# MEASURING LANDSCAPE PREFERENCES
## The Identification and Evaluation of Island Viewscapes

A Thesis Presented

by

CAROL HORNE

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# Canada

# DECLARATION

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# ABSTRACT

Limits to land on islands are clear and specific, defined by the coast and the sea. If the land on islands is limited, how then should it be valued as a resource and protected for its highest and best use? What tools would assist government administration and communities to assess the landscape and make informed land use decisions?

Land use decisions may be based on agricultural productivity, potential for development or ecological importance, but pure aesthetics are not necessarily taken into consideration. Yet few would deny that scenic beauty is often a major tourism draw for island destinations and that visual appeal plays a large part in the quality of experience of both residents and visitors. Islands very often depend to a large degree on the tourism industry and thus on the appeal of the scenic viewscapes; yet the value of beauty is very difficult to measure. No obvious consensus appears to have been reached as to how to accurately assess the economic value of a view, any more than the less concrete measure of well-being imparted by aesthetic surroundings. The paper proposes as a hypothesis that Prince Edward Island residents and visitors will express preferences for some viewscapes. This research exercise considers the scenic quality of landscapes as a resource, and sets out to develop an appropriate tool for the measurement of preferences for scenic landscapes in the context of Prince Edward Island (PEI)." Island). The paper establishes some preliminary basis for evaluation of scenic resource and provides results which could prove useful as one component of a land management program. The paper also reports on how the scenic resource is managed in selected island and mainland jurisdictions. This research could lead to an objective and practical methodology to designate scenic viewscapes for protection under the PEI Planning Act and assist in both defining and promoting appropriate development that could both enhance the tourism industry and contribute to the quality of life of residents of Prince Edward Island and those of other islands and mainlands elsewhere."

## ACKNOWLEDGMENTS

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# Chapter One
## The Value of Island Landscape

Limits to land on islands are clear and specific, defined by the coast and the sea. If the land on islands is limited, how then should it be valued as a resource and protected for its highest and best use? What tools would assist government administration and communities to assess the landscape and make informed land use decisions? This paper proposes that island residents and visitors will express preferences for some viewscapes and suggests tools that could be used to measure preferences.

From the fictional islands of past and current literature to the abundant tourism promotional materials of popular island destinations, the scenic beauty of islands is much touted and very often found in the forefront of any descriptive text. Here are the introductory paragraphs from the home pages of tourism websites of several islands:

Tasmania: "Separated from mainland Australia by the 240 km stretch of Bass Strait, Tasmania is a land apart — a place of wild and beautiful landscapes; friendly, welcoming people; a pleasant, temperate climate; wonderful wine and food; a rich history; and a relaxed island lifestyle." First the state of islandness is promoted, and immediately thereafter the beautiful landscape. (Official Tasmania tourism site, introduction page).

Jersey: "When you walk coastal paths coloured by a million flowers, and discover views that will live with you forever." Note the word *coastal*, soon followed by the word *views*.(Official Jersey tourism site, introduction).

Malta waits until the third and fourth sentences to tout the Island beauty: "And wherever you go, the Islands' scenery and architecture provide a spectacular backdrop.

The colours are striking. Honey-coloured stone against the deepest of Mediterranean blues." (Official Malta tourism site, introduction).

*Islands and Tourism*

An island offers a travel destination that is typically a tract of land completely surrounded by water, promoting a special experience that in the minds of visitors cannot be obtained on the mainland. As a body of land surrounded by water, an island can provide to tourists a location of escape, refuge, relaxation, adventure, and a sense of scope that is manageable for vacation purposes. Islands have also often figured in literature as Utopian locations.

An island is, first and foremost, *separate and discrete*. Access involves some alternate mode of transportation — whether it is by ferry, bridge, or air. This step alone allows travellers to divorce the problems of their everyday life from the upcoming trouble-free vacation. During focus group sessions in Halifax, Nova Scotia recently, residents of that city were heard to say that "once we get on the Bridge to Prince Edward Island, it seems like our problems are left behind." (Tourism PEI, 2004).

Tom Baum, (2000, p. 215) states:

There is something special and different about getting into a boat or an aeroplane as a necessity in order to reach your destination ... Once there the feeling of separateness, of being cut off from the mainland, is also an important physical and psychological attribute of the successful vacation.

As Doug Sandle (in Crouch and Lübbren, 2003) argues

...the promotion of the island's varied and unspoilt scenic environment provide

further powerful opportunities for the Isle of Man both to construct and to serve the

needs of the tourist gaze. However in this respect its main asset is undoubtedly its

island character. (p. 192).

Sandle goes on to quote C. Ryan who claims that "islands are lands of the immediate

present freed from the concerns of future mortgages and pensions; locations of beaches

that skirt and contain land safely from an appealing but uncertain sea." ( ibid.).

Michael Upchurch eloquently describes the island appeal:

The magical thing about islands, I felt both then and now, was that they were

something you could see at a glance. Whether they were real or imaginary, they gave

the nuggety satisfaction of certain sculptures. And in their very limitations of space,

they offered a realm that could be completely mastered, unlike the chaotic sprawl one

finds on almost any mainland.

At the same time islands can offer avenues of escape, whether from a dull workaday

existence, a disappointment in love or exhaustion with the world's travails. There's

something about stepping aboard a ferry that lifts your heart straight up. You find

yourself believing that the cares and nonsense of daily living can't possibly apply to a

place surrounded by water. Time itself abandons its tick-tock limitations — for a day,

or a week, or however long you can afford it ... Islands can make continents vanish.

It's always a small thrill, in this over-connected age, to flirt with the notion of being

marooned. On New England's Block Island, once, heavy fog set in while I was

staying there and the mainland simply vanished. The ferries couldn't run; planes couldn't land. We were quietly, pleasurably stuck."

(Upchurch, 2005, para. 2-3).

Not only does Upchurch clearly articulate the sense of isolation, escape and refuge associated with his island visit, he points out that he expects his marooned island experience to be relaxing; "time itself abandons its tick-tock limitations." (2005). Visitors to islands also often observe what they describe as a slower pace or a simpler lifestyle. Many of the temperate islands which enjoy a healthy tourism industry are primarily rural, made up of farms, open spaces, and small towns and villages. This difference in lifestyle serves to contribute to the impression that tourists are "getting away from it all" on an island vacation. The preferred activities may be sightseeing or outdoor adventure, and nature and the landscape play a key part in the island vacation experience

Tourists visiting islands also appreciate the impression that, due to the enclosed (and often small) nature of the destination, they might be able to manage a complete tour of the island. Where in the case of a mainland state the size of Florida or California the scope of geography may seem daunting or impossible to take it all in, the scale and the boundary of an island will appear quite manageable. Another example of the appeal of a compact unit of land surrounded by water, also in Prince Edward Island, is the popularity of a tip-to-tip cycling trail, demonstrating this desire to experience the whole package

*Islands in Literature*

Historically, islands have served as the setting for many popular adventure novels. Would *Treasure Island, Swiss Family Robinson* or *Coral Island* have been as intriguing if

set on a mainland? Today, tourists want to enjoy the same sense of adventure on an island

vacation. They may have the feeling that they are exploring the island destination,

venturing out each day on touring routes that will reveal new views of the shorelines, and

experiences that differ in a significant way from their everyday existence. The

opportunities for water sports increases the sense of adventure.

The same island lure has influenced various movies and television programs as well.

One of the most popular concepts over the ages has been the notion of being castaway on

a desert island: novels such as *Swiss Family Robinson*, movies such as *Cast Away;* TV

shows like *Gilligan's Island* or the current *Survivor* series and *Lost* all prey on the very

separate and apart location afforded by a body of land surrounded by water. The

necessity to become self sufficient, and the ability to create independent societies free

from the norms of mainland social system appeal in a visceral way to audiences.

A book published in 1999 groups together four island utopias (Atlantis, Panchaia,

Island of the Sun, and New Atlantis) described by philosophers Plato, Euhemerous,

Iambulous, and Sir Francis Bacon. Surely it is no accident that these and other utopian

communities are situated on islands, where society in the main is unable to corrupt the

ideal status of these island enclaves. According to D. M. Hooley, the reviewer of this text

called *Four Island Utopias*, edited by Diskin Clay and Andrea Purvis, the authors "stress

the place of island geography" (Hooley, 2002, p. 460). An island can prove to be a

perfect setting for a laboratory whether in actual terms or imagined utopian societies.

*Islands and the tourism industry*

.        All these factors lead to a situation where the tourism industry has taken on great

importance for many island economies.  Stephen Royle in *A Geography of Islands* notes

"a near universal development strategy, the adoption of tourism, part of which is

predicated upon the innate romance and mystery of islands, the 'island of dreams' idea"

(2001, p. 4).  Tom Baum confirms that "A high level of dependence on tourism is a

characteristic feature of many small island communities" (2000, p. 216).  In 2004, the

World Tourism Organization stated:

> As one of the most successful export industries in the world, international tourism has
>
> become the main economic activity for many island nations — in terms of both
>
> income and employment generation, its contribution to GDP, and its substantial
>
> impact on the balance of payments, trade and foreign exchange earnings."(Urosevic,
>
> 2004, p. 5)

At a World Tourism Organization conference on sustainable tourism in the Asia-

Pacific regions in 2000, the closing statement noted that:

> Islands differ greatly in size, climate, terrain, biodiversity, access, and in
>
> human history, habitation, culture, land tenure, legal systems and economic
>
> activity, including tourism.  For many islands of the Asia-Pacific Region,
>
> tourism is the main economic activity, in terms of both income and
>
> employment generation.  Due to their relatively small size, islands are quite
>
> vulnerable from both an environmental and a social point of view. This
>
> vulnerability may put at risk the long-term sustainability of tourism-based

economic development of the islands, if tourism is not appropriately planned, developed and managed." (World Tourism Organization, 2000, p. 1). Many islands lack other resources that would substantially contribute to the economy, and the dependence on the tourism industry adds further importance to the scenic resource. This singular dependence on tourism can also lead to unfortunate situations when weather incidents or political unrest detract from the islands appeal as tourist destinations. As well, island tourism destinations face increased threats due to global warming.

While the primary study region for this paper (Prince Edward Island) does not suffer or enjoy some of the attributes associated with the traditional small island tourism situation that relies almost completely on the sun, sea and sand concept, it very likely faces similar sustainability challenges. Many island tourism destinations have turned to that industry as a result of a lack of other resources, or a downturn in current industries and often small islands are very dependent on outside sources for both supplies and direction (both economic and jurisdictional). In his introduction to a Shetland Islands case study, Richard Butler discusses issues of capacity, access and attitudes towards development. (1996, p. 16-17). Most relevant to PEI is the suggestion that local administrations most likely will tend toward encouraging growth in tourism, rather than restricting it — a suggestion all the more relevant with the construction of the Confederation Bridge in 1997. Perhaps issues of capacity become relevant following the dramatic increase in visitation that resulted from full-time roadway access to PEI thereafter. In a report released in 2005 by the PEI Tourism Advisory Council, an aggressive global objective of attracting two million visitors by the year 2010 (from

approximately one million, or 1.6 million when on-island travel is taken into account as the new base measure. (Tourism Advisory Council, 2005). While "adherence to sustainable tourism practices" (ibid. p.2) is stated as a guiding principle, there is only one further brief mention of this subject in the report.

In another article about small islands and tourism, Butler concludes that to survive in the tourism industry small islands must control and manage "the tourist product and its quality, and realistic and accurate marketing of truly unique features of the destination." (1993, p. 89). Butler goes on to say that "Islands which do not succeed in this regard will decline in tourist appeal and will be indistinguishable from each other, or in Relph's term, placeless." (ibid.). If it is generally accepted that tourists visit islands to visit a special place, a "place apart," then certainly the role of island landscape — a distinguishable and identifiable landscape — should feature largely in the consideration of the sustainability of island tourism industries.

*Islands and Scenery*

Is it possible or likely that scenic beauty plays a larger role on islands than on mainland locations? Certainly for islands which promote themselves as tourist destinations, the value of inherent scenic beauty is paramount. Fortunately, islands have a definite advantage over mainlands when it comes to scenery. Other factors come into play: the prevalence of often preferred water and ocean views and the sheer limit to the land base should be taken into account when considering landscape and scenic views in the context of islands.

In the 2005 Tourism Prince Edward Island Conversion Research report, 23 % of visitors cite "scenery" as the primary motivator for visiting PEI. The next most popular reasons are "visiting friends and relatives" and "going to the beach," both at 11 %. (TPEI, p. 4). Also "the top three unaided mentions about what PEI visitors liked about their visit were scenery (31%)" and beaches and coastline were next at 15 %. And, not surprisingly given the above, the top activity for visitors was sightseeing at 74 %. (TPEI, p. 5). Also on page 14, respondents were prompted for mentions of other things they liked about PEI; once again "scenery" tops the list at 51 %, while a beaches/oceans/coastline grouping (also key island features) comes in second at 34 %.

There is evidence in some islands that the issue of land use (and sometimes as a result, the value of the view) has been given serious consideration. In Barbados, the Environmental Management for Land Use Planning and Sustainable Development Project (EMLUP) was reviewed in 1998. The overriding objective of this ambitious program was the achievement of sustainable national development including: conservation of environmental and natural resources and improved quality of life. The strategy/policy reflects an integrated approach addressing rural development and viability of rural areas (such as reduced migration to urban areas, preservation of rural landscapes, and promotion of eco-tourism); and social aspects. The Barbados National Conservation Commission (NCC), formerly known as the Parks and Beaches Commission, is a quasi-governmental organisation, which was established by an Act of Parliament in 1982 mandated to conserve the natural beauty, topographic features, historic buildings, sites and monuments of Barbados as well as control, maintain and develop public parks, public

gardens, beaches and Caves of Barbados and develop and maintain public accesses to beaches ("Windows to the Sea"). So, environmental legislation and non-profit activities have indirectly led to protection of viewscapes. (United Nations Division for Sustainable Development, 1998, Land Management).

In Bermuda, it seems much the same approach has been taken: protective policies combine with local volunteer organizations to help preserve the environment and the island's aesthetic appeal. As an island and the third-most densely populated jurisdiction on earth, Bermuda recognizes the limits inherent in its island setting. Bermuda has a long tradition of environmental management. As early as the 1600s, a number of acts and proclamations were passed to protect local bird species, turtles and vegetation. Other legislation followed which restricted the use of automobiles or controlled the size, type and location of commercial advertising.

Bermuda, as is the case with so many other islands, relies on tourism, but the early 1990s saw a serious downturn in the Island's tourism industry, leading to calls for a reappraisal of the type of product provided. The 1992 Bermuda Plan recognized that high levels of growth were threatening the very qualities and character on which Bermuda's success was founded. The Plan embraced the concept of sustainable development, with a move away from a development-oriented plan to one promoting environmental management. (Meggs, Developing a Small Island GIS: The Bermuda Experience, n.d.). At the same time, residents of Bermuda were mobilizing to protect the same assets and organizations such as the Bermuda National Trust and Keep Bermuda

Beautiful, developing such campaigns as "buy back Bermuda" to protect open space. (Welcome to the Bermuda National Trust, n.d.).

While many Caribbean or tropical islands share this dependence on their scenic attributes for the pleasure of visitors, there exist more temperate islands where tourism is or is becoming a key component of the local economy. "Rural communities and peripheral areas such as islands face the challenge of continuous economic development. Where primary traditional industries such as fishing and farming are in decline, tourism often becomes another tool to help create jobs." (MacDonald and Joliffe, 2003, p. 307). These islands have also taken a look at sustainable policies and decision-making that protect the local environment. Many times however, decisions are based on the conservation of nature, and aesthetics are secondary, or not at all a consideration in policy formulation.

