ultimately direct the organization and its staff.

The committee is currently developing partnerships with various groups as they prepare for the first round of on-going consultations. Partnerships in development include Government, First Nation, and non-government partners, The Township of Archipelago, Ministry of Natural (MNR), Georgian Bay Land Trust, Ontario Parks (French River), Georgian Bay Biosphere Reserve Inc. (GBBR), Northern Development & Mines, and the Pointe au Baril Chamber of Commerce to name a few.

The advisory committee members have developed a mandate,

"To develop a rugged coastal hiking trail alongside the east coast of Georgian Bay from Pointe au Baril to the French River as part of a shared vision of sustainable ecotourism within the Georgian Bay Biosphere Reserve: (Spence, 2007)."

Their Mission statement is:

- to create a sustainable world class trail system that will complement the spectacular landscape of the UNESCO Georgian Bay Biosphere Reserve
- to provide an opportunity for hikers to explore and discover the diverse environments of Georgian Bay through passive recreation
- to trace the journey of coastal history through a rugged wilderness hiking experience (Spence, 2007).

There are many economic spin-offs expected from sustainable trail system of this scope. For example, these endeavors could include restaurants, accommodations, B&B's, shops, outfitters, eco-tourism packages, trail maintenance, running the trail pavilion and leading trail orientation sessions, cultural programming, First Nations outreach and education,

and many other benefits that a world class sustainable trail could support and create (Spence, 2006). Some obstacles that the GBCT advisory committee will face would be to obtain tenure that allows the trail to go through conservation reserves, which account for a large potion of the trail. Currently, it is the MNR that manages Crown Lands, including conservation reserves. The concept and goals of the trail must meet the guidelines of a statement of Interest that was established in order to protect the conservation area from high impact development proposals. Further it will take some time to create long-term successful partnership with the local first Nation Communities along the current proposed trail route. The Quu'as Partnership is an ideal model, and is a textbook example of how such agreements are prepared and made to last with all parties satisfied. Both the WCT and the Bruce Trail have an overarching authority such as Parks Canada, or Niagara Escarpment Commission; however the GBCT is based on volunteers at this point and it will be interesting to observe how they deal with challenges as they arise without the support of an institutional framework or the formal organizational affiliation that the other trails do, such as Parks Canada.

2.3 The West Coast Trail Case (Study # 1):

The WCT is located within Pacific Rim National Park along the west coast of Vancouver Island. Figure 2 shows the trail nestled between Bamfield and Port Renfrew British Columbia.

Sections of the 77km trail fall within First Nation territory, thus a joint venture called the Quu'as Partnership was established. The Quu'as partnership is in cooperation with the Federal Department of Canadian Heritage and the Pacific Rim National Park Reserve. This agreement involves the Quu'as West Coast Trail Society, which represents the three

First Nations directly impacted by the trail: Pacheedaht, Ditidaht and Huu-ay-aht. The Quu'as Partnership ensures that the Quu'as West Coast Trail Society provides, support services, and personnel for the maintenance and operation of the WCT, but also ensures that environmental integrity is maintained along the trail at all times (Haugen, 2007).

The fog-prone coastline has claimed a multitude of ships with tragedies dating back to the earliest European records in 1786. The southwestern tip of Vancouver Island earned a dire reputation and was labeled the "graveyard of the pacific". The solution was a telegraph line/trail built through the virgin coastal wilderness in 1890's. The intent of this line was to serve as a communication link allowing shipwreck survivors to find safety in either Bamfield or Port Renfrew (Rudolphi, 2000). After much deliberation and delay, a lighthouse was finally built at Carmanah Point in 1891 (Vancouverisland.com, 2007).

Figure 2: Map of the WCT (West Coast Trail Rules, 2007)

In the 1940's maintenance was suspended, due to new navigation technology and a lighthouse to safely guide the passing ships. Parks Canada took on the redevelopment and reopening of the route as a recreation trail in 1970. This provides a history of the West Coast Trail and its place in Canada's heritage and natural heritage (Rudolphi, 2000).

Throughout the hike many experience the impressive temperate rainforest, rocky shoreline, and breathtaking beaches. Hikers can encounter cable cars, suspension bridges, boat crossings, and 36 ladders that scale the rock face as seen in Figure 3 (West Coast Trail Rules, 2007).

Figure 3: Ladders and cable cars are part of the WCT's LID infrastructure (Card, 2006).

Those that hike the trail may take from 2- 7 days to complete the route. One must be aware and ready for wet weather and slippery rocks and roots. It is mandatory for overnight hikers to receive an orientation session before receiving trail permits and

beginning their journey. During these sessions information is given regarding current trail conditions, tide tables, rules, trail history, sights to look forward to, and the importance of Pacific Rim National Park. Further, within that one hour time-frame hikers are warned of personal risk, accidents, injuries, and potential predators as there are both black bears and cougars that reside within the park boundaries. The National Park informs their hikers how to avoid interactions with such animals that share the trail. The park hosts over 8000 hikers every season (May - September), which brings in over $7 million annually. However, under a strict reservation quota system only 52 people are aloud on the trail per day (Holmes, 2007).

It is also mandatory for users to report in upon completion and any problems that they may have come across. Parks Canada will not charge for the cost of search and rescue (SAR), since some of that cost is included in the trail permit fee that must be purchased before embarking on the trail. The Pacific Rim National Park, is responsible for the entire trail, even when it goes through First Nation territories, to the extent that the First Nations must pay to have the trail along their land (Holmes, 2007). However, if a hiker is injured and decides to quit the trail at a boat crossing, such as the Strait of Juan de Fuca they must pay the First Nation who transports them back to either Bamfield or Port Renfew. In 2000, 102 people (1/100) had to be rescued in between the months of May to September. Usually, 99% of all hikers successfully complete the WCT (Spence, 2006). WCT information boards have been set up outside the Park's buildings and they are updated daily with current trail conditions, safety of bridges, boardwalks, ladders, private property and First Nations territories. There is also a waiting list for trail use along with a small camp ground at the head of the trail for hikers to stay while waiting for a cancellation.

In order to protect the ecological integrity of the trail there is a maximum number of 52 hikers allowed on the trail per day. In 2006 the WCT overnight use permit cost $110. (all costs are in CAD) as well as a non-refundable reservation fee of $25. per person. The boat crossing fee ($15. per person per crossing) is payable at the Registration Centre. There are two crossings that require ferry service, which is provided by the Quu'as partnership.

Figure 4: Chez Monique's Restaurant (Card, 2006).

As Figure 4 indicates, there is a small tent restaurant. Hikers can buy a cold beer for $5. and a burger for $12., much to the dismay of some hikers, seeing this as an eyesore along the landscape. If interested in hiking the WCT one must register one month before their ideal start date. According to Karen Haugen, Aboriginal Liaison, Pacific Rim National Park Reserve, the Park, "hires 4-5 wardens, one backcountry manager, and the Quu'as has

7-9 employees that do both maintenance and interpretation along the trail. When trail maintenance is required, the park hires a contractor that works on all infrastructures along the trail, which has 4-5 staff" (2007). Haugen also explains that the revenue made along the trail goes directly into a shared revenue account for all of Coastal BC Field Unit, which consists of 2 National Parks and 3 Historic Sites. From the revenue, budget dollars are allotted to each Park. For the WCT, there are dedicated funds for both contractors, and the Quu'as WCT Society. Further, the Quu'as WCT Society has conducted a 5-year strategic plan to help the three First Nations develop economic structure along the WCT (Haugen, 2007).

There is also a partnership between all three Nations on archaeological projects, as it helps to monitor all archaeology sites along the trail as well as work with the Nations on any species at risk projects that may occur along the trail (Haugen, 2007). Similar ideas and concept may be appealing to the GBCT advisory committee and to the potential partnerships with the Magnetawan First Nation, Shawanaga, Henvey Inlet, and Wasauksing First Nations.

2.4 The Bruce Trail(Case Study #2):

The Hamilton Field Naturalists developed the Bruce Trail along the Niagara Escarpment in 1960 (Whitelaw, 2004). After years of hard work the trail was unveiled in 1967. The tail is 800km stretching from Queenston all the way north to Tobermory (Figure 5). Under the BTA, The Bruce Trail is maintained through a system of "trail chapters", which has played a key role in the existence of sustainable development among all stakeholders involved (Whitelaw, 2005). Thus, reinforcing the trail concept along the escarpment. The BTA hosts nine Bruce Trail clubs with each club managing a section of

the trail. The club events and activities are overseen by a group of dedicated volunteers. The club regulates and manages trail maintenance, stewardship, public education, hiking programs, and landowner relations (BTA, 2007).

The BTA felt that the unique landscape was not receiving the appreciation or protection that it deserved or needed. General awareness about the Niagara Escarpment began to increase during this time for three main reasons,

i. Environmental movement organizations (EMO) activism associated with the development of the Bruce Trail
ii. Recognition of development threats to the Escarpment from aggregate extraction; and,
iii. Subdivision development, and government initiatives in regional planning (Whitelaw, 2005; Bruce Trail Association, 2007).

The Hamilton Field Naturalists formed a citizen's committee and the visionary for this concept was Mr. Raymond Lowes. It was his belief that, "by providing people the opportunity to hike the Niagara Escarpment, they would gain an appreciation of it and thereby want to protect it" (Whitelaw, 2005). This citizen's committee then took on the challenge of setting an agenda with the Government of Ontario to establish the Bruce Trail. Their strategies included, but were not limited to,

i. Hosting a conference on the recreational potential of the Niagara Escarpment in June 1961 held in Burlington;
ii. Direct lobbying of the government, use of the media, presentations; and,
iii. Marketing the Escarpment through trail organizing activities (Whitelaw, 2005).

The Bruce Trail Association (BTA) was formed In March 1963 and the Bruce Trail is a direct product of the BTA's efforts, which ignited the concept of landscape value in the region (Whitelaw, 2005).

Government support was crucial, but not the only task or obstacle that the BTA would have to endure. Under the leadership of the trail director, Philip Gosling, a relationship was made with the Escarpment landowners. Escarpment landowners shared the vision, purpose, and goals for the trail. Their participation is essential to the existence of the Bruce trail. The conflict that did exist between landowners and the route of the Bruce Trail was concerning private lands, urban commuter-shed of Toronto, and the natural environment of the Escarpment (Whitelaw, 2005). However, the most commonly reported conflict regarded gravel pits and quarries and focused on visual impacts caused by the location of quarries close to major roadways and other publicly fragmented areas (Whitelaw, 2005).

Figure 5: Map of the Bruce Trail (BTA, 2007).

The trail is now internationally recognized, and was also used as a tool for the area to be considered and nominated for a Biosphere Reserve under UNESCO's guidelines (Bruce Trail, 2007).