In Tasmania, the 1996 State Coastal Policy was recently reviewed and is to be replaced by the 2006 Coastal Policy. In the summary paper it is stated that "Tasmania's coastline is an important part of Tasmania's unique environment, economy, lifestyle and identity. It is a natural resource that is a defining element of Tasmanian island identity." (Tasmania Department of Primary Industries, Water and Environment, 2005, p.2). In the response paper, developed after a series of public meetings and the receipt of 111 presentations, the review committee includes as one of the primary goals to "ensure that the visual quality of the coastal zone is adequately protected." ( Tasmania Department of Primary Industries, Water and Environment, n.d., p.22)

In an update on landscape character assessment in Ireland, concern was expressed for the future of the scenic resource in the face of a thriving Irish economy and "unprecedented urbanisation and landscape fragmentation." (Landscape Character Network [LCN] News, 2006, p. 13). As with PEI, the Irish tourist board surveys confirm that "scenery is the single most important reason why people visit and holiday in Ireland." (LCN News, p. 13). The same article suggests that landscape character assessment "should be much stronger and more prescriptive ... highlighting the importance and value of all Irish landscapes, but should also contain advice on making judgements about the landscape." (2006, p.13).

In the State of Jersey, Channel Islands, a recent report on the condition of Jersey's environment (2005) states that "Protection and enhancement of the visual attractiveness of the landscape" is one of the primary goals of the Countryside Stewardship program. It is encouraging to note that as of the printing of the 2005 report the Scheme had not been funded, but according to an October 2006 visit to the States of Jersey website, the Countryside Renewal Scheme is now accepting applications from landowners and managers for financial support for environmental plans that will "Prevent pollution, increase bio-diversity, enhance the landscape, increase access to the countryside, improve energy conservation and encourage less intensive farming practices." (States of Jersey Countryside Renewal Scheme website, CRS 1 Guidance Notes).

Tourism is one of Jersey's most important industries and the value of coastal and inland scenery is acknowledged. Factors of islandness certainly play a role in the States'

plans for managing the environment; climate change, visual attractiveness and preserving the coastline are some of the key points in the current environmental plan in Jersey.

Two other items worthy of note in the Jersey exercise: the Countryside scheme is clearly tied to economic considerations, and the fact that Jersey has inserted a kind of catch-all measure for development applications — that of *"Appropriateness* .... The test of appropriateness must take into account such considerations as species, habitats or landscape features that need protecting and will prevent any inappropriate/conflicting components being undertaken in that area." (States of Jersey Countryside Renewal Scheme). In its Resource Management Act, New Zealand takes into consideration the level of appropriateness of development applications. This terminology will be considered again later when the paper looks at the administration of landscape preservation measures.

In the Autonomous Region of Madeira there are four Natural Reserves and the Madeira National Park which protects two thirds of the island, while in the Autonomous Region of the Azores there are 32 protected areas of which five are Protected Landscape Areas and several are marine reserves. (Nature- GIS Newsletter, 2003, p. 7). A Rural Development Programme for 2000-2006 for the Azores states that "the region's handicaps stem in particular from its island status and the distances between the nine islands that make up the group" (p.1, para. 2). However, the document also states in the same paragraph that one of the region's strengths is the "extraordinary natural beauty, a resource of great attraction to tourists." (p. 3). Of the four Measures in the Programme, number three includes "Conservation of the landscape and traditional features on

agricultural land" (Rural Development Programme for the Azores). It is interesting to note that some of the very handicaps of islandness described above prevented the importation of large farm equipment which likely resulted in preservation of the tiny, stone-walled fields which contribute so much to overall scenic beauty of the Azores. An interview with Prof Victor Hugo Forjaz of the Universidade dos Açores in May 2006, confirmed that the state does protect some views and impose limitations on the size of new developments. Professor Forjaz pointed out that visitation to the Azores had tripled in the past five years, and sustainability had become an issue. In an interview with community activist Varissimo Borges it was learned that Europeans had begun to purchase land and build homes that were not necessarily in character, and that there was also some concern that a new cruise port would change the scene in the Ponta Delgada harbour as well as affect the current tourism industry, saying "A cruise tourist is less sensitive to the local culture." (Forjaz). The challenges faced by islands dealing with growing tourism industries are no doubt widespread; those later to the game have one advantage in that they can learn from previous mistakes.

*Factors of Islandness*

It is also important to account for other well-accepted factors of islandness when considering issues of landscape and land use. Aside from the physical boundary of water, there are many social and cultural attributes of island residents and society which clearly come into play when the land is the topic of concern. Islanders are almost unanimous in their highly developed sense of place. Compared to mainland residents, those who live on islands will generally define themselves first and foremost in terms of their home, their

community, their "place." Islanders are rooted, without a doubt. As explained below, this attitude can affect land use matters both positively and negatively. The heightened sense of place often leads to a greater concern for physical surroundings, and an acknowledged vested interest in the future landscapes of the island in question. However, the sense of individuality that quite often comes hand in hand with island residency can lead to a greater resistance to imposed controls or zoning or management plans that might appear to remove or threaten individual rights of landowners. Prince Edward Island historian, Wayne MacKinnon puts the issue of land as the very essence of being: "More than any other single factor, the land shaped the identity and character of the people of Prince Edward Island." (2005, p. 178).

Also, the community and political networks that have emerged on islands after years of complex interactions can affect the operations of jurisdictions attempting to create order out of what may have been historically a casual, familial or nepotistic system of land holdings. Quite often residents of island communities will take pride in the ways they have been able to circumvent the rules and regulations, finding it quite natural to make use of family or political connections to further personal goals. As MacKinnon notes, even after the enactment of land legislation in PEI, "Islanders and non-residents used loopholes, political pressure, winks and nods and other tactics ..." (2005, p. 180). This complex community network has made it very challenging to objectively apply concrete legislation or zoning regulations in Prince Edward Island.

*Islands and Sense of Place*

Trying to clearly define the elusive sense of place has challenged researchers and philosophers but it certainly involves a human connection with the land. It has been argued that islands can better provide that sense of belonging. A broader description developed by Tom Slayton (albeit in relation to the mainland state of Vermont) adds to the concept:

> However, a sense of place is hard to define because it is primarily a feeling, and because it is made up of so many things ... But generally, we can say that those things that define a place fall into three categories. First: the geography: the place itself. Second, the way human beings have lived on the landscape and the way they live now. And third, the intangibles, the myths, stories, names of a place, and so on —- all of which help create the 'feeling' a place has. The most basic element, of course, is the land itself, that is, how the geography of a given location contributes to its sense of place. (1998, Vermont Forum on Sprawl).

Tasmanian professorm poet and environmentalist, Peter Hay, has given some thought to this connection between place theory and islands and in a recent article in *Island Studies Journal* concluded that "Islands are places, special places, paradigmatic places, topographies of meaning in which the qualities that construct place are dramatically distilled." (2006, p. 31). Hay actually proposes that place theory could be the base around which a sound island study system, or nissology, could be built. Where the single factor in common for islands around the world seems to be the fact of water surrounding land, and academics and researchers have struggled at times with such a wide-ranging and not

always coherent field of study, Hay suggests that "place phenomenology does work as a coherent theoretical framing for island studies" (2006, p.34).

This element of sense of place is possibly the missing piece when it comes to defining landscape priorities or deciding on zoning plans. Articulating intangibles such as sense of belonging, or Relph's concept of insideness, (1976, p. 49) or the stubbornly rooted attitude of an Islander is a challenge faced by many planning boards. Areas with a strong sense of place display a clear identity related both to the public image (perhaps conveyed in literature or even tourism materials) as well as internalized feelings of the residents. Of course the opposite of a strong sense of place is placelessness (1976, p. ii), a condition whereby one locality is indistinguishable from another — strip malls across North America, fast food outlets and convenience stores. Some jurisdictions, such as the United Kingdom, have made efforts to place emphasis not only on landscapes with high aesthetic values but also on retaining strong individual landscape character or sense of place. Others, such as Prince Edward Island, have not yet come to the realization that beauty, landscape character and a highly developed sense of place contribute value to the lives of the residents.

The relationship between the land and those who live on it is inextricable; we are affected by our environment, just as our surroundings are a result of our actions. "The land around us is a reflection, not only of our practical and technological capacities, but also of our culture and society – of our very needs, our hopes, our preoccupations and dreams." (Malpas, 1999, p. 9). Novelists and poets have frequently based their work on the effects of landscape and the overriding sense of place, and Malpas goes on to say that

"The idea that human identity is somehow tied to location is not, of course, peculiar to Wordsworth, nor even to romantic nature poetry. It is an idea that has both a long ancestry over the centuries and a wide currency across cultures." (Malpas, 1999, p. 10).

*Defining Landscape*

It will be beneficial to close this chapter with an attempt to define the term "landscape," and to narrow in on the understanding of the concept for the purposes of this paper. The standard dictionary definition: "a view or vista of natural scenery on land" (Webster's II New Riverside Desk Dictionary) but many more researchers in this area opt to broaden the definition to ascertain that the human element is properly included. According to Adrian Phillips "'Landscape' is a difficult word. It has many meanings and is interpreted differently by different people." (2002, p. 5). The Council of Europe uses this definition: "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. It also underlines that a landscape forms a whole, whose natural and cultural components are taken together, not separately." (Council of Europe, 2000). The New Zealand Resource Management Act agrees: "In practice, landscape is interpreted broadly and can embrace natural, cultural, physical and perceptual elements of the environment." (New Zealand Department of Conservation, 2006, p. 23). In other words, landscape is more than just scenery; there is an inextricable relationship between the land and those who live there. The look of the land is shaped by those who live there; how it is perceived is shaped by the experience of living in a landscape.

Therefore, the functional definition selected for the purposes of this research paper, adapted from the Council of Europe terminology, is as follows: "an area of land, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. Both natural and cultural components of landscape are important factors." In the material which follows the physical aspect of the land will be considered and a test case for measuring the scenic beauty of landscape will be proposed. As well, research in one community looks at the cultural components of landscape as they relate to considerations of scenic beauty.

Brian Burke in his Master of Arts thesis notes that "The unique attributes of which our culture is composed are reflected in the places we construct and the rituals that unfold within them." (1999, p. 11). Burke believes that "This historical physical and psychological relationship with the archipelago's [Les Îles de la Madeleine] landscape has contributed significantly to their strong sense of identity and attachment to place." (1999, p. 1). However, preserving the landscape that most reflects the local sense of place raises many challenges, not least among them: how exactly to best define that sense of place, that landscape character that not only reflects the culture and traditions and the people themselves but also has appeal to visitors.

Maintaining authenticity in the face of tourists' expectations is also a challenge. Christina Le Beau, a journalist writing in *Preservation* magazine, points out that at times destinations with a strong brand and widely accepted image may find themselves adapting to "what tourists crave." (2006, p. 40). Le Beau observes that at times "local leaders are less about the city's cultural and architectural roots and more about marketing and less

about history and more about style." (2006, p. 40). The demands and expectations of visitors do not always coincide with the needs and wishes of residents. To further complicate the matter, visitors sometimes become seasonal residents, bringing with them expectations that do not necessarily mesh with those of the locals. This potential conflict may play out in a very visible way when it comes to issues of land use.

How does one decide at which moment the landscape had its greatest aesthetic appeal, or which era in island history would be most pleasing or more valuable to protect? We may well ask how to sustain an economy that is based on tourism while "simultaneously satisfying the diverse long-term preferences of tourism's major stakeholders: hosts, guests, entrepreneurs, and policy makers." (McElroy and de Albequerque, 1996, p. 16). This research intends to shed light on one specific area of preference — that of the landscape — and the viewscapes that not only help to define Prince Edward Islanders but also attract the visits of so many.

*Measuring Landscape Preferences: The Research Program*

In Chapter Two, the land use situation in the study area, Prince Edward Island, will be summarized. This is an island province of Canada that depends to a large degree on a healthy tourism industry, which in turn depends to a large degree on the island's pastoral scenery. The factors of islandness as well as the stormy history of land use are considered and the existing legislation regarding scenic viewscapes is reported on. While there has been no apparent urgent demand for tools to help manage the province's scenic resource, data is provided to show that the landscape is changing. The implementation of

landscape preference measurement tools could not only serve to assist planners, but could draw local attention to issues of scenery as a valuable resource.

The literature review provided substantive examples of historic approaches to this issue, and demonstrated the interdisciplinary nature of this field. While the approach in the 1970s was primarily geographic and scientific in nature, trends currently lean toward more socio-cultural approaches to the research. This combination of approaches led to the decision to include two methods (on-line quantitative plus focus group) in this research project. An extensive investigation of landscape management practices in other jurisdictions uncovered examples of both policy and community-based approaches (details of which may be found in Appendix B) that could serve as useful examples for the setting of this paper, Prince Edward Island.

The measurement processes that are proposed and the review of landscape policies in other jurisdictions are possible useful tools for a local administration. While the factor of beauty might at first consideration seem nebulous and difficult to measure, the research proposes that collecting the opinions of residents and other scenery users, such as tourists, can lead to consistent results that define and rate viewscapes, not merely in terms of their net scenic quotients, but also in terms of the community value from a more social or heritage sense. The tools demonstrated in the following research chapters include both a quantitative on-line survey and a focus group session. Both proved practical and efficient to use and would certainly enhance the ability of policy makers to take decisions on relative values of viewscapes. While general aesthetic preference was measured in this case with an on-line survey, it was supplemented by the focus group. These tools could

also be used to further refine preference data either by landscape type (agricultural vs urban, coastline vs inland and so on), by specific scene (assuming there were decisions required on individual development proposals that would benefit from community input), against population sectors (such as resident vs tourist, urban vs rural dwellers, male vs female and so on).

Once having considered the individual situation of Prince Edward Island as regards land use and extracted useful guidelines and examples from the literature review, the core research goal of the thesis is to demonstrate that it is possible to define scenic preferences through the use of the tools tested in Chapters Four and Five. While the survey and focus group results will be taken into consideration, it is important to keep in mind that the purpose of the paper is not to define in indisputable and certain terms the preferences of either population group (resident or visitor); rather it is to show that efficient measurement tools are available to assist in making planning decisions. With refinement and further testing these tools can be efficiently applied in both PEI and a range of other situations.

# Chapter Two

## Prince Edward Island: Situational Analysis

Prince Edward Island, Canada's smallest province, is located just off the country's east

coast, a small crescent-shaped body of red soil and sandstone, surrounded by the waters

of Northumberland Strait and the Gulf of St. Lawrence. The province is about 280

kilometres from tip to tip or approximately 5,600 square kilometres. The resident

population is just 140,000, but PEI, as it is also known, hosts about one million visitors

annually.
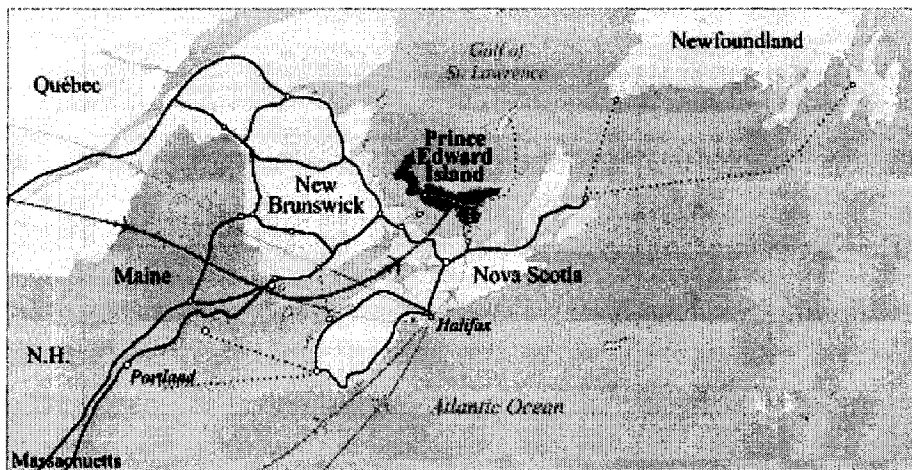


*Figure 1*: Locator Map (www.gov.pe.ca)

The economy is primarily and historically an agricultural one although the tourism

industry in recent years has developed to the point where cash receipts from each of these

two sectors are about equal at $350 million. This shared dependence on farming and

tourism is a fortuitous combination as it turns out; the visitors describe the landscape

with great admiration (Tourism PEI website, feedback, Appendix ) as a rolling patchwork

quilt, made up as it is of fields of potatoes, grain and hay, demarcated by hedgerows and

woodlots and of course defined by the coastline and the ocean and the multitude

of bays and inlets.



*Figure 2*: Orwell by John Sylvester (Tourism PEI)

A description of the English country landscape by Jacquetta Hawkes in an essay

by Yi Fu Tuan resonates here "[the countryside] having achieved a happy moment of

balance in its long course of evolution." (Tuan, 1979, p. 92). It is this balance that

pleases and soothes — the perception that here, humankind and nature work in harmony.

Perhaps L.M. Montgomery, famed PEI author of the world-wide popular novel Anne of

Green Gables, describes it best in her early memoir, *The Alpine Path:*

Prince Edward Island, however, is really a beautiful province — the most beautiful place in America I believe. Elsewhere are more lavish landscapes and grander scenery; but for the chaste, restful loveliness it is unsurpassed. 'Compassed by the inviolate sea,' it floats on the waves of the blue gulf, a green seclusion and 'haunt of ancient peace.'" (1917, p. 11).

Of course, the built components of the Island landscape play a key role in the overall scenic quotient as well; some residents still inhabit the traditional farm homes which have settled into the scenery as naturally as the thickets and hay bales. In addition to this bucolic picture, the province displays an abundance of brilliant colour in three seasons; the soil is an intense shade of red (due to the high content of iron) which only sets off the numerous and complementary shades of green of pasture and potato rows, hardwood and softwood forest. The coastline itself adds an undeniable aesthetic bonus to the shore with its alternating red sandstone cliffs and sandy beaches and dunes.

Many visitors comment on, and many Islanders take great pride in, the overriding "neatness" of the landscape, and landscape researcher and academic, Joan Nassauer, confirms that the "aesthetic of care" is appreciated almost universally. "Landscapes that we describe as attractive tend to conform to aesthetic conventions for the display of care, which can be exhibited in virtually any landscape." (1997, p. 67), and "In most settled landscapes, care is shown by neatness." (1997, p. 68).

There can be no doubt that, as tame and manicured as these scenes may be, they hold great appeal to tourists visiting the province who consistently place a high value on

the view, citing "sightseeing" (68 %) and "driving tours" (42%) as primary activities. (Tourism PEI, 2004). In terms of brand perceptions a 2005 study revealed that the primary perception at 86 % is that Prince Edward Island offers "colourful, scenic landscape and coastline." (Impact Research, PEI Tourism iTES report, 2005, p. 15 and p. 40).

*Changes in the Island Landscape*

All of this scenic resource is subject to change however; a lived-in landscape is bound to evolve. As with any occupied landscape, the residents will often exhibit a desire to change and improve, to develop and enhance their surroundings. These changes are partly due to a shift in the agricultural industry where farm size is shifting from the traditional family farms of 90 acres at the turn of the century to operations of an average size of more than 300 acres in 2001 (MacKinnon, n.d.). Potato acreage alone increased from 75,000 to 108,000 acres between the years 1990 and 1996. (Round Table on Resource Land Use and Stewardship, 1997). While the amount of potato acreage has since stabilized, the trend to larger farm fields continues. Not only is the average size of the farms increasing, but the average size of the fields is growing as well in order to to accommodate ever larger machinery. For primarily economic reasons, the agricultural industry in PEI has become one of specialization, marking a shift from mixed farming to monoculture. The size of the farms, the size of the fields and the size and prevalence of related infrastructure such as the large roadside climate-controlled warehouses for potato crop storage are all changes which have taken place in the Island's agricultural industry which could be perceived to have negative impacts on the overall scenic resource. This

shift in the farming sector and its resulting effect on the landscape could be material for an interesting follow-up research project (not intended to be treated here), as the province's two primary industries of agriculture and tourism provide mutual support and pose potential conflict.

While visitors are among the greatest appreciators of Island scenery, the very fact that one million people visit PEI each year means that many more services are developed to meet their needs. In June 1997, a 13-kilometre bridge connecting Prince Edward Island to the mainland of Canada was opened. In that year pleasure private motor vehicle and air visitation soared from 1996's 711,200 to 1,155,600 - a 62 % increase. Visits peaked in 1998 with 1.203 million pleasure visitors (or seven times the resident population). (Tourism PEI Economic Impact Study, 1999, p. 2). It should be noted here that a large percentage of visitors arrive by car. According to Tourism PEI's 2004 Marketing Plan, 94 % of visitors arrived by motor vehicle. (Tourism PEI, 2004 b), a figure consistent with each of the six previous years. This fact that motor vehicle/road transportation to the Island is such a dominant mode made the construction of a bridge to the mainland all that much more significant. The tourism industry continued to expand facilities in the first years of the 21$^{st}$ century; cottages were constructed and new attractions opened. Walmart established a store soon after the Bridge was completed as well. As a side effect, with easier access and much greater awareness among residents from mainland communities, relatively low-priced property was purchased for development of seasonal homes, often on prime shore frontage. At $60,000-$100,000, the price of a cottage lots advertised at various PEI real estate websites (michaelshomes.com,

5662121.com) may be out of reach for some Islanders, but within reach of many affluent North Americans.

In a presentation about "The Bridge Effect," Godfrey Baldacchino quotes a definition of non-islandness adopted by the European Union: "An island is not an island if it has fewer than 50 permanent residents, is attached to the mainland by a rigid structure, is less than 1 km from the mainland, or is home to the capital of an EU state." (Baldacchino presentation, quoting The Guardian, UK, January 21, 2003, p. 5). Yet very few Prince Edward Islanders would take this statement seriously. The sense of islandness is alive and well ten years after the completion of the Confederation Bridge. This does not mean however, that the Bridge has not had significant effects on the province. Certainly, the economy has benefitted from the easy access of tourists with an overall growth in tourism visitation. Other impacts, either negative or positive, could be a result of the trend described above where seasonal residents continue to purchase portions of the Island land base.

Add to these trends the growing migration of Island residents to lots of land or a small estates in the countryside or on the coast. While there are several municipal areas in the province, some 70% of land does not currently fall under any local municipal planning regulations. (Campbell, 2005). Taxes are lower in these unincorporated regions, and the provincial planning act is the only means to manage development by both residents and visitors, including seasonal residents. New developments may meet the letter of the law, but the net effect is creeping "exurbia," a term coined to describe the increasing trend to living on large plots beyond the suburbs. While some development

restrictions have been imposed in special planning areas surrounding some

municipalities, the intent to provide green space on the fringes of the urban areas has been

lost as developers simply take their activity just beyond the restricted zones, contributing

still further to the trend of an ever more suburbanized rural landscape. Both Islanders and

non-residents are capitalizing on relatively low land prices and tax rates compared to

urban settings and the classic Island scenes of the 100-acre farmstead are fast being

replaced by larger and larger potato fields and rows of bungalows or mini-mansions on
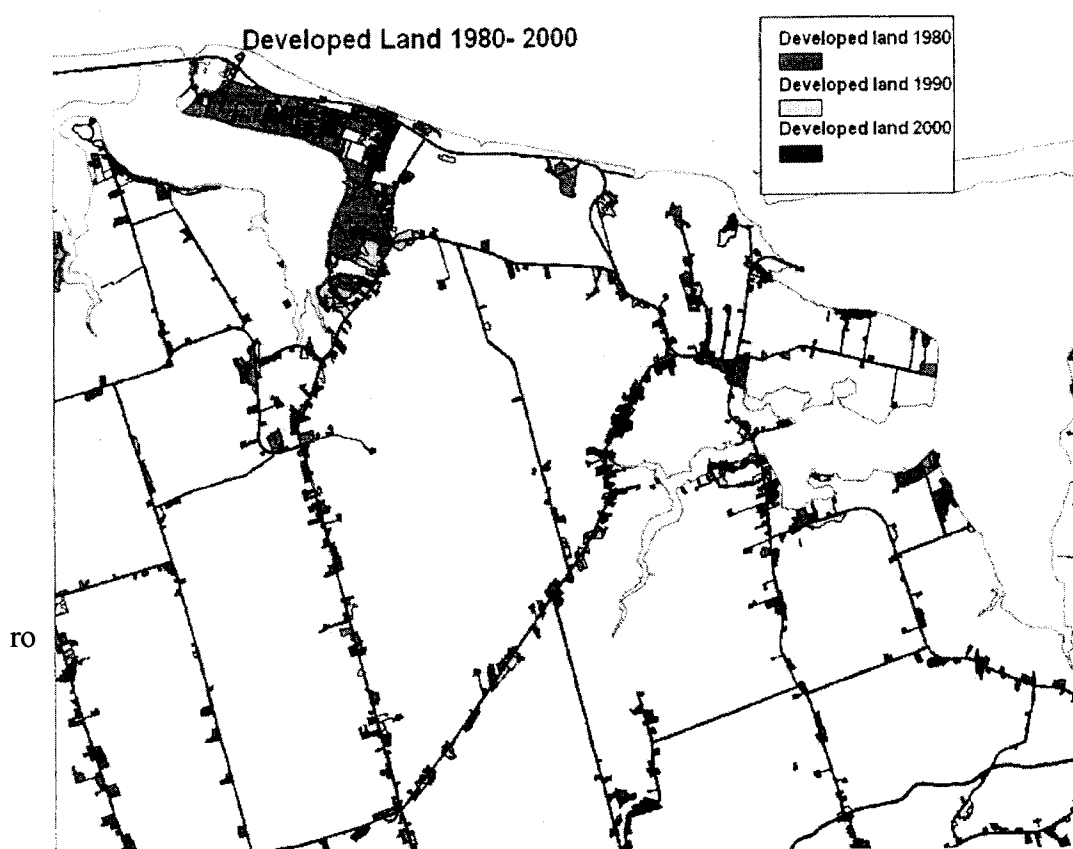


*Figure 3*: Map of Developed Land 1980-2000 (Bill Glenn, Dep't of Forestry)

roadside lots and 25-acre plots. Slight changes in planning act regulations require larger

lots (25,000 square feet, up from 15,000 square feet) or phased development and more

open space in subdivisions, but the fact remains that only on the arterial and collector

highways are any significant development restrictions imposed; a great deal of the

province's paved highways are now lined with suburban-style residences.

In keeping with the Island farm family tradition, farmers are permitted to

subdivide one lot to hand to family members. Sight distance (a safety factor to allow for

highway vehicle access) is one restricting factor when it comes to approving roadside

building lots, but the protection of the valuable class 2 or 3 agricultural lands or

viewscape zones are not currently a consideration. The regulations are considered to have

been successful in protecting riparian zone, wetlands and watercourses. While land use

planning has tackled issues of public health and safety and the environment, the scenic

resource is not currently under active consideration as a topic of concern. (Interview,

November 3, 2006).

Over the past ten years or so, an annual average of 420 single family dwelling

permits and 221 summer cottage permits were issued by the PEI Department of

Community and Cultural Affairs. In 2001-2002 fiscal year approvals were granted for

434 subdivisions, containing a total of 675 lots. (PEI Department of Community and

Cultural Affairs Annual Report 2001-2002, p. 30). This is the statistical evidence to

support anecdotal comments by visitors who return after a few years absence, and wonder

immediately when they drive into the countryside, "Are there more houses in PEI?"

There exists in PEI legislation the ability to define Special Planning Areas which could potentially include areas of scenic beauty, known as Scenic Viewscape Zones, but as yet it appears that only two regions have been thus identified (Campbelles Pond/New London and Borden-Carleton) and it is not clear what mechanism would be employed to categorize the landscape in this way or to allow for the selection of new Scenic Viewscapes. Once a scenic viewscape had been identified, the Planning Act regulation regarding scenic viewscapes does prevent electrical poles from marring the view or the construction of structures close to the highway that would block the view. (Prince Edward Island Statutes, n.d.). Ironically, by requiring setbacks from the highway, the net impact on the viewscape could be even more detrimental. This research tests a process that could lead to an objective, acceptable and agreed-upon methodology to designate scenic viewscapes for protection under the Act and assist in defining appropriate development.

It is also interesting to note that, while regional tourist associations have identified scenic lookouts and the provincial Department of Transportation and Public Works has created pull-off areas, there is no clear protection for the views thus designated. The concept of coastal touring routes has been developed and supported by local groups and two levels of government and it is likely that other "lookout" spots will be identified in future. There was no indication that these lookouts and the associated viewscapes would be allocated any special protection measures as of December 2006. Perhaps there is a step missing in this tourism product development process.

Other jurisdictions outside of PEI have mandated mitigation steps for new or existing development. Vegetative cover has been proven to make development more

palatable according to research undertaken recently in the midwestern United States. (Sullivan, 2004). While many Prince Edward Islanders are active gardeners, there is no requirement that they maintain or include trees or bushes in any development projects. In 1946, a Rural Beautification Society was established and to this day the group annually awards special achievement in the improvement and care of rural homes and communities. It could be assumed that some of the neat, well-tended rural properties are due to the work of the Society, which encourages the already active sense of community pride evident in PEI, but the association in no way attempts to discourage inappropriate development.

Prince Edward Island is perhaps unusual in that a low percentage of the land base is either provincial or federal crown land. "Approximately 121,884 acres of land which is 8.5% of the Island's 1,422,300-acre land base are owned by the Provincial Crown through the Department of Transportation and Public Works. (Email communication, April 25, 2007). "This land is assigned to various resource departments for forestry, fish and wildlife, and provincial parks or is dedicated to transportation, cultural interpretation, education or health agencies." (Round Table on Resource Land Use and Stewardship, 1997). The Round Table of 1997 recommended that the government establish a "no net loss policy for Provincial Lands" (ibid.) but the latest update shows a reduction of about 10,000 acres since the Round Table report.

In addition to the above recommendation regarding Crown Lands, the Round Table recommended an "objective of attaining the goal of seven percent of the provincial land base" (ibid..p. 130) as protected area. As of November 2006, the Island Nature Trust

was in control of 2,760 acres of forest, marsh, sand dune, offshore island, river frontage

and pond. As well, the Trust "helped private landowners voluntarily protect over 2,000

acres of their own lands under legal agreement, and ... worked with the Government of

Prince Edward Island to legally protect more than 10,000 acres of provincially-owned

land. (Island Nature Trust, 2006). The goal to protect 7% of the Island land base seems a

long way off, even when provincial and national park property is taken into consideration.

In the literature review to follow, examples of protected areas and landscape management

techniques are summarized. In general, Prince Edward Island is lagging behind most

other jurisdictions when it comes to the designation and protection of special spaces

either for aesthetic or habitat/biodiversity reasons.

*A Reputation for Beauty*

From the beginning, it seems that the image of this island was fated to a clear

association with its natural beauty: Prince Edward Island native Mi'kmaq legend relates

how the Great Spirit Glooskap chose red clay to make the most beautiful place on earth.

He created an Island sanctuary which He named "Minegoo" and placed it in the sheltered

waters of the southern Gulf of St. Lawrence. After many years, the Great Spirit decided

to share it with His People, the Red Man. (Government of PEI a, n.d. InfoPEI). And the

legend of beauty grows with the tale told around the first sighting by a European, when it

is said that from the moment that Jacques Cartier laid eyes on this island, he proclaimed it

to be "the fairest land tis possible to see."(Government of PEI b, n.d., InfoPEI) The

mythology surrounding the island's natural beauty has deep roots.

In fact, this abiding mythology could serve as a detriment to enacting any kind of significant change to local land policies: Islanders believe their own propaganda. Perhaps the landscape changes have been too gradual or subtle, but it appears that few residents take seriously the threat of continuing development on the overall scenic resource. The research portion of this report aims to test measurement tools that could assist in determining general preferences and possibly gain an understanding of tolerance levels to varying degrees of development from the point of view of both residents and visitors.