The Niagara Escarpment Commission (NEC) presents, "the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment and to ensure only such development occurs as is compatible with the Natural environment."

(NEC, 2007). The NEC was established in 1973 and falls under the Niagara Escarpment Planning and Development Act. There are 17 members that are appointed by order-in-council. Nine members (plus a chairman) represent the Public-at-large, and eight members embody the counties and regions located within the Escarpment (NEC, 2007). The Commission has a monthly meeting where they discuss and consider permit applications, plan amendments, and notes on development proposals. The NEC and the BTA work together to ensue that the ecological integrity of the surrounding environment continues to be world class and undisturbed by certain types of invasive development.

The designation of the Niagara Escarpment Biosphere Reserve occurred in 1990, which allowed for the ecological significance and diverse landscape of the Niagara Escarpment the opportunity for the conservation of biodiversity followed by sustainable development, and use within a region that serves as a home to an outstanding assortment of flora and fauna (Liipere, 2002). The Niagara Escarpment Biosphere Reserve and Bruce trail protects more than 300 bird species, 53 species of mammals, 35 species of reptiles and amphibians, 90 species of fish, and 100 varieties of special interest flora, including 37 types of wild orchids (Niagara Bruce Trail Club, 2006). The 1000 year old Eastern White Cedar trees can be seen growing out of the side of the cliff face, and are a tourist attraction (Niagara Bruce Trail Club, 2006). During a study completed in 1997, it was determined that 70% of landowners and adjacent landowners felt that the Bruce Trail was a safe and good neighborhood and that it allowed for positive impacts such as, getting in touch with nature, recreational opportunities, and health benefits. Furthermore, 70% of the real estate agents contacted during the study use the Bruce Trail as a selling feature when promoting property near the Trail (Go For Green, 1998).

The Bruce Trail has directly and indirectly contributed to the economic gain for communities that reside along the trail. In 1997, the Bruce trail users annually supported 1100 full time equivalent jobs in the province, while 191 jobs directly support local employment along the Niagara Escarpment (Go for Green, 1998). During a poll conducted in 1997, the results indicated that 33% of the trail users said that they had purchased "durable goods relating to their use of the Bruce Trail" (Go For Green, 1998). Given that those purchases are made over a 12-month time frame, it would make a direct impact of $20 million. Moreover, the gross impacts would both have direct and indirect benefits of approximately $47 million, which works out to supports approximately 900 jobs (Go For Green, 1998). A twelve-month study from June 1994 to July 1995 showed that the Bruce trail hosted more then 410 000 users. The study goes on to mention that 70.3% of these users said that the Bruce Trail was the main reason they were visiting the area.

Unlike the WCT the Bruce Trail does not have designated campsites and, while hiking throughout the National Park, camping of any kind along the trail is not permitted. Hikers must use and pay for a campsite in the National Park campground. The Bruce Trail is not classified as a wilderness trail and users have the option of sleeping at a cozy B&B after a long day's hike, which is not an option while hiking the WCT. The Bruce Trail Association has a website providing information such as the Bruce Trail users Code which states the following:

i. Hike only along marked routes, especially on farmland;
ii. Do not take short cuts. Do not climb fences - use the stiles;
iii. Respect the privacy of people living along the Trail;

iv. Leave the Trail cleaner than you found it. Carry out all litter;

v. No open fires are allowed on the Trail. Use a portable stove;

vi. Leave flowers and plants for others to enjoy. Do not damage live trees or strip off bark;

vii. Keep dogs on a leash, especially on or near farmland;

viii. Protect and do not disturb wildlife; and,

ix. Leave only your thanks, and take nothing but photographs.

These rules are listed on a website in place of head orientation session, as there are many entry points to the Bruce Trail, a trail head location like the WCT is not needed.

In 1995 the Niagara Escarpment Biosphere and the National Park had experienced some major cutback at he provincial level, but the Niagara Escarpment Monitoring Program and the Bruce Peninsula National Park Ecosystem Monitoring Program could still be implemented successfully (Whitelaw, 2004). Such programs help to keep the Bruce Trail sustainable trail system for generation to explore and enjoy.

Table 1: Comparative Analysis of Case Studies.

Name of trail	West Coast Trail (BC)	Bruce Trail (Ontario)
Year of opening	1970	1967
Length	77 km	800 km
Number of users/year	8,000	410,000
Estimated revenue/year ($)	7 million	20 million
Estimated # of jobs in region	50	900
Management & Maintenance	- Parks Canada - Quu'as Partnership	- Niagara Escarpment Com. - Bruce Trail Association

Chapter 3.0: Methods

To examine the concept of the GBCT, a review of the literature, case studies, and site visit/ semi-structured interviews were used to create a strong foundation before preparing recommendation for the GBCT committee. These three methods were used to triangulate my research in order to make my findings as valid as possible (Palys, 2003). An inductive approach was the theory of choice, as it adequately reflects my findings (Palys, 2003).

3.1 Literature Review

A review of literature provided background information that was essential to obtaining a full understanding of trail concepts and history. The literature provided valuable background information, but it was also helpful in the preparation of meaningful interview questions. After reviewing a number of sources, I was able to find supporting journals and literature regarding trail development nationally and internationally. The results will be analyzed in further detail during chapter 4.

3.2 Case Studies:

Both the WCT and Bruce Trail will be examined to study the methods used to achieve their international acclaim, as well as the policies put in place to declare them protected areas. Furthermore, I will grasp what lessons we can learn from the WCT and Bruce Trail in order to ensure a successful venture in the eastern coast of Georgian Bay. I will analyze and explore the relationship between protected areas and sustainable trail systems. Further, I have identified and acknowledged the partnerships and agreements that local First Nation communities have with Parks Canada and Biosphere Reserves.

Both the Quu'as Partnership and the Clayoquot Biosphere Trust Fund, on the west coast, are good examples of successful agreements.

3.3 Site visits and contacts

By conducting interviews and site visits within the Georgian Bay Littoral Biosphere Reserve I was able to connect with the area and get a feeling for the rugged terrain. During my second visit to the town of Parry Sound, I became more familiar with the route of the conceptual GBCT. I visited a number of the small communities the trail may encounter such as Point Au Baril, Bayfield Inlet, and Britt. Each area was very interested in the concept of a world-class wilderness trail according to some of the information presentations that Kirsten Spence has provided (Spence, 2007). During an interview in Point Au Baril it was made clear that the trail would bring some economic stability to an increasingly quiet area (Kelly, 2007). I was even able to hike a section of the eastern coast of Georgian Bay near Parry Sound in order to get a clear idea as to what the terrain of the GBCT trail would be like if the concept is implemented.

3.4 Semi-structured interviews:

The interviews are sources of primary data that will help gain a better understanding of stakeholder perspectives, and achieve further insight and information into the overall concept. This includes its potential impacts, benefits and drawbacks, and preferred options by those involved (Booth, Colomb & Williams, 2003). I prepared three different sets of research questions:

i. Interview questions for both the West Coast Trail (WCT) and the Bruce Trail;

ii. Interview Questions for the Georgian Bay Coastal Trail (GBCT) Steering Committee, and;
iii. Interview Questions for community residents regarding the Georgian Bay Coastal Trail.

I was able to interview a number of key informants in the town Parry Sound, Vancouver Island, and Southern Ontario.

The types of interview questions were limited to open-ended questions. A scripted interview can make the interview stall, make others feel uncomfortable, or freeze the interviewee. My goal was to make my interviews feel like a *comfortable conversation* and not an intrusive investigation. The following list identifies the key informants affiliated with each case study:

i. Bruce Trail Volunteer
ii. Ethan Meleg, Outreach Coordinator for the Bruce Peninsula National Park
iii. Greg Mason, Parry Sound resident
iv. Jack Little, Ahousaht First Nation
v. Karen Haugen, Aboriginal Liaison Pacific Rim National Park
vi. Keri McMahon, City of Calgary Trails
vii. Kirsten Spence, GBCT Committee (and visionary)
viii. Laura Heidman, First Nations Liaison, MNR
ix. Richard Murzin, Niagara Escarpment Commission
x. Rick Holmes, Warden Supervisor of the West Coast Trail Unit
xi. Robert Barnett, Escarpment Biosphere Conservancy
xii. Rod Kelly, Point Au Baril resident

xiii. William Fox, Coastal Marine Assets Manager, Pacific Rim National Park Reserve

3.5 Conceptual Framework

The conceptual component was developed to create a systems framework. The concept shows that the flow of the research question can be broken down into smaller components, and into a structure of various broad topics. All pieces of the conceptual framework are interrelated and will be examined at varying degrees of detail in the study, yet it is dependent on the scope and availability of information and study time-frame.

3.6 Community Report:

The GBCT committee has asked that I supply them with a final report indicating and highlighting the main recommendations and conclusions of the study. The community report will be a separate document and will be used by the GBCT committee as resources when publicly promoting their concept and will be an asset during decision processes.

3.7 Boundaries of the Study

The boundaries of the particular study are limited to the maximum area of the Georgian Bay Littoral Biosphere Reserve, and even to the boundaries of the GBCT 120km route its self.

3.8 Assumptions, Limitations and Biases

Location and distance was a limitation for my Vancouver interviews. I did manage to fly out west twice this year, but I could not finically afford to conduct face-to-face interview son the southwestern coast of Vancouver Island. The availability of various stakeholders for interviews and timelines are also limitations for the study. I also found that I ran out

of time. I could have used another two years to travel, interview and explore leads that would result in more thorough recommendations for the GBCT advisory committee. Future research could be focused on a number of themes, such as First Nation perspective, involvement, and governance. I would be interested to further explore how a trail can act as an educational tool for a region as well as a reminder or indicator as to the significance of the surrounding area nationally and internationally. Also, if I were conducting this research again, I would re-word my interview questions in the hopes of increasing the participation of my interviewees. Most felt that they were unable to answer my listed questions. Whether it was that they were not present when the trail was established, or they felt they were not entitled to participate in such a study. They were reluctant and I do not feel that I got the information I was seeking with the type of questioning I provided. Although I would like to represent this report as unbiased, the interpretation of information and selection of salient points is subjective (Booth, Colomb & Williams, 2003). By identifying potential biases and the assumptions made in this study I hope to help increase its validity and reliability (Palys, 2003). I may have obtained some biases towards the WCT due to the fact that I hiked the trail this past summer and had an amazing experience doing so. I also have an enormous passion for the natural environment and environmental education, and must remind myself that there are many goals for the GBCT. When I agreed to become a part of this project I assumed that the GBCT was already in the proposal stage and shaped my interview questions as such. I was rightly corrected when interviewing a MNR representative since the trail is currently only a *concept*. Also, in my naiveté, I did not fully understand the degree to

which politics played a role, or the total amount of decision making that is really behind creating and maintaining a sustainable trail system.

Chapter 4.0: Conceptual Framework

The conceptual framework that was assembled to guide this research is presented in Figure 7. The term conceptual framework can be defined as,

> "Conceptual frameworks are neither models nor theories. Models describe how things work, whereas theories explain phenomena. Conceptual frameworks do neither; rather they help to think about phenomena, to order material, revealing patterns - and pattern recognition typically leads to models and theories." (Rappoport, 1994).

This particular framework was geared to provide the overall structure for the concept of the GBCT and sustainable trail development. The organizational framework relies on a group of concepts and theories that together provide a viable flowchart to study the process and the order in which sustainable trail development can occur after looking at both case studies and following an intensive methods approach. The conceptual framework was developed to provide the process and selection of the triangulation research methods, and how the analyses of results were formed.

After designing the model and applying the concept to the framework I found that the GBCT fit reasonably well. Yet, some factors, such as First Nations involvement, might be overlooked when using this particular framework. However, it was my intent that step 4 (Community Participation) would automatically include all surrounding First Nation communities. Overall, the framework gives a solid representation of what to expect as

well as some of the barriers that may arise when planning and implementing a sustainable trail system.

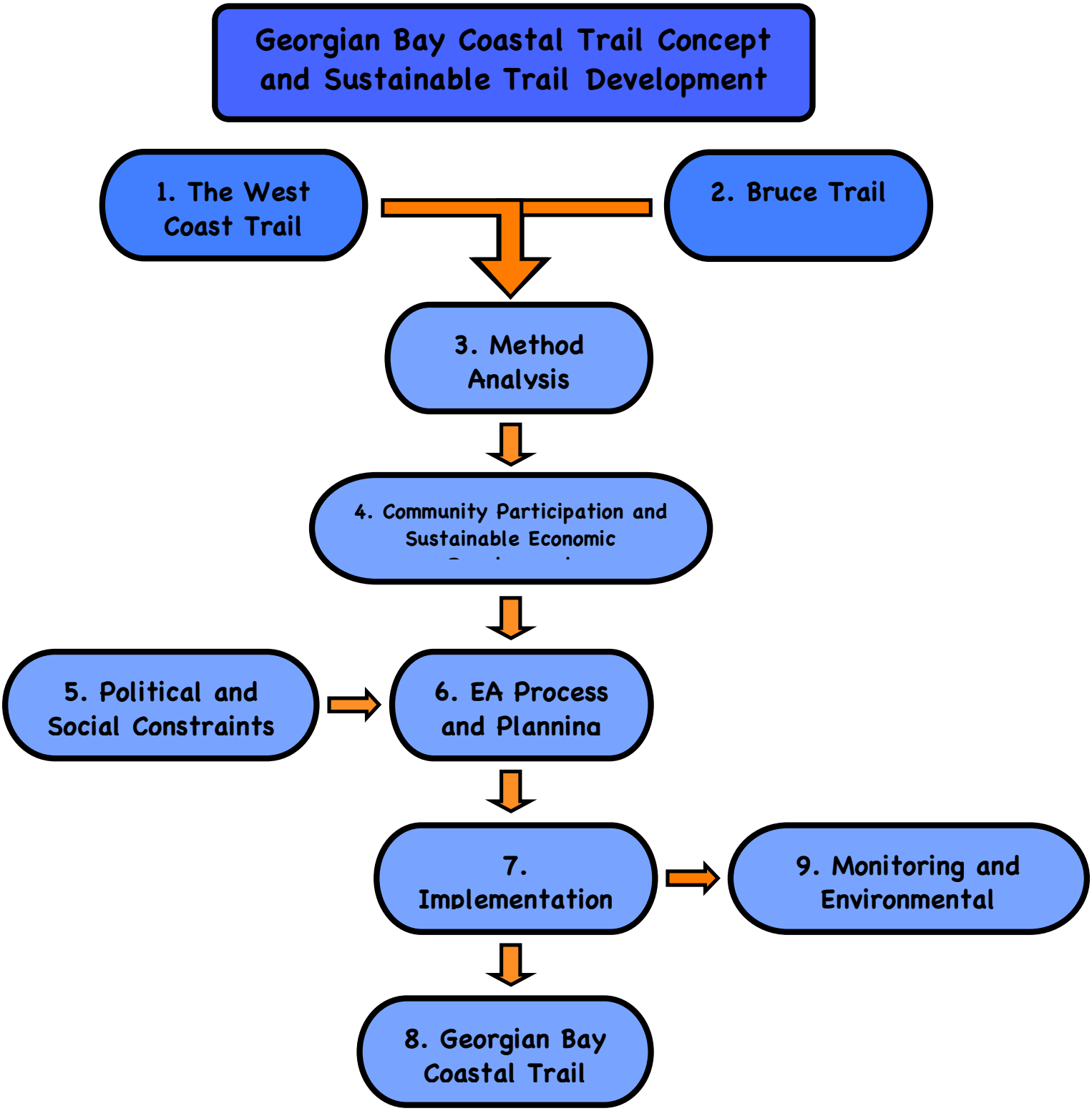

Figure 6: GBCT conceptual framework (Card, 2007).

Chapter 5.0: Literature Review

This chapter draws upon literature from four themes relevant to the research topic. The themes are protected areas, community sustainable development, education and outreach, and Traditional Ecological Knowledge and Wisdom (TEKW). The literature from each theme is thoroughly and critically reviewed in the context of the research objectives and was used to develop the interview questions (section 3.4) and a conceptual framework designed to guide this research (presented in chapter 5).

5.1 Protected Areas

The term 'protected areas' has a long history and has been said to be somewhat of a cultural artifact (Eagles 2002). For example, for the protection of natural resources, India set aside designated areas to be protected over two millennia ago (Eagles, 2002).

Further, historians claim that in Europe, "some areas were protected as hunting grounds for the rich and powerful nearly 1,000 years ago. Moreover, the idea of protection of special places is universal: it occurs among the traditions of communities in the Pacific ("tapu" areas) and parts of Africa (sacred groves)" (Eagles, 2002).

The World Commission on Protected Areas of the IUCN defines the term as, "an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means" (Dearden, 2002). Protected areas are not islands or isolated from their continuing or surrounding environments, but rather, they are part of a broader ecological, cultural and political land or seascape (Suffling, 2007). There is a need to ensure that protected areas are not turned into islands, lost to tragedy of the commons, or "loved to

death" (i.e., overused such as some classic examples of Elk Island National Park, and Wood Buffalo National Park (Dearden, 2002).) One way of protecting significant areas and the landscape would be to create an Environmentally Sensitive Landscape (ESL), which is:

> is a geographically and ecologically definable landscape that is distinguishable from the surrounding areas by the concentration, proximity and/or overlap of high order natural environmental features (e.g., Environmentally Sensitive Policy Areas or Provincially Significant Wetlands), other associated natural features (i.e., stream valleys, woodlands, and specialized habitats), and supportive environmental functions (e.g., groundwater recharge and ecological corridors or linkages) which together constitute a heterogeneous landscape mosaic that contributes significantly to Regional biodiversity conservation (City of Waterloo, 2005).

A proposed ESL would consider existing land uses by utilizing stakeholders' environmental awareness, innovation, and creativity. The ESL would co-exist with rural residents, agriculture practices, and small-scale commercial and institutional facilities. Another option would be to nominate and designate the area as a Biosphere Reserve, which will be discussed in further detail in section 4.1.2.

The link between *sustainable tourism* and *protected areas* can be identified by the fact that tourism is as old as the history of protected areas, but also that it has been proven that "Protected areas need tourism, and tourism needs protected areas" (Eagles, 2002). Even though this courtship can be tedious, complicated, and at time maybe seem like a double edged sword tourism will continuously play an important role (Eagles, 2002).

Recently, land and Resource Management Plans in Ontario have provided a planning context for protected areas. In another timeframe –since "time immemorial" - First Nations have seen the land and sea from a holistic worldview (Ministry of Natural Resources, 2007). The scientific, ecosystem approach is now striving to adopt an integrated perspective (Ministry of Natural Resources, 2007).

According to Scott Slocombe, with popular concepts like sustainable development and sustainability there is now a call for the integration of environment and development planning, yet currently there is concern that the integration is not happening in the scientific world (2006). In fact, most environmental planning for protected areas is not able to practice or produce viable and usable research and understanding that would allow for new opportunities. Therefore, while taking the ecosystem approach into account during the planning and management phase, all scientific activity must be focused on the best ecosystem science available (Slocombe ,1993).

5.1.1 Ecosystem approach

When defining a system of any kind it is important to note that a, "system" is a set of components (parts) and their interrelationships, which exhibit "emergent properties" in the system's behavior or functioning, which are (in turn) determined by both components and their interrelationships and cannot be understood by examining the components alone (Gibson, 2007). When applying the system's theory to an ecosystem it would involve, "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (JNCC, 2007). Ecosystems are not static systems, but rather an active and self-organizing process, which are made up of structures and functions (Kay and Schneider, 1994). Further, management goals need to be

focused on the research that shows ecosystems having maximizing functions (biomass, productivity, number of species) and/or minimizing functions (pest outbreak) (Kay and Schneider, 1994). Finding the balance between the maximizing and minimizing functions is essential to a healthy ecosystem. An ecosystem approach is incorporated into Protected Area Values (PAV) and involves the implementation of PAV's into the planning of the landscape, which would enhance and encourage more centralized government initiatives such as parks and trail systems (Dearden, 2002). PAV's approach is to look at a protected area at the landscape scale while encouraging greater attention to detail in terms of site specific ecosystems, while creating a range of stewardship approaches to ensure the ecological integrity of protected areas.

Currently, the ecosystem approach is approved and practiced at the federal and provincial level (Whitelaw, 2005). The ecosystem approach is relevant to this study because it has been used during similar research, such as the Royal Commission on the Future of the Toronto Waterfront (1991) and it tie's in the importance of recognizing a 'system' within the context of the interconnected environment (Whitelaw, 2005). This study can realistically only examine a small part of the whole picture to be viewed. McCarthy (2007) states that systems are 'nested' and we should always think about the system we are looking at as being made up of smaller systems and being part of larger systems. Not only will the landscape, or biophysical be analyzed, but the many social interactions, and numerous benefits of socio-ecological systems as well.