*The Land Question*

It should be pointed out at this time that Prince Edward Island has struggled with land questions almost from the first European settlements. In 1764, the Island was divided into 67 townships or lots, each about 20,000 acres; a few years later the townships were awarded to British petitioners by lottery. Each owner agreed to pay rents to the Crown and supply settlers for the lots. However, most proprietors saw their granted properties as investments only. Conditions of tenure were rarely honoured by the proprietors; rents went unpaid and a land-ownership problem was created. In 1769, the Island was granted separate government, to be financed by quitrents from the proprietors but these absentee landowners continued to evade their financial responsibilities and land ownership remained a hotly contested issue. During the first half of the 19th century, many Islanders managed to acquire title to their lands, but there remained a fair amount of tenant farming in some areas until the 1870s. By 1864, about 50 % of the lots in PEI were in freehold tenure. An Act in 1875 gave the Island government the power to force landlords to sell their holdings, finally expediting the process of turning over the land to

the resident Islanders. (Government of PEI, n.d.).

This ongoing period of absentee land ownership set the scene for an era of growing resentment and a fierce desire on the part of Islanders to become masters in their own domain. Subsequent attempts to impose controls or land use restrictions have met with resistance. As early as 1860 a land commission was established in an attempt to solve the conflicts between tenants and proprietors but the government of the time did not take action and heated controversy over the land issue resulted in insurrection and the calling in of troops from Nova Scotia instead. In the last quarter of the 20th century the PEI government attempted twice more to impose some kind of order to the ongoing land question through a major province-wide development plan, royal commissions and round tables, but in the words of Island historian Wayne MacKinnon, "Nowhere was the clash of values and beliefs, convictions and aspirations, more evident than in the public debate about the land. In the absence of clear government direction and policy, private interests trumped the public good ... Once again the Land Question haunted the Island" (2005, p. 188).

Today, while many Island residents and politicians and tourism promoters will boast proudly about the beauty of their landscape, there exists a residual attitude that with a deed to a property comes the right to use and develop according to the owner's wishes. In the words of Aldo Leopold, back in 1943 "Land relation is still strictly economic, entailing privileges but no obligations." (p. 238).

A great deal of discussion over land use issues in Prince Edward Island has taken place in the past 40 years. Issues associated with absentee landlords resurfaced in the

1960s, as non-residents began investing in local real estate throughout the province. Subsequently, substantial amounts of land in the province fell out of the control of local residents. From 1970 to 1988 the number of acres in PEI held by non residents almost doubled from 72,000 to approximately 140,000. (Island Regulatory and Appeals Commission, 2001). In 1972, Government introduced amendments to the *Real Property Act* to restrict the purchase of land by non-residents. In 1981, an application by a non-resident corporation to acquire 6,000 acres prompted public concern over the perceived impacts of land ownership, leading to fears that control of the province's agricultural industry would end up in the hands of one company. This led to the introduction of the *Lands Protection Act* in 1982.

The following quote defines the purpose of the Prince Edward Island Lands Protection Act, acknowledging the province's special situation :

The purpose of the Lands Protection Act is to provide for the regulation of property rights in Prince Edward Island, especially the amount of land that may be held by a person or corporation. This Act has been enacted in the recognition that Prince Edward Island faces singular challenges with regard to property rights as a result of several circumstances including

a) historical difficulties with absentee landowners and the consequent problems faced by the inhabitants of Prince Edward Island in governing their own affairs both public and private.

b) the province's small land area and comparatively high population density, unique among the provinces of Canada

c) the fragile nature of the province's ecology, environment and lands and the resultant need for the exercise of prudent, balanced and steadfast stewardship to ensure the protection of the ecology, environment and lands. (Island Regulatory and Appeals Commission, 2004a, Chapter L-5 Lands Protection Act).

It might appear that Island residents believe that the greater risk is associated with land held by non-residents and legislators are somewhat preoccupied with the "boogeyman from away." This attitude is perhaps understandable, given the past history, and the Island Regulatory and Appeals Commission (IRAC) continues to monitor closely the transfers of land to non-residents. Over 2003-2004, the Commission received 199 applications - 9 were denied. In 2002, the Commission denied 8 of 118 applications while in 2001, the commission denied 4 of 103 applications from non-residents wishing to buy properties of more than five acres or shore frontage in excess of 165 feet. The Commission makes the recommendation on each to Executive Council for ultimate decision by Lieutenant Governor in Council. (IRAC, 2004b and 2001). While the Commission admits to approving the sale of between 3,000 and 5,000 acres per year to non-residents, there appears to be no great increase in the amount of land held by non-residents, currently holding at about 9 % of the total provincial land base or 13 % of total parcels. (IRAC). "The Commission does not have sufficient data to fully explain why the substantial additional acreage approved for non-resident acquisition each year is not reflected in the total acreage reported as owned by non-residents." (IRAC, 2003-2004, p. 6).

As an interesting aside, a *New York Times* article of August 2006 is promoting just the thing Island legislation has been attempting to protect against. *North to Canada for an Ocean View* by Louise Tutelian suggests that there are great deals to be had and that the regulatory controls are only minor inconveniences (2006). The author goes on to describe the demand and what coastal Atlantic Canada has to offer well-heeled American clients:

> As long as an American buyer uses a Canadian lawyer and a Canadian bank for any mortgage, transactions are usually simple, and the buyer doesn't have to attend the closing. Foreigners pay some additional property taxes, and there are limits on the amount of shore frontage a single buyer may acquire in some areas. These restraints seldom deter those who have searched in vain for vacation homes farther south ...'The primary thing my clients are looking for is oceanfront,' said Michael Poczynek of Century 21 Northumberland Realty on Prince Edward Island, who has sold 20 waterfront properties to Americans in the last six months, about half of his total sales." (2006).

According to Wayne MacKinnon, back in the 1970s a dire prediction was made that by the year 2000, 15 % of the Island would be in non-resident hands; the current 13 % is very close to that prediction. (IRAC, 2004b). Other concerns are associated with too much land in the hands of one individual or corporation and applications made to IRAC to exceed the 1,000 and 3,000-acre caps on land holding are generally refused.

*Landscape and Agriculture*

The Prince Edward Island economy is clearly linked to the landscape in at least two ways - the pastoral scenes and quaint fishing ports that are so appealing to visitors depend on thriving farming and fishing industries, and like many resource-based sectors these industries face many current challenges. The general wisdom for the past several decades in the agricultural industry has been toward greater efficiencies often to be found by specializing and streamlining. The traditional 100-acre mixed farm of early PEI has all but disappeared, to be replaced by mono-culture such as row-cropped potatoes or large specialized livestock operations. Only recently has it been suggested as a result of greater emphasis on environmental concerns that this approach may not represent best practice for the future of farming. While the symmetry of the rows of blooming potato plants may be visually appealing, the bad press received as a result of pesticide-caused fish kills or the recent *Globe and Mail* (Mittelstaedt, 2006) article claiming high cancer rates in PEI potato growing regions are possibly a net negative. The Island agricultural community is reconsidering its approach and programs support organic and sustainable farming, as well as added-value and specialized crops. Certainly, the future visual appeal of the province's pastoral landscape depends not only on careful consideration of ongoing development practices, but on a healthy farm sector. Requiring out-of-province land purchasers to maintain the property in agriculture is one means to retaining a landscape mix represented by the working countryside, but individual active farmers must thrive rather than be tempted to sell off land to the highest bidder. The province's two primary

industries are mutually dependent to a large extent - the pastoral landscape attracts tourists; one million tourists add substantially to the local economy.

It is also interesting to note that lands formerly identified under the Lands Protection Act for non-development are now being de-identified. For example, a recent Order in Council dated October 24, 2006 reads:

Pursuant to subsection 9(2) of the Prince Edward Island Lands Protection Act R.S.P.E.I. 1988, Cap. L-5, Council amended the condition of non-development use made pursuant to section 2 of the Land Identification Regulations (EC606/95) in respect of approximately ten (10) acres of land, being Provincial Property No. 683367 located in Lot 21, Queens County, Prince Edward Island and currently owned by Kenneth Montgomery of Park Corner, Prince Edward Island. Council noted that this amendment *will enable subdivision of the parcel of land into a maximum of eleven lots* [italics added] This Order-in-Council comes into force on 24 October, 2006." (IRAC , LPA Alterations database).

A careful read of Doug Boylan's 1990 report of the Royal Commission on the Land, titled *Everything Before Us,* will reveal however that a primary recommendation is as follows "THAT the landscape be of paramount consideration in government activities." (p. 311). A further eight recommendations in Chapter 17 (Landscape) deal with topics such as promoting greater public appreciation of the landscape, preparing an extensive inventory of special landscapes, and designating a generous number of scenic look-out points.

*Regulations and Recommendations*

Looking at the provincial *Planning Act and Regulations* will help determine

how Islanders govern their use of the land especially in terms of scenic worth and

what amount of attention has been given to the much-vaunted beauty of the Island

landscape.

Regulation number 58 of the PEI Planning Act states

In the Scenic Viewscape zone as indicated in Appendix A, Map number 2

(two areas around Campbells Pond and New London Bay) approved

subdivision permits shall be subject to the following conditions:

(a) all new electrical and telephone utility lines shall be placed underground or

where this is not possible the poles and lines shall be placed on the side of the

highway opposite to that along which the scenic viewscape is located

(b) no structure shall be constructed, erected or placed closer than 200 feet (61

metres) to the highway along which the scenic viewscape is located. (p. 43)

And within any Scenic Viewscape , the following uses and no other shall be

permitted:

(i) resource development

(ii) recreation development

(iii) scientific studies and conservation-related activities."(p. 52).

Perhaps the concern over non-resident ownership has been somewhat misdirected, but the

Planning Act does provide options for consideration of Scenic Viewscapes. It is not at all

clear however, how those scenic viewscapes are to be identified. Only two Scenic

Viewscape Zones have been identified under the Act to this point: Campbells Pond/New

London and Borden-Carleton.

The topic of land use and land management has certainly not been ignored in recent

years in the province of Prince Edward Island. The Royal Commission on the Land of

1972 and the subsequent Round Table on Resource Land Use and Stewardship of 1997

attracted much local attention, and briefs were presented at numerous public meetings.

Progress reports on the recommendations made by the latter (1997 and 1999) state that

the majority of the 87 recommendations have now been implemented or are in progress

and Government has confirmed its ongoing commitment to the strategy proposed by the

Round Table. (Standing Committee on Agriculture, Forestry and Environment, 1999, p.

2).

Recommendation number 76 of the 1999 report by the Standing Committee on

Agriculture, Forestry, and Environment suggests "that the Department of Economic

Development and Tourism assess the opinions of residents and visitors to Prince Edward

Island regarding the quality and attractiveness of the landscape and the impact of changes

thereto." (p. 39). In the progress report of 1999, it is implied that the Economic Impact

Survey conducted annually by the Department of Tourism somehow assessed the

opinions of residents and visitors regarding landscape quality. The data contained within

the above Economic Impact study is inadequate to effectively assess attractiveness of the

landscape, stating only that visitors like to sightsee. The first part of the recommendation

will be addressed by the research conducted below; the second part of the recommendation, "the impact of changes thereto" may require further study.

Since 1999, no further progress reports have been published and an interdepartmental Land Use Coordinating Committee is inactive. Transfers to non-residents and development outside municipalities and along the province's shoreline continue at a rapid pace. A map depicting housing starts from 1980-2000 in the central portion of the Island (Figure 3) shows a thick tracing of building along almost all public roadways and coastlines. An earlier policy discouraging ribbon development is apparently no longer in effect. The resulting stretches of highways lined with residential development means that scenic vistas are impeded, local communities suffer as people locate outside the municipal boundaries and individual water and septic services pose environmental risks. As well, the juxtaposition of farmers and non-farming residents often leads to conflicts over agricultural odours and pesticide use.

Interviews with planning staff at the Prince Edward Island Department of Community and Cultural Affairs (Manager and Provincial Planner at the Provincial Planning Branch and Manager at Inspection Services Branch) confirmed that the province's landscape is rapidly suburbanizing. Single family dwellings and cottages are being built at a pace of approximately 420 and 220 per year, not including the building and development activity in the 31 municipalities that have their own official plans and bylaws. For example, in

Source: Bill Glenı
PEI Dept of AFF
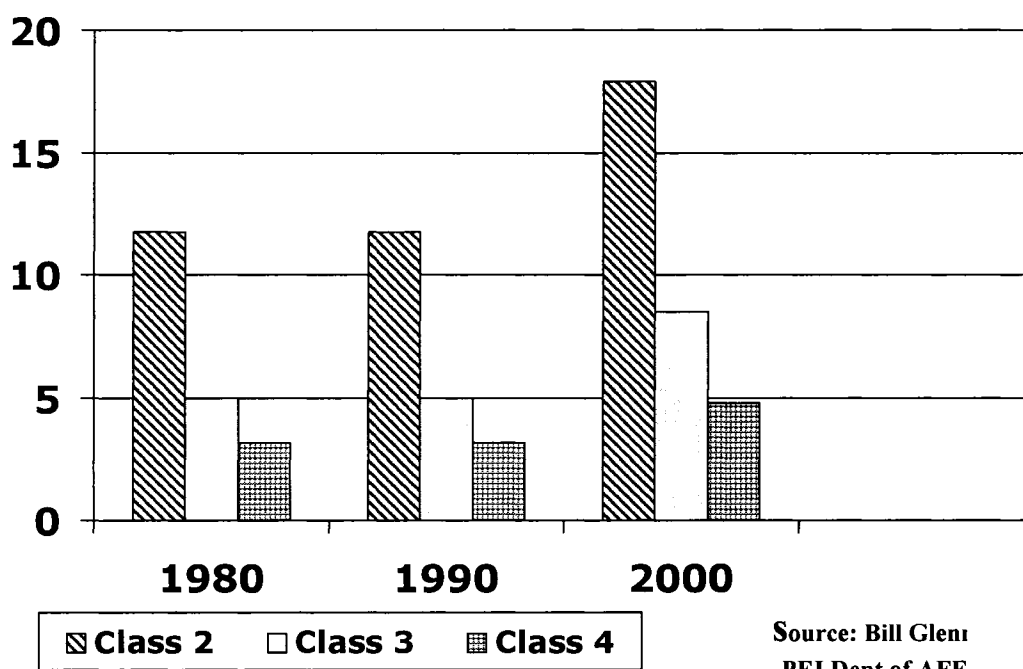
*Figure 4*: Agricultural land lost to development 1980-2000

2001- 2002, final approval was granted for 434 subdivisions containing a total of 675

lots. Of the 675 lots approved, 336 were for single family dwellings and 160 for summer

cottage. In 2002 - 2003 final approval was granted for 698 subdivisions containing at total

of 1211 lots. Of the 1211 lots approved, 606 were for single family dwellings and 421 for

summer cottage. (Interview, November 6, 2006 and Email, December 27, 2006,).

The Manager of Provincial Planning would like to undertake a regional growth

strategy planning exercise, testing the community-based process first in one region of the

Island. It is supposed that the terminology of growth would be more realistic or palatable

than planning or zoning and the interactive nature of the process would allow for

community input and direction. (Personal interview, November 6, 2006).

Boylan, however, in his 1990 report, takes a 'no-holds barred' approach to the rapidly

deteriorating scenic resource at that time in Prince Edward Island, suggesting along with

those who presented briefs to the Commission that the landscape was being "cropped" or

the value of the view subsumed for purposes of ribbon development, cottages on the coast

and residential placements that destroy scenic views for all but the homeowners. (p. 307).

As shoreline development continued (and continues to this day) to occur, Boylan

describes the result in a graphic way as "a visual disaster, best described as a holiday

shanty town." (p. 309).    The Department of Community and Cultural Affairs does

administer one other piece of legislation which might offer some protection to PEI

landscapes of note.  The Heritage Places Protection Act currently includes only  buildings

or cemeteries among the sites on the protected list, however.  As far as is known,  no

scenic landscape has ever been submitted for protection under this Act.