5.1.2 Biosphere Reserves

Biosphere Reserves are defined as, an area that has been designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to demonstrate innovative approaches to living and working in harmony with nature. Each reserve is typical of one of the world's major terrestrial or coastal ecosystems and has three inner-connected functions such as:

i. Conservation: landscapes, ecosystems, species and genetic variation
ii. Development: economic and human and culturally adapted
iii. Logistic support: research, monitoring, environmental education and training (UNESCO, 2006).

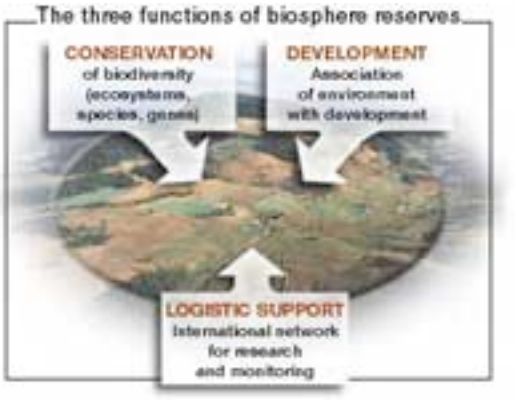

Figure 7: The three functions of a Biosphere Reserve (UNESCO, 2006).

The theory of a Biosphere Reserve was imagined over 30 years ago by the UNESCO 'Man and the Biosphere' program. In 1971 the concept was defined to,

"develop the basis within the natural and social science for the rational use and conservation of the resource of the biosphere and for the importance of the global relationship between man (sic) and the environment; to predict the consequences of

today's actions on tomorrow's world and thereby to increase man's ability to manage efficiently the natural resources of the biosphere reserve"(Francis, 2004).

Currently, 507 Biosphere Reserves have been designated in 102 countries 13 of which are in Canada. The role of a Biosphere Reserve was also meant to facilitate issues of governance, the position of "civil society", and the complex social –ecological systems (Francis, 2004). A community or local groups can come together to nominate their area to be designated as a biosphere reserve; however, the committees have to prove UNESCO that their region has ecological importance, opportunities for sustainable development, and has political support from all relevant communities (UNESCO, 2005). The party interested in having their area designated as a Biosphere Reserve has to then send letters of support to the Canadian officials for approval before the nomination can be sent to UNESCO office located in Paris, France, for final consideration (Life in the Biosphere Reverse, 2001). Legally a Biosphere Reserve must respect existing jurisdiction agreement, private property including municipal, provincial, and federal lands, and any land claims or Treaty situations that concern the rights of local Aboriginals within the designated region (UNESCO, 2005).

The Georgian Bay Coast Trail is proposed to fall within the Georgian Bay Littoral Biosphere Reserve, which "encompasses the eastern part of Lake Huron, includes the headwaters of the St. Lawrence River and has one of the largest fresh water archipelagos in the world. The result of an extraordinary collaboration between Native communities, local inhabitants, a consortium, which includes, among other, local business interests and regional and local authorities, it represents a common vision of sustainable development and environmental and cultural conservation" (UNESCO, 2006). The term boundaries is

used loosely and is based on a concept of people's sense of place, which is appropriate as most of the Georgian Bay Littoral Biosphere Reserve consists of conservation reserves, townships, and First Nations communities to name a few.

Presently, the Georgian Bay Littoral Biosphere Reserve is quite large and extends from, Port Severn in the south up to French River using highways 96 and 400 as a constructed corridors for the area with the western end stretching out into the Georgian Bay Islands National Park (GBINP), and Lime Stone Island Nature Reserve (Life in the Biosphere Reverse, 2001). The key features or core areas chosen within the Georgian Bay Littoral Biosphere Reserve are: Georgian Bay National Park, French River Provincial Park, Killbear Provincial Park and Masssasauga Provincial Park, the O'Donnell Point Provincial Nature Reserve and the Limestone Islands Provincial Nature Reserve (Life in the Biosphere Reserve, 2001). The local organization arrangement for the Georgian Bay Littoral Biosphere Reserve consists of a Board of Directors that represent the local region. Of the 8 members on the Board, 3 are from aboriginal communities, 3 members are permanent residents from local townships, and 2 are from the cottagers and boating community (Francis, 2005).

5.2 Community Sustainable Development

The term sustainability, "seeks a partnership between the public sector, the private sector, and NGOs and other elements of civil society. It offers a new paradigm for decision making that requires the integration of concern for environmental and social equity into ecosystem decisions, and vice versa" (Bell, 1999:14). Sustainable development can be defined as, "maintaining environmental resources so that they continue to provide benefits to living things and the larger environment of which they are apart" (Draper,

2005). The concept of sustainable development emerged during the 1980s, as a new environmental term with answers to the problem of meeting the material needs of a rapidly growing population while minimizing environmental damage (Bridger, 1999). The term was rather refreshing as it "took over to become the dominant paradigm from the 1980s onward..."(Whitelaw, 2005). The influence of sustainability has led to the sophistication through the application of new technologies (geographic information systems, e-mail) and activities (negotiation, mediation) to enhance their participation (Whitelaw, 2005). GBCT will only adhere to and to promote further sustainable development under the designation of a biosphere reverse. Furthermore, the seven principals of sustainability can be applied to the concept of the GBCT**:**

Socio- Ecological System Integrity

- To understand the complexity of the rugged eastern coast of Georgian Bay in particular and to then reduce negative impact within the area

Sufficiency and Opportunity

- To ensure that the impacts of sustainable trail development do not jeopardize future generations, goals need to include quality of life for all citizens and support healthy biodiversity within all ecosystems

Equity

- Measures need to be taken to improve the opportunities for future generations to enjoy a sustainable lifestyle (eg: setting a daily limit of trail users to protect from trail erosion)

Efficiency

- To use the resources provided at a sustainable rate and to do "more with less"

Democracy and Civility

- Creating a mission that is driven by core values, a mandate that clearly defines what is being done and an action plan that outlines who does what and when (these statements provide the visionary foundation, upon which,

all decisions can be made with respect to the interests and beliefs of all stakeholders, and the environment)

Precaution and Adaptation

- To acknowledge the boundaries of the unknown and to act in a manner will not damage the pillars of sustainability
- The duty of making decisions on complete and indicative data Immediate and Long Term Integration
- To integrate all of the above principles together to guarantee that GBCT will be able to experience a long and prosperous life span nestled in the eastern coast of Georgian Bay Ontario (Gibson, 2001).

A sustainable community is a, "community that uses its resources to meet the current needs while ensuring that adequate resources are available for future generations. A sustainable community seeks a better way of life for all of its residents while maintaining natures ability to function over time by minimizing waste, preventing pollution, promoting efficiency, and developing local resources to revitalize the regional economy. Decision-making that stems from a rich civic life and shares information among community members will lead to a sustainable community. A sustainable community resembles a living system in which, natural and economic elements are interdependent and draw strengths from each other" (Roseland, 2005). When assembling all three definitions together it provides a powerful guideline for the GBCT and surrounding communities to consider and abide by.

5.2.1 Social and Environmental Benefits of Trails

It has been proven that tourism can be one form of environmentally sustainable development with in a community. A study done in Thailand shows that trekking by foreigners became so poplar that it brought in an influx of approximately $2 million USD. Therefore, if tourism is applied to best management practices it can sustain the ecological integrity of the area as well as support the local economy (Dearden, 1991). Such an endeavor would be a form of sustainable tourism. Sustainable tourism is described as viable over the long term because it results in a net gain for the area in which it takes place (Eagles, 2002). Trails can easily satisfy a tourist's interest in the outdoors through *nature based* activities. In fact, according to Go For Green (1999), "travelers are increasingly attracted to educational oriented experiences provided by cultural and historical sites… Trails can act as a link between cultural and historical sites." It is the intent of the GBCT committee to mimic the effects of tourism and economic gain while sustaining a wilderness class trail system. There are currently many sustainable trail systems nationally and internationally, such as the WCT, Bruce Trail, Oak Ridges Moraine Trail, East Coast Trail, and the Great Ocean Walk to name a few.

The process of developing a trail is not an easy one as there are many obstacles along the way. When a community is informed that a trail is being proposed in their area many are worried about trespassing, aesthetics, loss in property value, noise, vandalism, loss of privacy, and pollution (Harris, 2007).

There are many benefits to developing and implementing a new trail system in a region or community. Tails act as a common meeting place for the community due to their

linear design and appealing surroundings, such as the water front, an old rail trail, or the inferior of public forested park. The concept of a sustainable trail system can help to encourage governance, and connect various partnerships between local government, private properties, landowners, and non-government organizations, and neighboring municipalities (Go For Green, 1999). It is important to note that there are numerous health benefits to using trails. Walking has been the most popular physical activity for over a decade, as 85% of Canadians choose to walk for leisure and recreational reasons (Go For Green, 1999). By giving a community the resources and the opportunity of a trail system their overall health will benefit, which has been proven to lower medical as well as the number of health insurance claims (Go For Green, 1999). Research has proven time and time again that when residents are encouraged to participate and are involved in an activity, such as developing a trail system in their area they feel more connected to the project and their community (Go For Green, 1999). There is a sense of pride and accomplishment when a concept and or proposal is brought to life, which is one of many reasons why it is so important to involve all key informants and stakeholders in the decision making process.

Environmental benefits of sustainable trail system are vast and one way a region can ensure the ecological integrity within their communities. The Go for Green: Active living and Environment Program (2000) has identified that trails:

i. Protect habitat for native animals and plants
ii. Raise environmental consciousness
iii. Help mitigate pollution caused by fossil fuels
iv. Reduce noise levels and provide visual diversity

v. Protect the biodiversity of our living world

vi. Can be used as living laboratories to monitor changes in the environment over time

Further, trails can act as an aid in the on going quest to protect and conserve natural resources. Trials reconnect people with their natural environment while helping to sustain the beauty of the region. Trails provide the following benefits to ensure the ecological integrity of the landscape as they:

i. Improve air quality by protecting the plants that naturally create oxygen and filter out air pollutants such as ozone, sulfur dioxide, carbon monoxide and airborne particles of heavy metals

ii. Trails and greenways help maintain and enhance carbon sequestration, a process by which "carbon sinks" (that is, soil and trees) capture and slow the release of C02into the atmosphere (Greenhouse Gas Emission Reduction Trading Pilot 2000). About 500 full-sized trees are needed to absorb the carbon dioxide produced by a typical car driven 20,000 km/year

iii. Trails provide passageways for migrating birds and butterflies (Royal Commission on the Future of the Toronto Waterfront 1992). For example: Monarch butterflies (Go for Green, 2000).

According to a world wide pool conducted in 2000, found that there is a strong consensus that countries need to concentrate on social and environmental goals, rather then economic pressures (Go For Green, 2000). One way to start looking at social and environmental needs would be to educate the public and to get them outside in order for them to understand and reconnect with their natural environment. Once a connection is made it is more likely that steps will be taken by the individual to promote a sustainable

lifestyle. The goal of the GBCT is that it could balance rugged overnight revenue-generating hikes with more open public access; this relates to Gibson's principle of social equity (above) and speaks to public education and engagement about using the trail (in other words, it is not just for "outsiders" who can afford to pay).

5.2.3 Outdoor Experiential Education

I hear and I forget
I see and I remember
I do and I understand
(COEO, 2007).

Outdoor Experiential Education (OEE) is an, "experiential approach to learning about the world around us, its many ecosystems, the adaptations and interdependence of its organisms and the challenges that face humans in working together to ensure its sustainability" (Card, 2006). The Council of Outdoor educators of Ontario (COEO), remind society that OEE,

i. Provides powerful opportunities for extensive personal and interpersonal growth
ii. Many skills are enhanced thought OEE, including cooperation, effective communication, decision making, problem solving, task leadership and social competence
iii. Early sequenced and repeated experiences in the outdoors develop in children a kinship with nature that can evolve into an informed, proactive and lifelong stewardship of the natural environment
iv. Children love to be apart of the solution – especially when they are able to see the effects of their positive interaction with nature first-hand (COEO, 2007).

One of the major differences of OEE and classroom learning is that OEE is able to use the students whole environment as a source of knowledge, thus allowing communities to be the focus of learning and not the classroom alone (COEO, 2007). Research has shown that hands-on interactive learning is the very best way to get everyone involved, engaged, and feeling as if they have had a meaningful experience -- academically and personally (COEO, 2003). It is important to note that even though the environment is a major concern OEE is not limited to that topic alone. Learning in the outdoor classroom uses the outdoors both natural and built/constructed to promote learning from experience, and can be used to enhance and enrich any curriculum subject (COEO, 2007).

Richard Louv, author of Last *Child in the Woods,* suggests that OEE, greening the schoolyard, and eco-schools are all on the rise, but this, although supported by a large volunteer base, suffers a huge lack of funding. Louv suggests that the school boards could make an attempt to build partnerships with local eco-centre's and environmental organizations, Provincial Parks, or local Trail Associations. Such a relationship would ignite the possibilities for students to have numerous experiences in the *outdoor classroom*. Instead of waiting on year-end school budgeting, the various organizations could come together with funding to provide an environmental educator to help the classroom teachers plan and facilitate class events at a number of venues (Louv, 2007). The students could be taken to a community park, or hike a local trail to learn about the area's history. This research is relevant to the GBCT concept as well as sustainable development because it encourages current teachers to take their students outside to help create, or to introduce a connection between the youth of the region and the remaining natural areas in their province or backyard. Such goals help to ignite an understanding

that the students are apart of their environment and wild spaces, but also that choices can be made to ensure that these ecosystems are protected as well as the wildlife that reside within them.

5.3 Traditional Ecological Knowledge and Wisdom (TEKW)

The TEKW of indigenous people has become recognized and has gained attention over the past decade (Turner, 2000). Turner believes that TEKW has played a huge role in, "the management of local resources, in the husbanding of the world's biodiversity, and in providing locally valid models for sustainable living" (2000).

TEKW is the, "knowledge of ecological principles, such as succession and interrelatedness of all components of the environment; use of ecological indicators; adaptive strategies for monitoring, enhancing, and sustainable harvesting resources; effective systems of knowledge acquisition and transfer; respectful and interactive attitudes and philosophies; close identification with ancestral lands; and beliefs that recognize the power and spirituality of nature (Tuner, 2000).

Even though TEKW was acknowledged in 1992 at the United Nations Conference on Environment and Development as being, "complimentary to, equivalent with, and applicable to scientific knowledge" in some cases TEKW has not been taken seriously (Turner, 2000). An Example of such ignorance took place on the Western Coast of Canada. The local coastal First National people suffered as they were then not permitted to fish for the prized traditional food of Abalone (*Haliotis kamtschatkana*). The Haida Elder's concerns for over fishing were not heard by the Canadian Government and the respected shellfish suffered from mismanagement and overexploitation (Turner, 2005). In

many ways TEKW promotes and goes hand in hand with sustainability, and has great input during decision-making processes, such as the improved techniques of protecting the temperate rain forests of Clayoquot Sound (Turner 2005). As mentioned in the introduction, metaphors such as the term the Earth's Blanket are here to remind society that Human actions can have consequences and repercussions with impacts that can affect the community at a global scale. First Nation children are taught at a young age through stories and teachings how to live a sustainable lifestyle and how to maintain a healthy surrounding landscape. There is great worry among the elders that environmental teachings are being lost and not told to the youth, as their culture changes with the fast paced greedy world that surrounds them (Turner, 2000). For it is these teaching that remind the children of the earth to take only what one needs to survive, to always have respect for one's environment, and give thanks. Only then real wealth and gifts of the world will be received once again (Turner, 2005).

Currently the proposed GBCT is set to cross four First Nation territories. The GBCT committee has engaged in relations with the local First Nation communities as the first step in creating a partnership. Such an opportunity will allow for many positives, one of which being the shared understanding of TEKW along the rugged coastline.

5.3.1 Partnerships in Protected Areas

As part of my methodology, the WCT was chosen as one of the two case studies, as the GBCT will be modeled after the internationally recognized wilderness class trails to some degree. The WCT is also an appropriate role model for the GBCT because an agreement called the Quu'as Partnership was established for the "cooperative management of the WCT (Gardner, 2001). This agreement takes a trans-disciplinary approach among three

communities, the Pacheedaht, Ditidaht and Huu-ay-aht, along with Parks Canada (Gardner, 2001). The Quu'as Partnership provides many positive opportunities for all three First Nation Communities, such as employment as well as a forum to increase cultural awareness.

The word Quu'as means 'one people' which is exactly what the partnership strives to enforce (Quu'as, 2007). The three nations, Pacheedaht, Ditidaht and Huu-Ay-Aht, have come together to form a business operation that makes their culture and heritage available to others that would like to learn more about the challenges and breathtaking environment of living and surviving on the west coast (Quu'as, 2007).

Such an endeavor will act as a long-term training and employment initiative for the Pacheedaht, Ditidaht and Huu-Ay-Aht people (Little, 2007).

As long as the trail is open, the Quu'as Partnership encourages these three First Nations to aid in 'business and economic development' activities related to the WCT. Under the Quu'as umbrella there is room for ecotourism, recreation possibilities, natural heritage and cultural education, and, support services such as running the 4 hour ferry services from Bamfeild to Port Renfrew. Another type of partnership is an example from the Clayoquot Sound Biosphere Reserve and the local First Nations that reside within its boundaries. The Clayoquot Sound Biosphere Reserve was designated years before the Georgian Bay Littoral Biosphere reserve and has therefore acted as a model for First Nation relations and partnerships.

The Nuu-chah-nulth people are subdivide pertain to five Nuu-chah-nulth tribes, such as

i. Ahousaht;
ii. Hesquiaht;

iii. Tla-o-qui-aht;

iv. Toquaht; and,

v. Ucluelet First Nations (Clayoquot Biosphere Trust, 2007).

They have resided in Clayoquot Sound UNESCO Biosphere region for millennia living off both the land and sea, as they have always been a coastal community. Their people relied on the ocean for salmon, sea mammals and various other ocean creatures, but only took and used what they needed (Clayoquot Biosphere Trust, 2007). To this day their culture is based on the natural environment that has sustained them, and reflected in their art, politics, and the teachings of their people (Clayoquot Biosphere Trust, 2007). The Biosphere Reserve is home to about forty small "Indian Reserves" totaling approximately 1,055 hectares in size, thus leaving little land left for communities to expand (Clayoquot Biosphere Trust, 2007).

The Clayoquot Biosphere Trust (CBT) is a federally registered non-profit organization with a board of directs that represents local First Nations as well as local communities. The endowment fund income has been used for research opportunities, education, and training, which fits the three inner-connected functions of a healthy and sustainable Biosphere Reserve Region (Clayoquot Biosphere Trust, 2007). Endowment funds help to make sustainable community development a reality while increasing awareness and understanding of their amphibious environment. The CBT's Vision statement is as follows:

"The Community of the Clayoquot Sound UNESCO Biosphere Reserve Region will live sustainable in a healthy ecosystem, with a diversified economy and strong, vibrant and united cultures while embracing the Nuu-chah–nulth First Nations "living" philosophies

of Iisaak (Living respectfully), Qwa' aak qin teechmis (Life in the balance), and Hishuk ish ts'awalk (Everything is one and interconnected). This vision was articulated to the Clayoquot Biosphere Trust during public consultations with the residents of the Clayoquot Sound UNESCO Biosphere Reserve Region Community…"

(Clayoquot Biosphere Trust, 2007).

To guarantee that these partnerships are maintained and successful Julia Gardner wrote the 'First Nations Cooperative Management of Protected Areas in British Columbia: Tools and Foundation' in 2001. The document discusses a set of principles or possible "best practices" that can be used as a guide and as a tool in improving cooperative management of protected areas within British Columbia. These 'best Practices' for First Nations Co-operative Management in Protected Areas consist of seven themes, which are:

- Management Structures and Processes;
- Funding Cooperative Management Arrangements;
- Economic Opportunities for First Nations;
- Cultural Issues, Traditional Ecological Knowledge and Wisdom (TEKW) and, Interpretation
- Alliances between First Nations, Non-government and Other Organizations

(Gardner, 2001).

6.0 Findings and Results:

After conducting interviews on the west coast, along the Bruce Trail, and the eastern coast of Georgian Bay my findings are as follows.

6.1 The West Coast Trail:

I was able to speak with three key informants along the western coast of British Columbia via e-mail and telephone. My first interview was with Mr. William Fox, the Coastal Marine Assets Manager for Pacific Rim National Park. Mr. Fox has worked at Pacific Rim National Park for eight years after moving from Alberta. He felt that winter storms on the southwestern part of Vancouver Island pose the main challenge and obstacle from year to year. On December 11, 2006 the WCT lost over 3000 trees due to high winds and mudslides. After the storm, trail managers also discovered that many ladders, suspension bridges, cable cars, and bridges were either missing or badly damaged.

When asked if he could identify the key individuals/groups/organizations/agencies that either contributed to, or hindered the development of the trail he talked about the Quu'as Partnership with the local First Nation communities, and how successful that relationship continues to be. The collaboration offers many opportunities for growth on both sides of the long-term partnership. Mr. Fox explained that after covering cost of staff, training, and trail maintenance it costs over $1 million a year to operate the trail.