Government is not of course the only party to develop and implement enlightened

land policies and actions.  A small but determined group has formed to protect an area in

PEI's very scenic North Shore region.  The L.M. Montgomery Land Trust was founded in

1994 as a registered non-profit charity with a diverse membership of farmers, tourist

operators, and photographers working to preserve scenic coastal agricultural lands from

development.  The focus is on a 13-kilometre stretch of coastline from French River to

Sea View, an area of roughly 3,000 acres of land.  Two parcels of this area have been

designated as Scenic Viewscapes under the Planning Act Regulations.  The group has

struggled to raise funds in order to compensate farmers and landowners in the area as part

of a purchase of development rights program. The group also seeks the donations of development rights from land owners or purchases and then resells land, with restrictive covenants attached.

Some of the challenges facing the Montgomery Land Trust include: the rising cost of land, capital gains tax complexities making US resident land donations difficult, and the weakness in the farm economy creating more pressure on farmers to sell land for development. Moreover, the completion of the Confederation Bridge has improved access to PEI, leading to even greater development pressure. The price of land for cottage development has more than tripled in the last five years. (L. M. Montgomery Land Trust, 2005). To date, 130 acres of land have been preserved — a slow (and possibly exhausting) process at best. (L, M. Montgomery Land Trust,2005).

However, the group continues to meet, raise funds, discuss viewscape protection with area residents and is working on clarifying tax benefit information for those willing to turn over land or development rights. The group also lobbies government and is working on a proposal that would designate for special attention an area they would call the Montgomery Seashore (in honour of the author of Anne of Green Gables.)

There is no doubt that this island province depends heavily on the tourism industry and there is more than adequate evidence that the tourists value the scenery as a primary part of their vacation experience indicating that the beauty of the landscape is a major motivator, sightseeing the most popular activity and the experience most remembered after their vacation. (Tourism PEI, 2005). The legend of the Island's beauty

has deep roots and still today many local residents will declare the Island's scenery as among the most beautiful in the world.

However, the landscape is changing and the rate of change may have been accelerated since the construction of the Confederation Bridge to the mainland. Inexpensive shore property is increasingly rare all along the eastern seaboard and non-residents from both Canada and the US are discovering the province's development potential. This research paper will attempt to discover if those landscape changes and development projects bring a positive or negative result to the Island scenic resource. Land use is certainly not a topic which has been ignored in the province; to the contrary, many boards and commissions have approached the question of "the land" in Prince Edward Island. It is not clear, however, that the comments of the public and the recommendations of the appointed commissions have been acted upon. The issue still elicits plenty of heated opinions, and this is further complicated by a long history of intense debate over land issues.

Some action has been taken to address health and safety and the environment, but the overall value of the scenic resource itself has perhaps been shuffled aside, treated with an all-but-ignored possibility to identify Scenic Viewscape Zones under planning regulations.

Much has been written on the PEI land question and this paper in no way attempts to support, refute or elaborate to any extent. Rather, the situational summary sets the scene for the research project which follows. If Prince Edward Island scenery is deemed

to be a valuable resource, if issues of land have preoccupied Islanders and their legislators

for decades, if a combination of factors is accelerating landscape change in PEI, then it

seems logical to suggest that a tool to help define and determine the most valuable

elements of the scenic resource should be a useful addition to the planning tool kit.

# Chapter Three

# Literature Review

Landscape has been the subject of written ruminations in many disciplines and for many centuries. In the past two hundred years philosophers and historians have considered how our surroundings affect us as well as how we make changes to the landscape. It is natural that landscapes will change but according to Marc Antrop "The first initiatives to conserve nature and landscape came about in the second half of the 19th century." (2005, p. 28). Along with the growth of Romanticism in the previous century and in response to industrialization, there developed a greater appreciation for traditional scenes, a longing for Arcadia – the mythological Greek "ideal region of rural contentment" (Oxford English Dictionary). In Chapter Four of *Countryside Planning*, landscape policy analysts Adrian Phillips and Roger Clarke quote a couple of early landscape writers who know how to appreciate a domestic landscape such as the style seen in Prince Edward Island. William Cobbett is quoted as saying he had "no idea of picturesque beauty separate from fertility of soil," while William Gilpin is quoted as saying there are "few who do not prefer the busy scenes of cultivation to the romantic landscape" or to employ a paraphrase – a productive pastoral scene is worth all the drama of the Alps or Pyrenees. (Phillips and Clarke, 2003, p. 49).

This review of literature looks at some of the philosophical and historical writings about landscape, and takes a special interest in how landscape has been considered as a

key factor in shaping the identity of place and its people. As well, material about the working countryside was seen to be especially relevant to the Prince Edward Island situation. Some of the theory, especially related to defining aesthetic in terms of landscape was useful; it became very clear that the field is multi-disciplinary. Many articles within the more scientific disciplines of geography and planning were consulted for direction and examples on how to approach the primary research portions of this project. Government documents and policy papers proved useful as examples of how landscape protection measures may be applied especially on islands.

*Landscape and Identity*

In general, Antrop says "Landscape changes are seen as a threat, a negative evolution, because the current changes are characterized by the loss of diversity, coherence and identity of the existing landscapes. New elements and structures are introduced which look alike everywhere." (Antrop, 2005, p. 22). How a place explains itself, communicates its character or personality is most evident in the face it presents to the world – in other words, its landscape. For tourism destinations, this sense of place is crucial and tourists must not only be attracted by the public image of a place, but the destination must then live up to the image communicated. All in the face of constant change! Christina Le Beau, in a recent article in *Preservation* magazine, points out that this image making may sometimes be taken too far, that sometimes "places adapt to what tourists crave." (2006, p. 40). She suggests for example that Santa Fe's adobe structures,

now mandated by local regulations, "are less about the city's varied architectural and cultural roots and more about marketing." (p. 40).

Islands in particular have suffered from this susceptibility to change — the open/closed nature of islands has meant that very often visitors from outside will arrive on an island shore, see opportunity and begin to capitalize on the potential. The Caribbean region is a perfect example of a multitude of islands which have been developed to a large extent by outsiders. And of course this region bases much of its current-day economy on the tourism industry, an industry that relies a great deal on external agencies with multinational companies running the resorts. The islands of this region have come to consider whether they are in fact presenting their most authentic face to the visitors from around the globe.

*The Landscape of the Working Countryside*

Another landscape philosopher/historian, Paul Claval, confirms that our landscapes often present our self vision to the world; the artist-designed parklands of the 1700s and 1800s were a reflection of the image rich landowners wished to put forward to the world. Wealthy aristocrats defined the style of the day and influenced attitudes to open space in new ways. The term "Arcadia" took on a new association with rural villages; a countryside "decorated by a few thatched cottages, a milk shed and a sheep barn." (Claval, 2005, p. 17).

In the ongoing desire of urban dwellers to find their own personal Arcadia, the trend to move to one's very own green patch in a space beyond the city continues to grow.

Suburbia and exurbia have been spreading to the detriment of both the city centres and the countryside. In the words of Marc Antrop "The countryside is becoming a place of living, not a place for making a living." (2005, p. 30).

American writer, Tony Hiss, published an excellent two-part article on this very subject in *The New Yorker* in August 1989. *Encountering the Countryside* discusses that category of landscape called the "working landscape," where "terrain and vegetation are molded not dominated." (Stilgoe quoted in Hiss, 1989, p. 44). Hiss proposes kinship with life and partnership with the working landscape lead to better stewardship of the land. It is important to make a distinction here between landscape research undertaken in forested areas and untouched national parks and the working countryside or agricultural regions, as confirmed by Sally Schauman

> First, our understanding of scenic quality derived from studies of forested and wildlands should not simply be translated to the agricultural context. Second, if professionals can provide tools such as a classification system, evaluation indicators and survey methods, a team of professionals and laymen can successfully complete scenic assessments that are sensitive to regional agricultural patterns." (1988, p. 238).

Schauman also suggests that "a range of evaluation indicators should always be used for assessing visual value in the countryside. The range should always judge both a technical judgement and a public input component." (p. 229).

*Identification and Protection of Special Places*

No doubt, New England is one classic example of the aesthetic working landscape. Hiss (1989) describes the efforts taken by the New England Governors who in 1988 "agreed to put together a list of unprotected spaces and working landscapes within the region that New Englanders, by consensus, consider special places that help create the distinctiveness of their particular corner of the country." (p. 58). Hiss goes on to say that the six Governors have all endorsed the preservation of every place on the list. Hiss also describes quickly the process used by the Massachusetts Landscape Inventory to identify the landscapes to be slated for preservation "They divided the state up into six 'physiographic regions,' large areas with broadly similar landscape and cultural characteristics and then looked for the best landscapes in each of them." (p. 60).

The Massachusetts survey also made use of local suggestions, drawing on other methodology such as used in the United Kingdom (the Countryside Commission of Scotland). When the work of the inventory was finished, 4 % of the land in the state was deemed deserving of a "distinctive" rating and another 5 % considered to be "noteworthy." Hiss quotes landscape planner Harry Dodson as saying that "There's usually a broad consensus among local people on the special places in their neighbourhood" (p. 62), an observation tested within the process of this study.

*Sprawl and Exurbia*

In the introduction to a special issue of *Landscape and Urban Planning* (2004), the trend to urban sprawl is discussed and methods to sustain open space are considered a critical issue, that "is now increasingly being seen as integral for sustaining our

psychological health and our ethical relationship to the non-human world as well."

(Gobster, Stewart and Bengston, 2004, p. 149). They maintain that "Social science

research can play an important role in providing answers to address these vexing

management concerns" (2004, p. 149) related to increasing development pressures.

The once-rural landscapes are evolving into spread-out residential spaces, where

in Prince Edward Island, at least, modest homes mingle with traditional farmsteads,

punctuated by cottage developments and 20-acre estates crowned by mansion-style

constructions. While few of the philosophers writing about the land in this century would

deny that change is necessary, most call for some kind of harmony in the landscape. The

definition of harmony, however, must be determined for each locale and each individual

situation.

*Defining Aesthetic*

In 1949, renowned conservationist Aldo Leopold declared that "The physics of

beauty is one department of natural science still in the Dark Ages." (1974, p. 146). He

also states that "Our ability to perceive quality in nature begins, as in art, with the pretty.

It expands through successive stages of the beautiful to values as yet uncaptured by

language." (p. 102). Leopold, along with influential journalists such as Rachel Carson,

was at the forefront of the western world's developing concern with protection of the

environment. John Muir, founder of the Sierra Club, was one of the earliest

environmentalists. This "greening of America" had its swell in the 1970s (and some

might say peaked at this time) and it was during this period of gathering public interest in conservation that much of the hard research concerning landscape aesthetics took place.

There is some indication now, in the first decade of the 21$^{st}$ century, that "green" has become once again a popular concern. Global warming, pesticide use and galloping development are issues which now attract the attention of the general public. People line up to watch documentaries by politicians about climate change. Perhaps the time is right for a grass-roots approach to environmental change. Aesthetic does not necessarily imply ecological or in the words of Joan Nassauer, "a scenic landscape aesthetic does not necessarily protect nature." (1997, p. 68). However, Nassauer proposes that it would be possible to cultivate an aesthetic appreciation that would lead to positive environmental outcomes. She suggests as well that "Landscapes that attract the admiring attention of human beings may be more likely to survive than landscapes that do not attract care or admiration." (p. 69).

As UK geographer Jay Appleton pointed out "Scenery is in short a resource with far-reaching geographical implications. We pronounce roads to be scenic highways, we set aside heritage coasts, we designate areas of outstanding natural beauty, yet we have only the haziest understanding of the general aesthetic principles which underlie our decisions." (1980, p. 15). The interdisciplinary field of landscape theory was dominated in the last third of the twentieth century by geographers, foresters and landscape architects attempting to provide a response to Appleton's claim. By applying quantitative surveys of public preference, using geographic tools such as scenic inventories and topographic

and GIS mapping and eventually by trying to determine what influences people's preferences the field of landscape aesthetics developed and evolved. Yet Appleton was not convinced that the methodologies developed by geographers could provide complete answers. "Elaborate methods have been devised for investigating problems which have not been sufficiently clearly defined. ... All this, if not caused, is at least aggravated by the diminished importance attached to what geographers of the old school used to call 'an eye for country'" (1980, p. 3). Appleton makes a cogent observation that "It is increasingly recognised that much of the significance of geographical data is to be discovered not so much in terms of what places *are* like as of what people *think* they are like." (1980, p. 4). Appleton calls for a meeting of the arts and sciences in this unique field of landscape research.

*The Study of Landscape is Interdisciplinary*

One of the challenges facing the landscape researcher is defining the field of study. While to a large degree the actual evaluation of viewscapes has taken place with the sectors of land use planning and geography, it is clear that factors os aesthetics, philosophy, environmentalism and cultural and community issues all come into play.

Phillips and Clarke, (2003), point out that:

as a basis for a policy-related discourse it [landscape] has suffered from three distinguishing characteristics: landscape is a convergence ground for different disciplines; attitudes and responses towards it are culturally related, change over

time and are considered to be subjective; and few of its qualities can sensibly be

quantified. (p. 44).

The challenges of blending disciplines and quantifying intangibles have not prevented a

multitude of researchers from trying, however.

*Methodologies for Landscape Evaluation*

According to The MacAulay Institute, a well-respected Scottish land use research

institute, there are more than 150 methods of landscape evaluation. They range from

objective descriptive inventories usually applied by experts to public preference models

developed via survey methods. Some researchers have successfully merged the two. (The

MacAulay Institute, 2004).

Among the descriptive models are systems to inventory scenic resources in a

quantitative and seemingly objective way, that is, by applying a grid to a map and tallying

a scenic quotient. More formal aesthetic models are also applied; measures are taken in

terms of balance and contrast or form, line, and colour. These are most often undertaken

by experts in the sector.

The public preference models often employ questionnaires which measure via

psychological and phenomenological methods the opinions and feelings of the public

toward various aspects of the landscape. Some of the research seems to show that sample

groups with greater familiarity with the landscape are less able to agree than groups (such

as visitors) who are more ready to reach consensus on the relative worth of landscape

scenes (Penning-Rowsell, quoted in MacAulay Institute). The possibility that preferences

vary according to residence could have interesting implications for the tourism industry, as decisions on preservation may be made by local concerned groups – the iconic beauty in question might be in danger of losing its appeal for tourists while locals attempt to arrive at a consensus.

The final method, quantitative holistic, combines two approaches: public preference surveys with mathematical or more scientific assessments of the landscape. Psycho-physical models attempt to correlate the physical aspects of the landscape with the perceptual judgements of the observers. The MacAulay Institute has prepared a well-thought out summary and has grouped the various landscape evaluation approaches in a logical and thorough manner.

In 2000, S.R. Swaffield and R.J. Foster prepared an article for the Department of Conservation in Wellington, New Zealand. In this report, *Community perceptions of landscape values in the south Highland high country* subtitled "A literature review of current knowledge and evaluation of survey methods," they review and critique various approaches to the problems of measuring and evaluating landscape preferences. Swaffield and Foster make one conclusion in particular worth referencing: in their view, "no single approach or method is clearly more effective or rigorous than the others. Each has particular strengths and weaknesses." (2000, p. 43). They go on to say that "The most defensible approach, where possible, is to combine two or more approaches. Multi-method studies are becoming increasingly common when dealing with or investigating

complex social issues, and appear to be the most effective way to address the demands of landscape perception research." (p. 43).

*Measurement Techniques*

In terms of methodology, there is a well-established history of employing photographic images of landscapes as the basis for determining preferences (as opposed to actual on-site viewings, which present plenty of logistical limitations and due to the ever-changing nature of the landscape makes comparisons much more difficult.) In the Swaffield and Foster (2000) report, it is stated that "In landscape perception research, the most common quantitative methods are the ranking and rating of photographs and questionnaires." (p.17). In 1980 Steven Shuttleworth examined the accepted use of photographic images in the public preference surveys and went a step further, confirming not only that there is a high level of agreement between surveys taken as a result of on-site viewings in the field and those surveyed using only photos of the scenes. He also concluded, not surprisingly, that colour photographs are much preferred and he recommends the use of wide-angle photographs. (Shuttleworth, 1980).

Some studies have yielded results that do not support the validity of the use of photographs in all situations, however. Terry Daniel and Michael Meitner (2001) list several studies that report high levels of consistency between perceptual judgements based on photos and response to the direct experience of the landscape, but they also report on inconsistencies. The exceptions generally involve other factors, such as still shots of scenes of which the in-person experience is greatly affected by sound and motion

such as a running river. Another exception involved hikers and it was concluded that perhaps the physical exertion of the hiking experience also coloured the rating of the scene in person versus the later rating of the photo.

Other possible factors in employing photographs for landscape rating exercises were mentioned by Daniel and Meitner (2001). As a drawback: "representing familiar places with photographs encouraged a focus on the picturesque rather than on how the place connects with people's lives." (Scott and Canter, 1997, p. 277). They also point out that employing photos allows for experimental control over presentation contexts (p. 62) and conclude that "many studies have shown excellent consistency between preferences and/or perceptual judgements based on photographs and those based on direct experience." (p. 63) and that "all indications are that appropriately sampled and presented photographs can provide valid representations for assessments of landscapes viewed in the context of relatively passive environmental experiences such as in the context of sightseeing, driving for pleasure." (p. 63).

The Swaffield and Foster paper points out that communities of interest do not perceive landscape in the same way. "Urban communities and tourists emphasise iconic scenic values, while specialised or localised communities exhibit a more diverse range of preferences, particular to their situation."(2000, p. 5). C. M. Hagerhall (2001) investigated consensus in landscape preference judgements. The landscape sample used by Hagerhall was a highly recognized and promoted example of the Swedish countryside and this preconceived notion of the Swedish scenes yielded high consensus at the top end

of the preference ratings. To apply this learning to the PEI situation, it might be supposed that the iconic scenes such as used repeatedly in the tourism literature would yield greater agreement in rating scores than the more mundane snapshots included in this survey.

Using a unique videotape approach to representing landscape as seen while driving through the countryside, Brush, Chenowith and Barman (2000) found significant differences in ratings among members of six groups (farmers, foresters, logging contractors, potential tourists and members of a lake association). While the general curve of the ratings of the three types of scenes (forests, farmland and urban edge) is consistent, there are differences among participant groups. Forested land was most appealing to all but farmers when driving through the Wisconsin countryside, while the urban edge was least attractive to all. Most significantly, farmers differed widely in their positive appreciation of farmland. In general each group of participants showed differences in their mean ratings, supposed by the researchers to be related to level of knowledge of the scenes in question.

While the concept of landscape and the public appreciation thereof has deep roots (perhaps going all the way back to early Greek civilization), the field of study which has attempted to make practical evaluations of the relative aesthetic seems to have gained prominence in response to the growing environmental awareness from late 1960s on. As administrations began to react to public demands for protective measures of various sorts (including scenic protection), researchers responded with various tools and approaches. Most of this research took place within the disciplines of geography and land use

planning. In the US, the Federal Department of Agriculture (also in charge of Forestry) was heavily involved in defining means to identify lands which met evolving expectations for preservation.

*Scenic Beauty Estimation and Other Methods*

The earliest research of this era (1970s) was led by a few prominent scientists including Ervin H. Zube, Gregory Buhyoff and in particular, Terry C. Daniel and Ron S. Boster. This last pair is credited with the formulation of the Scenic Beauty Estimation Method. Boster and Daniel along with Louise M. Arthur prepared another excellent summary paper in the journal, Landscape Planning, in 1977. They used a set of groupings similar to the MacAulay Institute (descriptive inventories and public evaluation), but suggested a category that involves economic analyses. Willingness to pay models are commonly found in efforts to place economic values on the view, but the authors suggest that results are unreliable. However, it is noted that this line of reasoning should not be abandoned; that placing dollar values on aesthetic landscapes would help ensure that this aspect would play a role in land use decision making; in other words, "money talks."

An Australian scenic amenity study researched community appreciation of landscape aesthetics at Moggill and Glen Rock, concluding that "Despite the breadth of opinions in our society about what constitutes beautiful scenery, the scenic preference model developed by the Moggill study was able to predict about 72 % of the variation of preferences for different types of scenery." (Preston, 2001, p. xii). Furthermore, Preston

was able to conclude that "loss of open space, by the placement of buildings, and powerlines or other transmission lines, decreases the value of natural and rural areas." (ibid.).

There is reasonably well-established precedence for the preference of open space over developed landscapes. Sullivan and Lovell (2006) note at least three studies in California, Wisconsin and Utah that provide "evidence from rural settings that roadside development reduces scenic quality." (2006, p. 154). Their own research paper focussed on the rural-urban fringe, a landscape situation particularly relevant to PEI, since so much of the province now falls into rural-urban fringe category. Of interest in this particular study was the demonstrated result that vegetation can mitigate the adverse effects of development. (2006, p. 160).

Rachel Kaplan, a well-respected researcher in the field of landscape preferences and environmental psychology, proposed that individuals make preference choices based on four components related to how one makes sense of, or is involved in ones surroundings; the degree of coherence, complexity, mystery and legibility of scenes are said to affect preference patterns that reflect reasonable behaviour and support reasonable human needs – an evolutionary approach perhaps. (University of Michigan website, faculty profile for Rachel Kaplan). Similarly, other researchers (Appleton, 1980) suggest people prefer to be in places where they have good visual access to the surrounding environment (high prospect), while also feeling protected and safe (high refuge).

Logically, negative reactions are common when visual access is denied or when the sense of refuge is absent and one feels "on view" to others. (Heerwagen, n.d.).

Other variables found to be important include naturalness, topographic variation (which could be defined as complexity) and the presence or absence of water. The problems associated with assessing these variables may lie in the interpretation of a factor such as naturalness or mystery. Some recent research attempts to take a more mathematical approach, such as the work done by Hagerhall et al where fractals defined by landscape silhouettes are linked to environmental preferences. (Hagerhall, Purcell and Taylor, 2004).

It has also been noted that "Adults commonly express preference for scenes dominated by trees, water and other natural features, compared to urban areas without such natural features. This pattern of preference appears to hold over cultures and historical periods." (Hartig and Staats, p. 280). Not only does the preference prevail, but several studies have shown that natural environments positively affect health and well-being. (Groenwegen, P.P., 2006 and Maas, 2005).

*New Tools of Measure*

Most recently, technology has allowed completely new approaches to this field of landscape preference research. Visualization and modelling softwares are used to project proposed landscape changes; Photoshop and other image adjustment programs can guage the public's tolerance to growth or development. The Collaborative for Advanced Landscape Planning (CALP) for example, is an informal group of researchers at the

University of British Columbia that specializes in landscape visualization and environmental perception. The Centre uses tools such as a Landscape Immersion Lab which creates a virtual environment by projecting panoramic images onto three angled screens resulting in realistic visualizations of existing, past and future landscapes. CALP also works on remote sensing research, databases and software for GIS (Geographic Information Systems), and 3-D modelling. (UBC, CALP).

The research undertaken in this paper makes use of the very powerful information tool, the Internet. Surprisingly, given the current extensive availability of online tools, very little research was uncovered where landscape investigators posted their surveys on websites or invited participation via e-mailed newsletters. A small study in Cambridge, Ontario in 2000 had a low level of participation and possibly inadequate theoretical basis. (2000, SKB and Associates). However a researcher based in Germany, Michael Roth, has presented a paper at the 2004 Conference on Information Technologies in Landscape Architecture titled "Online Visual Landscape Assessment Using Internet Survey Techniques." Roth states that "in landscape evaluation, especially visual quality assessment, the (Internet) revolution hasn't taken place yet." (2004, Introduction). Roth undertook to test the objectivity, reliability and validity of online surveys measuring visual quality. By making use of a recent on-site and photograph-based survey he was able to compare results obtained by the former with results obtained via a website-based questionnaire. Roth concluded that the Internet survey was objective, reliable and valid,

as well as being cost-efficient. He suggests further research into other landscape

simulations such as 360° images or video presentation of scenery. (2004).

*Trends in Landscape Research*

In terms of trends in this field of research, it seems, on reviewing some of the

more recent literature, that more studies are likely to take into consideration the full

experience of the landscape and that long interviews are often used to understand the

relationship between the viewers of scenery and the landscape itself. Laura Hurni Jensen

(2006) in an article in the Tress-edited *From Landscape Research to Landscape Planning*

describes the recent trend in Europe and especially the United Kingdom to a method

called Landscape Character Assessment, a method that marks a change "from landscape

being regarded mainly as a visual concept to landscape being about people and place,"

(2006, p. 162) bringing socio-economic aspects in the heart of landscape assessment.

Jensen noticed three phases in this evolution and it is significant that in England, at least,

protection for natural areas could be combined with countryside character assessments.

Referencing once again the New Zealand report, the authors have recognized the

importance of community values and the necessity of including local citizens in the

identification process. A Portugese case study in the island of Faial in the Azores,

described in a 2004 journal article suggests that the concept of landscape has evolved to

"incorporate components like cultural and socio-economic factors, in addition to the

natural and aesthetic features, influenced by the perception of landscape as a resource."

(Bulcao, Riberio, Arsenio, Abreu, 2004, p. 48).

Phillips and Clarke asserted in 2003 that "The assessment of landscape can be undertaken in a rigorous and comprehensive way (Countryside Commission, 2003), but it cannot be reduced to a set of computer-based calculations dealing only with numbers." (2003, p. 51). And "today's concept of landscape is vastly more than attractive senery for tourists to view." (2003, p. 53). This more socio-cultural approach to landscape evaluation has merit in that any implementation steps should be facilitated if the public has been engaged in the process from the beginning. One intriguing research style (Uzzell, 1991) was described as "action research" which carries the survey results "forward into design or decision-making workshops." (Swaffield, 2000, p. 15).

*Landscape and Sense of Place*

Antrop (2004), Tuan (1976), and Nassauer (1997) are among several current landscape scholars who speak of sense of place, but for place theory in the context of islands we must defer to Peter Hay, who proposes that islands "attract affection, loyalty, identification." (2006, p. 31). Hay goes to say "And what do you get when you take a bounded geographical entity and add an investment of human attachment, loyalty and meaning? You get a phenomenon known as 'place'."(2006, p. 31). There is little doubt that on islands the engagement of the residents with their surroundings and the character of community that develops suggest a highly developed sense of place. Hay also reminds that the threat of globalization could lead to a loss of individuality and result in ultimate "placelessness." In his article in the *Island Studies Journal*, Hay concludes "If islands do remain special places, it is because the characteristics that endow space with the shared

meanings that transform them into place may be more pronounced, better articulated, and more effectively defended on islands than is usually the case elsewhere." (p. 34).

In a recent paper by Eileen O'Rourke (2005), the Burren in Ireland is studied in terms of the socio-natural interaction and landscape dynamics. In O'Rourke's words, cultural landscapes "can be thought of as the meeting place between humankind and the environment," (p. 69) and her research involved extensive observation of and interaction with the inhabitants over the course of a year and included over 60 interviews, yielding a holistic overview of the links between landscape and society in the Burren. While there are several programs in place that could serve to help protect the Burren landscape, O'Rourke suggests that landscape "change is inevitable and must not be confused with degradation." (p. 80) and she also stresses the need for local participation in land management decisions.

Place attachment and familiarity also have been found to play a role in preference determination, and interestingly, Rachel Kaplan and Eugene Herbert found that "While preference is affected by familiarity, people do not necessarily prefer what they are familiar with." (1987, p. 291). In Norway, Bjørn Kaltenborn and Tore Bjerke (2002, p. 381) found "that place attachment had a positive effect on perceived attractiveness of landscapes that have a natural character, and landscapes that contain historically important elements." The research which follows in this paper may very well reveal differences between the two sample groups — tourists and residents — although this project has no plan to measure place attachment with PEI landscapes.

The previously quoted Joan Nassauer (1997) posits that a demonstration of care

for the landscape leads to an appreciation for the scene and agreement that the view is

attractive if not necessarily beautiful in the classic sense. Kathleen Dean Moore, in a

collection of essays called *Coming to Land in a Troubled World*, talks about this intimate

relationship between people and the land

> People value connections to the natural places that create and sustain us ... Moral
>
> obligations grow from relationships. If we are of the land, and if we care about
>
> and depend on our connections to it, then we ought to act in ways that nurture,
>
> enhance, and celebrate healthy webs of connections with the land and all members
>
> of the biotic community." (2003, p. 12).

*A Theoretical Framework*

At various points during the 20th century, academics bemoaned the lack of

common theoretical framework in this field. Writing in 1993, Allen Carlson discusses

the "theoretical vacuum in landscape assessment," an issue to which Jay first drew

attention in 1975. Carlson noted that the field still lacked an adequate theory of

justification as of 1993. Ten years later in 2003, Adrian Phillips and Roger Clarke seem

to agree: "until quite recently, multidisciplinary approaches to the understanding of our

environment were not fashionable, and landscape was therefore doomed to be everyone's

interest but no one's responsibility. As a result there has been no strong disciplinary core

to the topic" (Bishop, 2003 p. 50).

An interesting dichotomy appears to exist when considering the musings of some of the great landscape philosophers (J.B. Jackson [2003] and D.W. Meinig [1979] in particular) who place value in landscape as an expression of a community, regardless of aesthetic appeal. Jackson argues (in Meinig, p. 223) that while it would be nice to have more beauty in our landscapes "Of all the reasons for preserving a fragment of the landscape, the aesthetic is surely the poorest one." He proposes that we must "understand the landscape in living terms." (p. 224). Meinig concludes "Yearning for an ideal and humane habitat is perhaps universal. Such a habitat must be able to support a livelihood and yet cater to our moral and aesthetic nature." (1979, p. 101). Yuriko Saito (1998) agrees – he "advocates for the scenically challenged parts of nature," saying that the picturesque tradition of landscape appreciation has lessened our ability to see beauty in more modest, less grandiose scenes. (p. 101). While the notion of functionalism may be applied to landscape matters, surely there is an element of the aesthetic impossible to ignore. And herein lies the middle ground perhaps, where research and decision-making and land use management processes take into consideration not only the relative beauty of the scene, the potential economic value of the land but also the cultural and historic value of the landscapes – a process that will not only acknowledge and accept change but assist communities in making informed choices for the greater good.

*Landscape, Development and Land-use Policies*

Once again, Welsh scholars, Adrian Phillips and Roger Clarke, have a practical and current take on the topic, providing four reasons why landscape can become a medium through which to address the challenge of sustainable development: they propose

that landscape "is a unifying theme, requiring an inter-disciplinary approach; it reveals a time-depth understanding; it can only be addressed meaningfully on a relatively large scale; and it involves engaging in a cause close to many people's hearts. (2003, p. 53).

While landscape has been a popular subject of both artists and writers over the centuries, it is more specifically the topic of the working landscape that has directed this research for this paper. Many scenes have been revered for their great drama or natural beauty, but the pastoral scenes have consistently attracted favourable response as well.

*Summary*

Reviewing the materials written on the topic of landscape revealed a long-standing interest in the topic of landscape and aesthetics. The table attempts to summarize some of the literature references in terms of approach and key concepts.