Rick Holmes has worked at Pacific Rim National Park for 27 years and is the Warden Supervisor of the West Coast Trail Unit. Mr. Holmes focused the interview on the topic of Search and Rescue (SAR) operations and concerns.

A *wilderness class* trail can have a high injury rate and the GBCT advisory committee would need to discuss the logistics of an emergency if that type of trail were to be developed. Many accidents can occur when hiking a rugged trail, and when operating a trail system the entire existing infrastructure needs to be looked after and serviced on a regular basis. Mr. Holmes made it clear that when building infrastructure on a trail that,

"simple is best, but it has to be done by a professional... this is not a local job." He went on to explain that an engineering firm has to be on site during the development stage giving their professional stamp of approval before any ladder or bridge is deemed safe for public use. Each structure has to be tested annually to guarantee the safely of all trail participants. If the GBCT concept is approved it will be required to have a public safety plan, and the following needs to be considered if an injury or accident were to occur on the trail.

i. Who is responsible for public safety? How will it be funded? Who will be responsible for the financial burden of trail rescues and who will be liable for problems that transpires on the trail?
ii. How will liability issues affect members of the Board in the case of a lawsuit? Who will be financially responsible for legal costs in defending the trail organization?
iii. Who will pay for the cost for helping hikers when they get hurt?
iv. Who will provide and pay for whatever boats, helicopters and/or other vehicles and personnel required to execute search, rescue and other EMS services?
v. Will the GBCT be spilt up into different chapters? If so, how will that contribute to or hinder search, rescue and other EMS services? How can everyone work together effectively?
vi. How will accessibility to water, roads and other possible "outlets" be determined & assessed over the entire length of the trail?

Mr. Holmes brought it to my attention that the National Parks system has included a SAR fee into trail permit costs. The only time a hiker on the WCT has to pay money to be

rescued is if they walk off the trail within a First Nation Community and ask that a local drive them back to their car in either Bamfield or Port Renfrew. Also, in the areas of the First Nation territories the trail is still considered National Park property and Quu'as pays the National Park for the trail to go through their land.

After meeting and speaking with Jack Little it was clear that there is a very exciting opportunity to create a long term working partnership with the local First Nation communities. Little accompanied Kirsten Spence and I to meet with the Shawanaga First Nations and the visit was an overall success. The Shawanaga people were very interested in hearing what Little had to say about the thriving Quu'as Partnership on the west coast, and asked many questions how such a partnership could work for this area. Little was not shy to mention what had not worked for his people and how those obstacles were over come in order for both participating parties to be happy. He talked about how a wilderness sustainable trail system can bring economic gain to a 'struggling' community and what their people could look forward to in terms of jobs, cultural awareness, and conservation to their scared land to name a few. Little was very interested in the historical trading relationships between the four First Nation communities involved, and if the traditional routes were still active. He felt that the trail would be a great reason for all of the scared and historical locations to be professionally documented by using GIS. When Little spoke he was not only talking about the Shawanaga First Nation, but the Magnetawan First Nation, and the Henvey Inlet First Nations as well. Little's vision is to bring those communities together as one just like the Quu'as did with the Pacheedaht, Ditidaht and Huu-Ay-Aht First Nations. It is very important that the GBCT advisory

committee go about sharing their vision with the these First Nation communities because without their blessing the trail will not get past the concept phase.

Throughout the three interviews the main themes tended to be how to deal with unexpected events along a costal trail, safety (risk management) and partnerships, which sums up the excitement, and the stress, of doing what they do. All three participants were motivated, passionate about their jobs and eager to share their knowledge and experience. It takes all kinds to build a successful sustainable trail, but those attributes listed above seem to make all the difference. Since the GBCT will be modeled more after the WCT then the Bruce Trail, I would have liked to have interviewed more Pacific Rim National Park employees and scientists. Due to distance, time constraints and recent heavy wind damage along the WCT, I was not able to contact or be referred to anyone else.

6.2 The Bruce Trail:

It was my intent to use the Bruce trail as an example of how a trail is established by a group of volunteers, and to examine the relationship between landowners and a trail system. After contacting Beth Kümmling, Executive Director of the BTA, I was able to connect with a volunteer that has been an active member of the BTA for over 30 years. She confirmed that the Bruce Trail was developed by volunteers, who knocked on doors to obtain, "handshake agreements" with many landowners. Some of the key challenges or barriers in the process of establishing a trail would be creating those essential partnerships with local landowners, as they are the, *heart blood* of the trail.

It was explained that, "If a change in ownership of a critical property meant that several kilometers of trail would have to be abandoned, we would have to walk the roads to get

around the affected area. Landowner relations are one of the key elements of maintaining our trail."

One of the obstacles the BTA had to overcome was the identification of local contacts, since people who live in the community are the best liaisons with landowners. He mentioned that, "a rural farmer is more likely to trust the doctor who delivered his children than some "suit" from Toronto."

When asked if there were any key individuals/groups/organizations/agencies that either contributed to, or hindered, the development of the trail it was suggested that contributing Government agencies, such as The Bruce Peninsula National Park, Ontario Parks, Ministry of Natural Resources, and Ontario Heritage Trust were huge contributors to the planning and execution of the project. Numerous municipalities and Conservation Authorities were also very supportive and would also be ideal partners.

The Bruce Trail is a special case as is it still in the process of being established since only 50% of the more than 900 km of the Bruce Trail is actually on a permanently secured route. The Ontario government as part of its Niagara Escarpment Plan legislation of 1975 designated a corridor to be established for the Bruce Trail. The Association is in the long process of negotiating a variety of permanent solutions to secure the trail corridor.

She voiced that the main surprise during the process was the beauty of the land, "all the hidden waterfalls, glens and scarp features: caves, crevices and rocks that we found as we scouted for the best route of the Trail." The Bruce Trail Volunteer felt that The Bruce Trail contributes to local communities as a local attraction and recreational resource, but also economically provides a host of employment opportunities to tourist facilities. The BTA purchases land specifically to preserve and nurture wildlife. The Trail is more than

just a walking path; it is a wildlife corridor with an access trail that allows the public to experience nature.

From her perspective, trail agreements made with the local First Nations were made by a handshake that was informally arranged with the Band elders in the early 1960's. One of those elders ran the local scout group and had the scouts build most of the Trail in the area of Cape Croker. As an interesting segue, the trail continues to benefit the Chippewas of Nawash First Nation community as The Cape Croker Campground continues to thrive along one of the trail's most spectacular sections. The Bruce Trail is major tourist attraction on the Bruce Peninsula and has fostered a huge amount of cultural and heritage education, as well as economic development for the region.

Finally, the thirty-year veteran of the BTA recommends that the GBTC committee talk to the band councils, and to "show them that the Trail is a benefit to the local community and that it will bring in tourist dollars as well as provide a resource for the community."

The relationship with Bruce Peninsula National Park has also been a success offering many benefits. The existence of the Trail is integral and is part of the original precepts of the Bruce Peninsula National Park. In 2006 the Peninsula Club of the Bruce Trail assisted the Park in the development of a new 4 km trail to allow access to previously unavailable viewpoints in the heart of the park (Meleg, 2007).

During an interview with Ethan Meleg, Outreach Coordinator for the Bruce Peninsula National Park, he spoke about the importance of the Bruce Trail as a tourism draw. The Internationally renounced trial draws people to that area as well as the outstanding recreation opportunities that accompany the trail and the region. Economically, the Bruce Trail was built into packages to promote the areas tourist's attractions; therefore, using

the trail to it's economic potential, which is something the GBCT advisory committee might consider. According to Mr. Meleg the National Park has a strong partnership with the BTA and both parties host the Annual Bruce Peninsula Hiking Festival, which is held in the shoulder season. This event is geared towards quiet tourist season, but also to allow for natural appreciation and a tranquil hiking experience. The Bruce Trail has lead to:

- **i.** Interactions with the natural environment and allows people to reconnect to nature and to become inspired, and;
- **ii.** Serves as a link to protected areas and raises the profile of the region while connecting significant corridors (Meleg, 2007).

The Bruce trail predates the Bruce Peninsula National Park (1987) by 27 years, and the trail serves as one of the key experiences in the park. The National Park shares responsibility of the trail with the BTA, such as maintenance, infrastructure, and access to the trail. The park also aids in the development of new trails as well as helping to buy land along the trail for conservation purposes. Further, the BTA sits as a member for the National Park advisory, which allows for community input and communication.

Richard Murzin, a member of the Niagara Escarpment Commission also touched on the good relations the Bruce Trail has with landowners and even have "stewardship director's" that go out and make sure that everything is running smoothly between the property owners and the trail. This is an incredible program as it allows locals to talk with locals to make sure that their concerns are heard and documented. Mr. Murzin pointed out how important it was for one to know one's audience and to whom they will talk and listen.

Another key informant was Robert Barnett of the Escarpment Biosphere Conservancy (EBC). Mr. Barnett was a member of the BTA from 1986-1996, and has currently been a member of the EBC from1996-2007. When the Bruce Trail was established his role was to find land along the trail corridor and aid the committee in acquiring it. He was able to find 15 properties. Mr. Barnett feels that key challenges or barriers in this process would be the lack of funding and government rules regarding such transactions. MNR had been also a "road block" during any development processes associated with the Bruce Trail (Barnett, 2007). Mr. Barnett recommends that other groups interested in establishing a trail encourage volunteerism, and decentralize decision-making. He believes that trails contribute to local and regional economies, and to conservation. The BTA is able to protect species, ensure carbon sequestration, provide education for the public, and encourage community involvement.

6.3 Eastern Coast of Georgian Bay:

Kirsten Spence, GBCT Committee and visionary, has made it her job to see GBCT concept though, and hopes that it will be established and implemented within in the next six to ten years. The GBCT advisory committee is ensuring that all key stakeholders are being included in the decision making process by involving all key informants and stakeholders. The GBCT advisory committee is also following the formal Environmental Assessment process that is provided by the MRN. The advisory committee sent out information letters to all parties indicating the purpose and goal of the sustainable trail concept as well as proof of notification by registered mail to indicate that an effort of communication has been made on their end. As a committee member of the GBCT Kirsten Spence contacted the four local First Nation communities. She is hoping for a

long-term partnership throughout this process. The GBCT advisory committee started with only a few members participating in pre-meetings and presentations in hopes that the concept would move forward. Presently, The GBCT advisory committee has begun to develop a long term successful partnership with the First Nations while also gaining wider community support form the neighboring towns that may also find economic gain from such an endeavor.

The GBCT advisory committee feels that the concept of the trail will support economic independence through eco-tourism, as well as other more sustainable development within the region. The GBCT will also teach local residents and tourists about the Biosphere Reserve regarding it's many highlights, and it's fragility. In fact Kirsten feels that, "the GBCT concept is currently the best fit project out there to meet the goals of the Biosphere Reserve … as far as access, tourism, sustainable development, and education and awareness are concerned." The GBCT concept promotes the Biosphere Reserve by giving the public a chance, and the means, to explore it as well as for them to make connections with their natural environment.

During an interview with Laura Heidman, First Nations Liaison with the MNR, many issues and concerns where raised regarding the concept of the GBCT. The eastern coast of Georgian Bay is approximately fifty percent Crown Land and fifty percent private lands. The section of Crown land that the trail is currently proposed to follow is, by law, zoned as a conservation reserve. Such a title indicates a set of guidelines and protocols that were put in place called the Statement of Conservation Interest (SCI), which was developed to protect the status of the designated area. Even though the conservation reserve has also been recognized as a Biosphere Reserves it is the SCI that has the right

of way when any type of development is discussed with Ministry of Natural Resources and any local stakeholders (Heidman, 2007). If the GBCT committee would like to pressure the concept of the trail they need to write a formal application to the MNR. The GBCT concept would have to be compatible with the SCI in order for the process to go any further. For example, charging a trail use fee and permit might not coincide with the ideals of the SCI and the only way to be able to charge a fee would be by having the MNR issue a tenure. Such an event could be very controversial among many groups and communities within the proposed trail area, including First Nations, trappers, and other recreation uses to name a few. Laura Heidman, local First Nations liaison for the MNR, feels that consultation is very necessary around such issues as tenure and SCI, and will have to be introduced and discussed very carefully (Heidman, 2007).

Rod Kelly, a Point Au Baril resident, feels very strongly that the GBCT trail will be a success, and at the same time will also save Point Au Baril in many aspects. The new highway that is currently being constructed is bypassing the small town of Point Au Baril. Much of the economic income to that community was based on tourists stopping to eat, sleep and shop on their way to and from the cottage. He feels that the trail can be used as a tool to acknowledge the area and its potential. Kelly claims that the eastern coastline of Georgian Bay could be advertised as *experiencing* Canada before exploration and settlement, and that it's pristine turquoise waters and rugged landscape would be like traveling trough time to witness Canada before confederation and even before the Europeans arrived. As a local resident Kelly felt that the trail user fee was appropriate going to a maximum $150., that cell phone range should be accessible for safety reasons, that dogs be permitted, a campfire ban be put in place, and a maximum of 54 people on

the trail per day. During winter months Kelly would like to see dog-sledding and winter yurts available for campers to ski or snowshoe the trail.

Greg Mason, who grew up in Parry Sound, is aware of the GBCT concept and supports the idea. He would like to see a long-term partnership with the local Fist Nation communities. Mason would like to have the trail revenue put back into trail maintenance while supporting conservation, and community sustainable development. Mr. Mason did touch on the issues of SAR and is curious as to who will pay if a rescue is needed along the trail. Will there be risk management and safety protocols? Should hikers carry their own insurance? Mason said that the hikers needed to be aware of what the risks actually are and what their choices would be, so that they can make an informed decision.

Chapter 7.0: Analysis

Inspiring to build a sustainable trail is one thing, but to actually go through all the motions and be successful is quite another. The planning, feasibility report, environmental assessments, consultation, meetings, proposals, would suggest that this process could not be completed over night. There is an incredible amount of work that goes into making a successful sustainable trail system. Both the WCT and the Bruce Trail have been inspirational models and examples of how community sustainable development can be achieved by creating a low impact trail within a protected area such as a National Park or a Biosphere Reserve. Both trails created new job opportunities within the surrounding local communities and with that came sustainable economic growth, with new jobs and new businesses geared towards the region and trail. As shown in both examples of the WCT and the Bruce trail tourists are willing to paying for the full

experience, such as the eco-tourist guided hike, buying a t-shirt, staying at a B&B's, or tasting the 'local flavors' of the area. When hiking a wilderness class trail, hikers will stay and explore the county and eat well before and after their hiking experience bringing them full circle with their accomplishments, or preparing them for an adventure they will never forget.

To engage the community in the development of a new trail system would be very beneficial. It would promote not only the Biosphere Reserve, but also the trail itself. During the recent Canadian Biosphere Reserves Association (CBRA) Conference it was announced that the Southwest Biosphere Reserve in Nova Scotia was hosting a *Lobster Race*. During the race each person was be given a GPS to obtain waypoint's that would be then gathered to make accurate maps of the Reserve. This type of event helps biosphere research and education while having fun by making it a community affair. The *Lobster Race* is only one of many events taking place within the Canadian Biosphere Reserve. The Georgian Bay Littoral Biosphere Reserve would also have the opportunity to host an event that highlights the Reserve, but also to introduce some opportunities for community sustainable development and participation within the region that support the three functions of a Biosphere Reserve.

The Eastern Coast of Georgian Bay is made up of Canadian Shield bedrock, which makes low impact trail development and sustainable trail establishment very attainable. Trail erosion will be minimal due to the rock base unlike the WCT. There is very little infrastructure needed for the GBCT trail and the less the better for environmental and liability reasons. If possible, boat crossing will be provided rather than large suspension bridges for the reasons of economic gain. It would be even more appropriate if the boats

were a non motorized means of transportation, as this choice would be more environmentally responsible and it just might add to the over all adventure to be escorted via canoe, raft, rowboat or paddle boat. The Bruce Trail is split into chapters and each chapter is responsible for the maintenance of their section, whereas the WCT is split in half and the First Nation communities are in charge of managing the maintenance of the trail. The Pacheedaht and Ditidaht look after the first section of trail while the Huu-Ay-Aht take over from there to Port Renfrew. In the event of any emergencies, all three communities work together to ensure safety for hikers. The GBCT advisory committee needs to decide on an overall structure that will best suit the site and the goals of the organization. After that, deciding who will be responsible for what, and where, will fall into place as a result of the consultations among stakeholders.

Chapter 8.0: Recommendation

This section of the study will be given to the GBCT advisory committee in hopes that they will be able to learn from the research provided, but also to apply methods, ideas, or concepts into their working sustainable trail system. It is my intent that the GBCT advisory committee will be able to use these findings and recommendations as academic proof that the concept of successfully establishing a sustainable trail within the Georgian Bay Littoral Biosphere Reserve and Conservations areas has been well researched.

8.1 Sustainable Trail Development and Community Sustainable development

Sustainable trail development and trail management within a protected area, whether public or private, will involve “enhanced cooperation and concrete partnerships among

the tourism industry, governments at all levels, local communities, protected area managers and planners, and the tourists themselves" (Eagles, 2002). The GBCT concept brings the opportunity of tourism and education to the region, which in turn can support the protection of significant areas and First Nation Communities. Tourism and education encourage local residents and community members to realize the value of their assets thus wanting to preserve it (Eagles, 2002). To have the trail be recognized as a sustainable trail and in order for community sustainable development to flourish the following need to be considered:

8.1.1 Group Camp Sites

Both the WCT and the Bruce Trail (within the National Park) provide group camping and advise that such facilities are used. By providing a group campsites the amount of erosion, and vegetation disturbance can be controlled and monitored over time. Each designated group site should be labeled on the trail map for hikers to gauge the distance to their next site. Group camping sites are a good idea for Search and Rescue (SAR) operations as well.

8.1.2 Bear Cash

It is recommended that bear cashes be placed at every group campsite to make it easy for campers and hikers to stash their food properly. Such a simple thing as storing food safely can significantly reduce conflicts (MacHutchon, 2001). Please note that bear resistant food storage lockers are shared with other campers; therefore, locks are not acceptable and will be cut off. Campgrounds become hot spots for bear sightings and incidents, due to a high concentration of human use (Merrill, 2000). During the

orientation session it should be made clear that even the clothes warn during cooking must not be kept in the tent, but in the bear cash with the food and garbage. Hikers must take out all garbage when leaving the site; these structures are not for garbage dispersal. The Bear cashes will make the group campsite less cluttered with hanging backpacks and bags and will help prevent camper/ bear interactions.

8.1.3 Low Impact development

It was recommended by Mr. Holmes that all infrastructures be low impact. Low Impact Development (LID) is the following:

i. Goal to minimize impacts of development
ii. Focus on spatial layout of development
iii. Maintain and enhance natural processes (Stone, 2007).

LID is an *innovative storm water management approach* but the principles can be applied to any type of sustainable development (Stone, 2007). The WCT did a great job of LID along the trail. When appropriate, a fallen tree was turned into a new bridge as seen in Figure 8.

Figure 8: LID on the WCT (Card, 2006).

LID on the GBCT must be contracted to a professional company and it is highly recommended that an engineer who is familiar with LID principles be on site during construction. All trail infrastructures require consistent up-keep and maintenance, but they also require regular site visits from the contractors, clients, and consultants to ensure that the trail is safe for hikers. A few examples of LID when creating a sustainable trail system would be to:

i. Use paddleboats, rowboats or canoes for any river crossings as a simple dock or landing may have less impact than a bridge
ii. Cable cars or suspension bridges where appropriate
iii. Use of natural resources available -- as in Figure 8.

8.1.4 Trail Orientation

Before hiking the WCT all hikers must attend a mandatory orientation session. During a 45min slideshow and presentation hikers will be made aware of the route choices and characteristics, the dangers, trail etiquette and expectations, some history of the area, the safe-guards, emergency protocols and of course, the wonders to expect along the journey. The mandatory orientation is an effective way to ensure that all hikers are educated on the trail and understand the challenges they may encounter along the way. It is the ultimate opportunity for hikers to ask questions and address any concerns with an experienced trail user. Orientation huts are located at both ends of the WCT and I would recommend the same for the GBCT concept. The committee should also consider having an experienced environmental education specialist available to facilitate the orientation process and to coordinate educational experiences along the route. These may include short-term interpretive sessions, longer term guided sections, explanatory plaques and interpretive stations. As required, trained student staff could be hired to act as group leaders as well as trail *watch-dogs*, much like the "Portage Crews" at Quetico Provincial Park in Ontario.

8.1.5 Composting toilet at each group site

Each of the designated group sites was equipped with a composting toilet along the WCT. This avoided the necessity mini latrines varying in skill and proper technique. The coastline of Georgian Bay is quite different from that of the WCT, but such an idea would be worth considering.

8.1.6 Fire Ban

To reduce forest fire potential within the Conservation Area, First Nation Communities, traditional sights, and the Biosphere Reserve it would be in the best interest of the GBCT

advisory committee to ban all fires along the trail. Thanks to technology there are numerous lightweight camping stoves that easily replace a campfire.

For those who associate campfires with hiking and camping, maybe, if all stakeholders agree, they would be permissible only in the supervised group sites at either end of the trail.