Beginning with the Greek concept of Arcadia where the idealized landscape is gentle and fertile, home to shepherds and rustic gods and the inhabitants lead simple lives in harmony with nature. In modern western literature, Arcadia has become a generalized dream of rural happiness and tranquility and an alternative to the complicated experience of urban society. (University College of Cape Breton, n.d. References, Illusions & Arcadia Esoterica, Dictionary). Authors such as Antrop, Nassauer, Phillips and Clarke not only acknowledge the visual appeal of a well-kept farm scene, they also point out that the working landscape is perhaps most subject to change. Add to this the impact of tourism visitation, an issue for many islands, and the beauty of the working landscape is at risk.

| | Discipline | Key concepts | Location |
|---|---|---|---|
| Antrop | philosophy/ history | landscape change/ sense of place | Belgium |
| Claval | philosophy/ history | Arcadia/ landscape of reflection of self | France |
| Phillips & Clarke | policy | managing change/policy instruments | Wales |
| Hiss | journalism | working landscape | US |
| Leopold | environment | protection of environment | US |
| Appleton | geography | blending disciplines defining aesthetic | UK |
| Nassauer | geography/ environment | aesthetic of care | US |
| MacAulay Institute | land use planning | summary information/ planning methodology | UK |
| Swaffield & Foster | policy | summary information/research methodology | NZ |
| Daniel & Meitner (& Boster) | geography | scenic measurement/research methodology | US |
| Sullivan & Lovell | geography | scenic measurement | US |
| Jackson | philosophy | defining aesthetic | US |
| Meinig | philosophy | defining aesthetic | US |
| Jensen | land use | socio-cultural element | Netherlands |
| Roth | land use | Internet survey | Germany |
| Kaplan | geography | aesthetics/place attachment | US |

*Figure* 5: Summary of landscape researchers

One of the greatest impacts of change is the effect of urban sprawl. As Antrop noted the countryside has evolved from a place where farmers make a living to one where urbanites have opted to relocate. As this sprawl continues, the sense of place that distinguishes the country from the city is lost and along with it a sense of identity for local communities. Islands, with their often highly developed sense of place, must take note of the gradual shift in populations and living patterns. While coastlines have only increased in appeal as the location for permanent or seasonal dwelling, islands find the views for which they are famous may be altered beyond recognition.

The challenge of defining beauty in landscape has been addressed by various researchers and the reading included a great deal of material published by geographers in journals such as *Landscape and Urban Planning*, and for several decades most scholarly efforts in this field focussed on a scientific approach whereby topography would be scored and mapped and overall ratings applied. The MacAulay Institute in Scotland is an excellent repository of research in the field and they have noted several models which could include employing experts to assess the value of scenic views. More often, though the public is consulted to determine preference, making use of various survey methods. The literature seems to agree generally that substituting actual viewscape visits with photographic materials is acceptable, and while many researchers employed this technique, only a couple of references were located that used the Internet to deliver the images to the respondents. While there is absolutely no consensus on the most appropriate means to evaluate scenery, some of the survey results do appear to be consistent across research projects. Unobstructed views, views with water or vegetation,

views with mystery or that contain a possible surprise often yielded high scores. Most significant is the fact that, even in this very subjective field of beauty, respondents are able to agree to a large extent on which scenes have the greatest appeal.

The general trend in the field of landscape research is in the direction of more socio-cultural approaches. Now, researchers expect to collect much more than standard scores in public preference surveys; rather they aim to gather impressions, feelings and evidence of more personal attachments to the land. In the realm of the working landscape, our chosen topic of special interest, this sense of place and the emotional attachment to the land become even more important. Evaluating not only the scenic quotient but also the meaning of a place creates great measurement challenges of course. In terms of the actual research undertaken for this paper, the general framework for the project was guided by the descriptions provided by the MacAulay Institute and the New Zealand landscape policy researchers, Swaffield and Foster. While Swaffield and Foster (2000) describe four approaches (Psychophysical, Cognitive, Socio-cultural and Experiential or Phenomenological), the two approaches that best describe the activities undertaken by this researcher are Psychophysical and Socio-cultural. The Psychophysical approach involves the measure of perception of beauty, to be achieved by an on-line image rating instrument. The Socio-cultural aspect was met with the testing of a focus group session where opinions and sentiments about landscape were gathered.

*How other jurisdictions manage their landscape*

In addition to the review of academic literature in the field of landscape research, the researcher reviewed landscape policies of several jurisdictions around the world (with special emphasis on islands) to gather details on the ways and means to manage the scenic resource. International, national and sub-national jurisdictions were reviewed including examples of jurisdictions which have found solutions or which have addressed land issues from an aesthetic standpoint. The examples included international programs relevant to landscape, and continued with instances in Europe and North America, New Zealand and Australia and include at least two categories of process: legislative and community-based – these two not necessarily restrictive of one another. Three islands in particular were reviewed in terms of their landscape management programs, with a view to possible identification of island-specific concerns as they relate to scenery as a tourism resource or protection of coastlines. Further details of the landscape management policies of the various jurisdictions may be found in Appendix B.

*Landscape Policies Around the World*

From the international level on down, it was found that approaches vary widely among continents and countries with some regions leading the way in terms of both appreciation and protection. Over the course of the research it was determined that Europe and specifically the United Kingdom may be among the most advanced in issues of landscape management. Broad speculation on this could lead to the conclusion that densely populated regions with a long history and an appreciation for heritage may take

greater interest than regions in the "New World," where wide-open space has generally been taken for granted and a shorter span of history may imply less heritage value for landscapes. Perhaps as well, the concept of the rights of private landowners was entrenched early on in regions such as North America, settled and developed in the past three centuries.

*International and European Landscape Management*

The UNESCO World Heritage programs and the International Union for the Conservation of Nature (IUCN) are two international agencies which have addressed concerns of landscape. In general the role has been that of research and identification for the purposes of protection. It is significant that in 1992, UNESCO's World Heritage Convention introduced a category called Cultural Landscapes. Of particular interest for this study is the IUCN Category V Protected Landscape/Seascape designation which acknowledges the interaction of people and nature and could potentially to the working landscapes and seascapes of Prince Edward Island. However, safeguarding biodiversity is an included management objective under IUCN Category V designations while the Cultural Landscapes category of UNESCO does not require this.

There also exists a European Landscape Convention which is primarily and policy and research body, made up of a network of national research institutes. A leader in this sector in Europe is certainly the United Kingdom and the legendary beauty of the British countryside is well protected with well-established programs supported by extensive community involvement.

*North America*

While there does not seem to be any kind of pan-continental landscape convention such as in Europe, there are several national groups in the US concerned with landscape and scenery. National Heritage Areas, Scenic America, American Farmland Trust, Smart Growth networks, land trusts, National Scenic Byways are just a few of the programs operating to preserve open spaces and promote sustainable development. As well, some of the early research into scenic quotient measurement was conducted by US Department of Agriculture and Forestry staff.

In Canada, the list of organizations and programs related to landscape seems much shorter. The primary means of scenery (and environmental) protection has been the National Parks system, and the Canadian Heritage Rivers program protects about 30 rivers systems. Some land trusts are operating in some regions and programs such as Ontario's greenbelt program acknowledges the value of open space.

*Islands and Landscape*

Three islands of three jurisdictional levels were reviewed: New Zealand, Tasmania, and Quadra off the coast of British Columbia. All three islands take stock of their scenic resource, though management efforts vary. In New Zealand, which relies heavily on the tourism industry and its scenery, the Resource Management Act is the primary means of landscape protection and a coastal policy is currently under review. While the country has in place national policies, it is often up to local levels of government to administer regulations which may be difficult to interpret (defining

"scenic" or "appropriate development" is difficult), and applying land use restrictions in communities of made up of independent-minded islanders is a challenge. Tasmania, an island province of Australia, is also reviewing its coastal policy. Both islands appear to be searching for workable scenic amenity tools. The island of Quadra, off the coast of BC, Canada, has no real legislative or landscape control powers and depends of provincial regulations and regional planning boards for any scenic protection activity. Once a land-use plan has been established, District Managers in the BC Ministry of Forests and Range can impose a visual quality order based on both planning documents and community input.

*Landscape Management Techniques*

According to land policy researchers Bengston, Fletcher, and Nelson, land conservation measures may be categorized into three general groupings. In a 2004 article in the journal *Landscape and Urban Planning*, the three researchers summarized US public policies for managing urban growth and protecting open space (Bengston, Fletcher and Nelson, 2003). They note a lack of a national land use policy in the United States, but categorize US land conservation measures this way: acquisition of property, regulatory approaches and incentives (2003). Included in the category of property acquisition are parks and other lands acquired for the public good. A great deal of the land measures fall into the public policy instrument of regulation which includes zoning, greenbelts, or development moratoriums. Governments can also offer incentives such as

tax deferrals and credits. The authors did not discuss private sector or volunteer land conservation measures in the US.

Taking the well-established and seemingly successful model of the UK, an umbrella organization now called Natural England, brings together English Nature, the Countryside Agency and Rural Development Service for a more holistic approach to issues of landscape management that includes economic development, the environment and scenery as a resource. In the UK this is well supported by an active community movement (Campaign to Protect Rural England, Eat the View, Quality of Life Assessment, and Countryside Character Assessment). The concept of landscape character assessment seems to have caught on; 83% of English counties have now completed assessments.

*Conclusion - Managing Landscapes*

In conclusion, in the jurisdictions studied, appreciation for the scenic value of the landscape is not universal or uniformly applied. In some islands and mainlands it is rarely or not at all mentioned. In others, the amenity of scenery is uppermost in the intent of environmental management plans and legislation, while in still others scenery is valued only as secondary to other ecological resources. There seems to be no standard for the measurement of the scenic resource, but certain trends may be perceived, or valuable lessons learned from leaders in the field.

While international landscape protection programs exist, such as the European Landscape Convention or the UNESCO landscape categories, these serve mainly to

provide guidance or validity to more local efforts. A great deal of expertise lies within the European group, and a considerable amount of influence is attached to a designation by UNESCO or IUCN, but ultimately the responsibility for the land lies within local jurisdictions.

Within those local jurisdictions, landscape management efforts at times appear to be disjointed. Even with clear-cut legislation and a full set of regulations the administration of those is often tested. Volunteers, environmental lobby groups, real estate developers and planning professionals all have opinions about the value of specific scenes, or conversely the value of specific development projects. In some jurisdictions landscape preservation is achieved by zoning, in other instances property owners are compensated financially for development rights or properties are purchased outright.

It was apparent that a highly engaged local community can spell success in this sector. The UK's Campaign to Protect Rural England is a case in point – with a membership of more than 60,000, public opinion is likely to come down in support of protection measures rather than against. Even in the US, the extensive range of volunteer efforts (Scenic America, American Farmland Trust, Cultural Landscape Foundation, and so on) serves to bolster or even influence the regulatory process.

And yet, it is not clear that any one system of evaluation was more successful in any of the jurisdictions reviewed. As with the coastal policy reviews underway in New Zealand and Tasmania, a comment in common seemed to be the lack of clear direction when deciding on landscape protection actions. Terms such as "appropriate" are too

vague when considering specific development proposals and even with reasonably hard calculations of scenic quotient, the route to achieve the "perfect landscape" was not always obvious.

The IUCN Category V Protected Landscape/seascape designation is one that could prove very suitable to many island situations where the land base may be small and the scenery is rarely untouched or pristine. As in Europe, where the bulk of the designated Category V protected landscapes now exist, small islands may exhibit higher population densities, a highly developed tourism industry, domesticated, working landscapes and the absence of large expanses of wilderness. These conditions could set the scene for greater application of the Category V designation though IUCN planners caution that the category is not meant to be a dumping ground. Areas which have exceptional scenic qualities, strong connection between culture and nature, demonstrate sustainable use of resources and have maintained their integrity and traditional industries are good candidates for Protected Landscape designation. (Phillips, 2002). Currently, there are several islands which contain Category V designated landscapes including the Vinales Valley in Cuba; the vineyards in Pico, Portugal; Öland Island in Sweden; Cordilleras in the Phillipines; and the first designated Cultural Landscape, Tongariro National park in New Zealand. It is important to note that in most of the above cases, the protected landscapes comprise a working agricultural scene. As well it is significant that in 1994 the IUCN definition explicitly included "All areas of land and/or sea ..." (Phillips, 2002, 2.2.3) opening the door to greater attention for island systems, marine environments and other coastal zones. It is also important to note that in the case of PEI,

some local level of designation and management provisions would need to be in place before appealing to any international bodies for recognition.

It is impossible to say with certainty within the scope of this research project if island administrations are any more or less concerned with landscape than those in mainland jurisdictions. It is notable that coastal policies have often been developed on islands to protect marine ecology, beach access and of course the view. It is not only obvious, but has been confirmed by this research and others, that water views are generally considered superior to land-based scenes. (Scottish Executive Research, 2006 and Forest Images Pty Ltd., 2002). This places much greater responsibility in the hands of island administrations to properly take into account the special value placed on seascapes. Two of the islands studied are currently performing comprehensive reviews of their coastal policies. Even though the policies are just about ten years old, both islands acknowledged the need for careful consideration of the management plans for coastal zones. The notion of landscape character may be more clearly articulated within island communities, where sense of place often thrives. The politics of defining the most valuable places on islands can be fraught with difficulties as differing jurisdictional levels confront the issues. While it may be admirable that island administrations hand off the landscape planning function to local communities they could be doing so with inadequate direction or insufficiently clear policy guidance. As is so often seen in island communities, highly engaged individuals on both sides of the landscape issues do not hesitate to tussle it out, leading to stalemates or inaction. Meanwhile the march of development continues.

*Learnings as a Result of a Review of Landscape Policies*

What can be learned from this international review of landscape? Very briefly: without doubt all jurisdictions face challenges in managing this resource. Feelings for land run strong, yet development pressures are also powerful. While islands may contain some of the world's most treasured scenery, that of coastal views, they also face the most pressure. The IUCN Category V Protected Landscape/Seascape could offer some opportunity for islands searching for a means to preserve their scenery which would fall into the working landscape category. An engaged local community is key to effecting shifts in land use policy and no one system of "value of the view" measurement prevails. And it seems apparent that, in comparison to all the other jurisdictions under review, Prince Edward Island has one of the least effective means, or has taken the least action, to protect its valuable landscape resource.

# Chapter Four

# Measuring Landscape Preferences via an Internet Survey

## *Introduction*

The research program for this project included two phases. The first was a straightforward photo-rating questionnaire similar to other research where landscape photos were rated. Examples of this type of research include an article by Ervin Zube published in Landscape Architecture in 1973 entitled *Rating everyday rural landscapes of the Northeastern U. S.* (Zube, 1973). In 1980, Steven Shuttleworth investigated the use of photographs in landscape studies in the Journal of Environmental Management. (Shuttleworth, 1980). In the 1990s, Robert Ribe (Ribe, 1994) and Robert Ryan (Ryan, 1998) also made use of photo-rating of landscapes. These are just a few examples of research projects which measured landscape preferences undertaken in North America in the latter part of the 20th century. This project differed from earlier landscape rating research mainly in that the questionnaire was administered in a very 21st century mode via the internet.

The second phase involved a focus group where local residents were invited to discuss their general perceptions and attitudes to landscape as well as complete the same photo-rating questionnaire and also rate another 12 photos, six of which had been digitally altered. Both phases were intended to demonstrate the degree to which it is possible to measure preferences for landscape. The measurements were then used to

examine whether the type of landscape or residence of the rater influenced the preferences.

The two phases fit into two general categories of landscape research. Several of the articles reviewed in Chapter Three grouped landscape measurement research methodologies into various categories. The categories described in Simon Swaffield and R. J. Foster's *Community perceptions of landscape values in the South Island high country* have been used in this description of methodology. While Swaffield and Foster (2000) described four approaches (Psychophysical, Cognitive, Socio-cultural and Experiential or Phenomenological), the two approaches that best described the activities undertaken by this researcher were Psychophysical and Socio-cultural.

The rating of landscape photos sought to measure relationships between preferences of the respondents and the physical features of the landscape (psychophysical). The previously described Scenic Beauty Estimate method as developed by Daniel and Boster (Daniel and Boster, 1976) would be typical of this approach. It was meant to provide useful information on a sample basis that could potentially be applied to the larger landscape or the larger population. It assumed that if large numbers expressed clear preference for specific features or attributes of scenes or photos, those results could be used by planners to predict reaction to other similar scenes. Or, given the efficiency of the internet rating tool, planners could actually administer surveys as required to capture public opinion on specific scenes or on individual land use proposals.

The socio-cultural portion of the research undertaken in January 2007 is described in Chapter Five. Including both methodologies for this paper served not only to

acknowledge a current trend to more socio-cultural research in this field, but as Swaffield and Foster (2000, p. 43) noted "no single approach or method is clearly more effective or rigorous than the others." They also suggested that "The most defensible approach, where possible, is to combine two or more approaches. Multi-method studies are becoming increasingly common when dealing with complex social issues, and appear to be the most effective way to address the demands of landscape perception research" (ibid.).