8.1.7 Trail use limit

Currently the WCT only takes 52 hikers per day to prevent further erosion, over use, and crowding at group campsites. It would be in the best interest of all participating parties to ensure that the GBCT also has a daily limit to protect the natural resources, and to prevent any type of degradation that might occur if the coastal trail reaches its carrying capacity.

8.2 Search And Rescue (SAR)

One of the many challenges the GBCT will have to face is how to approach and deal with SAR along the rugged eastern coast of Georgian Bay. In the unfortunate event of an accident occurring along the trail the GBCT advisory committee would be best to avoid the "Who will/should pay" questions. Rick Holmes, the head warden of the WCT, recommended that the cost of rescue be installed within the trail use permit fee. Even when the WCT passes through First Nation's territory it is still considered Park's Canada property, so that if an injury occurs the cost is still covered. Also of note regarding injuries along the WCT, at each of the river crossings an injured hiker, or a hikers who choose not to finish the trail have the option of being boated, or driven back to their vehicles at either Port Renfrew or Bamfield by the local First Nation's people -- for a

price. It was also brought to my attention that the First Nation Communities pay a fee to Parks Canada for the WCT to cut across their land. It is recommended that the GBCT advisory committee look into incorporating the SAR fee into their trail user fee to help avoid controversial costs to injured participants. The mandatory trail orientation will help to inform hikers of potential hazardous areas along the trail. Questions should be asked as to who is responsible for the public safety and how will it be funded. Therefore, It has also been recommend that there is a Public Safety Plan put in place to ensure that jurisdictions and rescue operations are organized and prepared for any potential emergency. It may be helpful to carefully plan which sections of the route could be covered by which SAR/EMS services and how. Each case will dictate the response, but a basic plan, built on possible scenarios and that is known to hikers will go a long way to increasing safety on the trail. It may even be a benefit to spilt the GBCT into various Chapters, modeled after the Bruce Trail, for the main purpose of safety and efficient maintenance procedures along the trail. It would be interesting to have each hiker wear a GPS locater on their pack during the hike, so that if anything were to happen the exact location would be identified making the SAR more efficient. If funding is an issue maybe the GBCT could be a test or training site for the technology in wilderness settings, or, it could be the hikers choice (at their expense) to carry the GPS locater along the hike. Parents hiking with smaller children may find this an appealing option. Safety is a major concern to most hikers and the discussion or debate as to whether cell phones are permitted on the trail. The WCT is not a cell phone friendly environment, with no coverage along the trail. Many suggest that this is a good thing, as other hikers do not want to hear ringing phones in a wilderness environment. If hikers are concerned about

calling for help in an emergency situation then they can have the option of renting a satellite phone. If hikers insist on carrying their own equipment, the *no ringer/vibrate only* rule could apply – and be well enforced by fellow hikers who are disturbed unnecessarily. A member from any one of the various communities along the GBCT could make a side business renting out safety equipment such as satellite phones, flares, bear bells, bear bangers, and bear spray to name a few.

8.3 Partnerships

Hishuk istsawak

Iisak

Quaaktinteechmiis

During site visits and interviews the term 'partnerships' was a recurring theme and a concept that individuals felt strongly about. Jack Little, an Ahousaht First Nation, resident of Vancouver Island, and on the Board of Directors of the Clayoquot Biosphere Trust, has experience ensuring that partnerships are successful for all parties. Little has set out 5 guidelines to follow when establishing partnerships with First Nation Communities.

i. Acknowledgment, Recognition and Respecting First Nation traditional territory
ii. Trust: Many partnerships fail due to trust issues. Trust is a vital component to ensuring a successful relationship between all parties. One way to get over trust issues would be for all active stakeholders to get to know each other and to

become apart of the First Nation community by taking part in Community events such as traditional celebrations like full moon celebrations, Pow Wow events, and sweat lodges to name a few. Little states that most partnerships fail within the first two steps, but once the above a courtship can begin a successful partnership will be well underway.

iii. A protocol agreement: Jack Little feels that the next step in creating a successful long term working relationship and partnerships would be to design a protocol agreement indicating that all parties will come together and will agree to teamwork, respect, but also how they are planning to ensure that a partnership will continue to be a victory for all involved over time.

iv. Once protocol agreement is in place it must be an honored and respected. For example, if the agreement states that all traditional lands that inhabit spiritual, economic and political significance for First Nations People must be protected and not disturbed then that agreement must be honored. It would be in the best interest for all parties if the protocol agreement outlines what the goals of the GBCT concept are so that what they want to do and how they want to deal with the situations can be discussed and Best Management Practices can be put in place that all parties agree to, while honoring and respecting the agreement.

v. Finally, to make a partnership a win-win situation, all resources put be put together such as manpower, financial aid, economic support, community participation, public outreach and education initiatives to name a few. Little suggests that in order to make a respectable partnership that, “all cards be put on

the table… here is what we want to achieve and here is how we are going to do it".

Following these 5 guidelines to a successful long-term partnership may look easy, but there maybe some obstacles along the way and barriers to over come. According to Jack Little the main obstacle in his opinion will still be the *trust* issue. Little states that, "It is still hard for Natives to trust anyone that they are talking to and especially attempting to work with. To have a good relationship and partnership you must (take time to) get to know each other. Respect is earned. Trust and trusting one another is huge!" (Little, 2007)

"Too many times people, companies, organizations have said we want to work with you, yet they are the only ones usually that benefit." (Little, 2007) Jack Little believes that once the trust uncertainties are rectified only then can there be benefits for all parties involved. To overcome trust barriers, all active stakeholders need to make an effort to get to know each other, and becoming familiar with one another in a respectful manner, as respect must be earned before you establish trust. Further, all parties must be "truthful, respectful, say what you mean, and mean what you say" (Little, 2007). "This is crucial because if you do not follow through then all that you have worked towards is for not and it becomes harder to regain trust." (Little, 2007) Little advises to find and continue to work on your commonalities, yet not to forget and also work on issues that may not be common, and to find and always go back to your strengths, which are the common issues. Remember to be creative in tackling least common issues by using the strengths and you

in my opinion can find a way to a win-win situation. The Nuu-chah-nulth Nation use these three phrases;

i. Hishuk istsawak (everything is connected);
ii. Iisak (Respect) - this means of everything (i.e. all walks of life, earth, land, sea, lake, water, air etc), it is all inclusive of everything, and;
iii. Quaaktinteechmiis (life in the balance)

Little explains that, "I / we use these principles in everything I do and am involved with, especially the CBT (Clayoquot Biosphere Trust) Board of which I have been co-chair of for 7 of the 8 years I have been on the CBT Board." Such principles would also apply nicely to the GBCT and the Georgian Bay Littoral Biosphere Reserve. A successful partnership shows that all parties want and are willing to work towards a common goal. To bring together different cultures and value with opportunities for education for the Georgian Bay region, but also for trail users regarding First Nations aspirations and history. Jack Little promises that, "the proof will be in the pudding, but there is a need for all to have an equal partnership by ensuring there are equal opportunities for all involved parties" (Little, 2007).

9.0 Conclusions

"The notion of tracing a path carved along 120km of Georgian Bay's rugged coastline, ancient and sublime, is a journey that promises to rouse the quest for adventure in all of us."

· Sally Manning, Wilderness Guide & Author

Both the WCT and The Bruce Trail represent very high standards of success, as referenced in this paper. It is fair to say then that the bar has been set extremely high for the GBCT concept once approved. Globally, trails are gaining more respect and popularity, which could be because society is starting to notice that with a new trail, comes many community and economic benefits. Small coastal areas can take advantage of trail extra's, such as sustainable tourism, eco-tourism, economic opportunities, partnerships, conservation, education initiates, or finally being that entrepreneur.

However, building a sustainable coastal trail while taking the ecosystem approach will not happen over night and takes a team of dedicated volunteers, community members, home and cottage owners, trappers and hunters, private and corporate landowners, and sometimes all levels of government to get a trail concept passed and operating. Making a sustainable environmentally friendly trail takes time, money, communication, partnerships, patience, and environmental expertise. There are endless challenges when involving so many stakeholders at so many levels, as all are entailed to their own opinion and their way of looking at the world. Nonetheless, their participation is essential and all voices must be herd and noted during the planning stages. The real trick is to manage the process so that everyone actually shares the same vision. Jack Little pointed out many times during his interview that First Nation consent and participation is the only way the GBCT will be approved and become successful. The WCT can teach the GBCT many lessons on how to engage such a relationship and how to maintain that trust over the long term.

The top three lessons the GBCT advisory committee can take from this study would be the importance of safety, the necessity of sustainable trail development, and the achievement of establishing partnerships with local First Nation communities.

To most people, a wilderness coastal trail means adventure, challenge, and at times danger. It was stressed throughout the study that the GBCT must have a comprehensive public safety plan that includes effective (field-tested) emergency procedures. It is also important to restate that during the actual construction of the GBCT, the ecosystem approach be honored using low impact. Furthermore, the infrastructure must be engineer approved and conscientiously maintained – also speaking to public safety. In a wilderness and remote setting SAR can be expensive and difficult. The WCT has an effective and affordable solution of including SAR expenses into the trail fee. This method may also work well for the GBCT.

The eastern coast of Georgian Bay is known for its rugged rock faces and tranquil scenery. There is no reason why a trail should change or take away form such a dynamic landscape. By using low impact development techniques, human powered boats to cross watercourses, natural bridges and even ladders, hikers will feel like they are seeing Canada as it was before European settlement. To enforce the practice of taking an ecosystem approach it was recommended that there be a fire ban, tent platforms, bear cashes, group campsites, and a composting toilet at each site. These are just a few ideas and suggestions for sustainable development along the GBCT.

The GBCT is currently proposed to travel though four First Nation communities. It was acknowledged throughout the literature and reinforced during interviews that all First Nation communities need to be involved right at the beginning of the planning process. It

is a sign of respect to approach each community with traditional graces. An example would be to bring a gift to the Elders of tobacco before introducing yourself and the concept of a wilderness coastal trail that will run though their territory. A successful partnership is the foundation to a successful trail system. Jack Little proposed that there are five steps to follow when establishing partnerships with First Nation communities, and that the guideline must be taken in order to establish the trust and respect necessary to move the project forward. Jack Little joined us for a visit to the Shawanaga First Nation territory. His presence made the visit much more successful for all parties, as he was able to explain the Quu'as Partnership and spoke with experience and historical perspective. He represented the *West Coast People* and his words were words of trust, truth and were familiar to the Shawanaga First Nation. It was the start of a promising relationship that the GBCT advisory committee will benefit greatly from, as will all who enjoy the trail itself for many generations to come.

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