The two phases employed in this research were selected to test the hypothesis that it would be possible to determine landscape preferences of residents of and visitors to Prince Edward Island. It was intended that the tools tested could be offered to policy makers as efficient and accurate methods of collecting information that could aid in making land-use decisions. The results could provide useful information to the province's planning offices in managing land use, especially as concerns the two major industries of tourism and agriculture.

*Method*

The quantitative research investigated preferences for a set of 31 Prince Edward Island landscapes via an internet-based survey. The number of scenes that could be included was limited to about 31 due to the size of the photo image files inserted in the survey software. As well, the 31 images, when tested, allowed for survey completion within a time frame that was about 7-10 minutes. There were two groups of respondents according to place of residence (Islander versus mainlander). The scenes were subsequently grouped according to four types of landscape category. The results were analyzed by mean scores for the rated individual scenes. The results were also analyzed

against place of residence and preference for landscape category types and against developed versus undeveloped landscapes.

Rating images is a well-established process in landscape research methodology. Robert Preston (2001) in his Moggill, Australia study, quotes a 1990 research article (Stamps, in *Perceptual and Motor Skills* journal) that found a correlation of 0.86 between preference ratings in situ and those resulting from photo ratings. (p. 8). As referenced earlier (Hull and Stewart, 1991; Daniel and Meitner, 2001), photographs are an acceptable way to present standardized representations of actual landscapes, and using photographic representations is a convenient, cost-efficient and standardized means to present scenes to a group of respondents. However it was not apparent that the very powerful communications tool, the internet, had been used extensively in this field to present landscape scenes to a wider audience. One other internet-based landscape survey was located in the course of the research. SKB & Associates presented a report for the Cambridge Area Route Selection Class EA Visual Inventory in March, 2000. The study was intended to develop a method of identifying and inventorying areas of visual significance, identify areas that should be preserved for their visual quality, to conduct visual preference testing of the sampled landscapes and finally to create a reference map. (SKB, 2000). In 2004, researcher Michael Roth concluded that an internet survey is a valid and reliable tool for this purpose by comparing results of an internet-based landscape preference survey with earlier results of on-site and colour print based surveys. (Roth, 2004). In the present study, the use of the internet-based survey allowed the researcher to reach large numbers of potential respondents in a cost-effective way.

*Participants*

The invitations to participate in the on-line survey were sent with permission to two e-mail newsletter subscription lists. One group was made up of 106,000 people who had requested to receive news from the PEI Department of Tourism; the other subscriber group of 750 was made up of members of the Tourism Industry Association of PEI. Of the subscribers who opened the newsletter, those who were interested in completing the survey had only to click on a link which took them directly to the survey site. Since all participants completed the Measuring Landscape Preferences survey voluntarily as a result of an invitation sent by e-mail to two lists of subscribers, it is not a true random sample. Those who completed the survey probably had some interest in PEI or its scenery.

By inviting both groups to complete an on-line survey the research project reached large numbers in each category (residents and non-residents). The E-mailed newsletter invitations reached 0.5 % and 11% of the total membership of each group respectively. In other words, of the 138,000 residents of PEI, the subscriber base of the TIAPEI E-news totals 700 tourist operators, or 0.5 % of the Island's total population. Similarly, of the approximately 900,000 annual visitors to PEI, the E-newsletter reached 106,000 subscribers or 11% of the total visitation to Prince Edward Island. Unfortunately, the open rate, or the number of people who actually opened either newsletter, was not available; therefore it is not possible to calculate the participation rate based on the overall number of invitations. However, as discussed below, in the case of internet surveys, response rates may be calculated based on the number of people who opted to

view the survey against those who started it. The survey terminated in the late summer of 2006. No reminders were sent, although the on-island survey was promoted in the local media via one radio interview in French and a news release.

| | Tourism PEI subscribers to e-news (off island) | TIAPEI members industry association (on island) |
|---|---|---|
| # of newsletters sent | 106000 | 750 |
| # of surveys viewed | 1740 | 86 |
| # of surveys started | 1257 | 56 |
| participation rate | 72% | 65% |
| # of surveys completed | 1148 | 46 |
| completion rate | 91.3% | 82% |
| average completion time | 7 minutes | 10 minutes |
| mean score of all scenes | 6.22 | 6.11 |

*Table 1*: Survey Participation

The first invitation was sent to the 106,000 English-language subscribers of the Tourism Prince Edward Island electronic newsletter on February 8, 2006. As of September 2006, 1,740 people viewed the survey, 1,257 had started it and 1,148 had completed it. The average time to complete the survey was seven minutes. The mean score of all the scenes on a scale of 0 to 8 was 6.22 for this group.

The Tourism Industry Association newsletter included a mention of, and link to, the survey in their March 2006 issue. As of September 2006, 86 people had viewed the survey; 56 started it and 46 completed it. As with the Tourism PEI survey, there was no

officially announced closing date and no reminders were sent although a local news release and French radio interview helped publicize the TIAPEI survey. The mean score for all the photos as rated by this group was 6.11. No incentives were offered to either group for completion of the survey.

In the case of internet-based or on-line surveys, determining participation rates versus completion rates and stating the overall sample size is not exactly comparable to mailed or telephone surveys. Gunther Eysenbach, writing in the Journal of Medical Internet Research, points out that "in on-line surveys there is no single response rate" (Eysenbach, 2004). Rather, he says "there are multiple potential methods for calculating a response rate, depending on what are chosen as the numerator and denominator. As there is no standard methodology, it is suggested we avoid the term "response rate" and have defined how, at least in this journal, response metrics such as, what we call, the view rate, participation rate and completion rate should be calculated" (ibid.). The Checklist for Reporting Results of Internet E-Surveys as proposed by Eysenbach was consulted and according to the section on response rates for internet surveys, it was suggested that the participation rate should be calculated by dividing the number of visitors who open the survey by the number who complete at least part of the survey. Following this a completion rate may be calculated by dividing the number who agree to participate by the number who finish the survey. Eysenbach also points out the self-select or volunteer sample obtained from on-line solicitation does differ from a representative sample. First and foremost, he maintains, the invited group, or in this case subscribers, must be clearly

identified in order to present any possible biases and of course that the survey process and methodology should be explained in detail.

*Materials*

The survey was built using a commercial software service that allowed for inclusion of images. The survey was hosted at Survey Console (the software company) and subscribers of the above two E-newsletters received invitations to participate from February through April, 2006. The software enabled construction of the survey with minimal assistance from UPEI technical support. One technical challenge related to conducting an online survey that included images was overcome through the use of the Survey Console technical support and publicly available software which was used to shrink the file size of j-pegs. Due to the file size of the images, the maximum number of questions or images was 31. Tested completion times were under ten minutes though this depended on type of internet connection used.

It is important to discuss definitions and choice of terminology used in the research. Many possible terms apply to this line of investigation, from scenic beauty, visual quality, landscape value, aesthetic significance, landscape character and visual amenity. The participants in this particular quantitative research project were asked to "Please rate the scenes in terms of scenic beauty." This phrase was seen to be a straightforward, easily understood term to measure relative attractiveness of the PEI landscape photos. Other of the terms above have a more loaded significance, attaching possible value beyond "beauty." The scale of nine un-numbered radio buttons employed the legend at the far right "not at all" and at the far left "very." Matell and Jacoby

confirm that neutral responses tend to appear more often in three- and five-point scales;

therefore a nine-point scale was determined to provide adequate range of relative beauty

and lessen the chance of neutral responses. (Matell & Jacoby, 1972). The screen shot of

one survey page, Figure 6 below, does not fully capture the scale legend but represents in
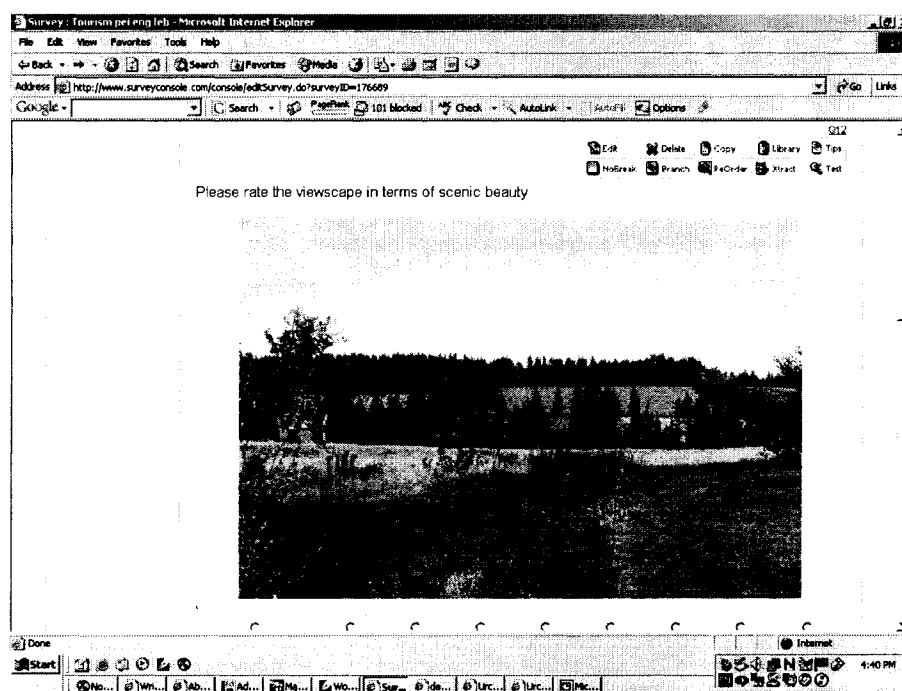


*Figure 6*: Screen shot of one of the on-line survey pages

general what the survey participants would have seen in terms of the proportion of the

image on their computer screen. A scale offering more than three or five choices allows

respondents to provide reactions to scenes in a larger range of relative scenic beauty

values, and according to Matell and Jacoby the larger number of points on the scale

lessens the chances of neutral scores. (Matell & Jacoby, 1972). This phase of the

research is meant to address simply an aesthetic rating in terms of perceived beauty of

individual scenes; the qualitative focus group session addresses to some degree landscape character, or aesthetic significance.

The photography for the survey was handled according to standards set by previous research studies in that as much as possible the images are taken at the same time of day, in similar light conditions with similar amounts of sky and land, with no extent of framing, or photographic enhancement such as cropping or zoom tools. The scenes were those which could be seen from the roadside by any driving resident or visitor. The scenes showed an assortment of landscapes meant to be generally representative of the Prince Edward Island countryside, and included traditional farmsteads, residential development, shore scenes and open fields. The study intentionally rejected the use of professional tourism beauty shots for this research, expecting that photographs of this nature would naturally receive high approval ratings for the quality of the photography, the composition and of course the selection of only iconic Island scenery.

It is also important to note at this point that some landscape research takes into account the relative visibility of the scenes; this project made no attempt to measure the probable number of times the scene is viewed or its relative importance to other viewscapes around the province by any other measure than aesthetic. Another measure that is often taken into consideration is sensitivity to change, i.e. is this landscape more or less susceptible to development or other pressures? It is acknowledged that these factors are indeed important and could be included in some way in an ultimate, or more sophisticated viewscape measurement tool.

*Procedure*

Phase one of the research project collected preference results from both local and off-Island residents for a set of 31 Prince Edward Island scenes. All photographs were taken late in the summer of 2005. The survey was built in late 2005 and the survey invitations were sent in January and February of 2006. The analysis of the responses began in the fall of 2006.

## Results

In order to draw some conclusions about Prince Edward Island landscape preferences, the scenes were grouped into four categories (this was done after the responses were collected and the choices were made based strictly on landscape features). The four categories are:

1] Coastal/no development (land plus water, only natural landscape features);

2] Traditional development (farm homes, rural scenes, coastal and non-coastal);

3] Non-coastal/no development (farm fields)

4] Coastal/non-traditional development (shore scenes with cottages, large seasonal dwellings or modern housing).

While the choice of which scenes belonged in which category was subjective, these categories served to capture some key features of the Prince Edward Island landscape and more importantly addressed specific issues related to development pressures especially as concerns shoreline subdividing and building. Categorizing water scenes versus no water was clear and indisputable. The developed category in this survey included a scene with any built structure but it is conceivable that some scenes with smaller depiction of built structures could have been seen to be undeveloped by another reviewer. The scenes could

have been categorized otherwise to reveal different comparative score sets. The categories

did not have an equal number of images included within them: Landscape Category

Number One/Undeveloped Coastal had eight scenes; Category Two/Traditional had nine

scenes; Category Three/ Non-coastal Undeveloped had four scenes; and Category Four/

Coastal/Non-traditional Development had 10 scenes. The first category, undeveloped

coastal, was clear cut, as was the third category, undeveloped inland. The distinction

between traditional and non-traditional development was less obvious and requires

further explanation. For the purposes of this research, traditional development included

farm homes, most likely constructed before 1950. It did not include summer cottages, or

other seasonal dwellings, new homes, mobile homes or subdivisions. It should be

acknowleged that the 31 scenes could have been grouped otherwise.
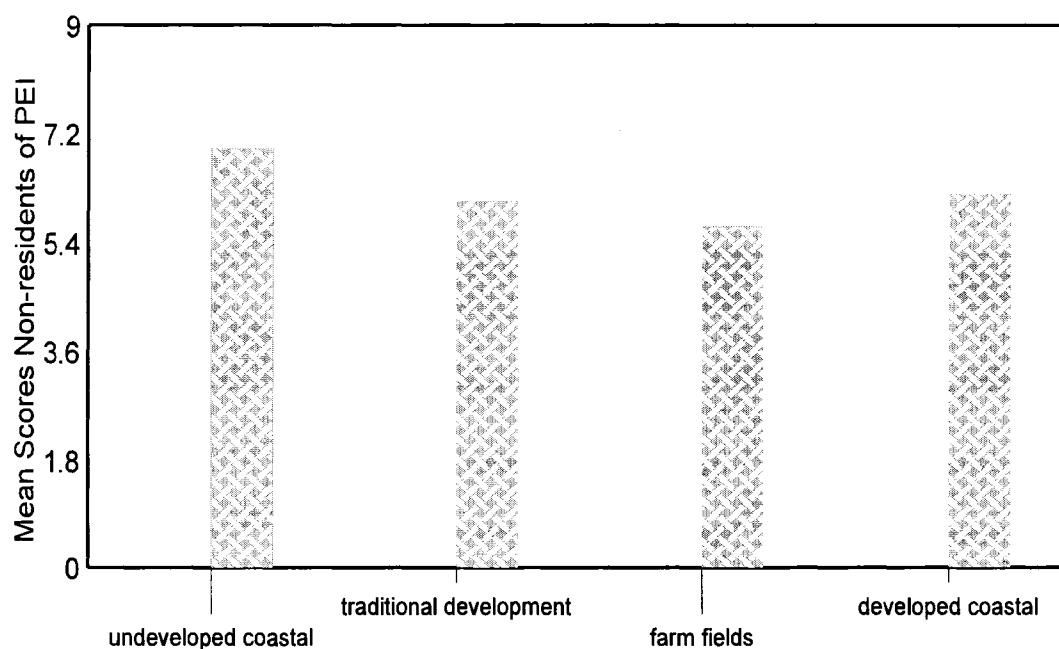


*Figure 7*: Mean scores by non-residents

Looking first Figure 7, the data resulting from the larger survey group (those

mostly off-Island) revealed that there were differences among the mean scores of the four

landscape groupings. The preferred scenery group, at a mean score of 6.95, was category

number one: Coastal /no development. In keeping with the results of other studies

(Nasar, J.L, & Li,M. 2004 and Hagerhall, p. 247, Forest Images Pty. Ltd., 2002), scenes

with water generally seem to have more appeal than inland scenes. The next preferred

group is category four: Coastal views with non-traditional development with a mean

score of 6.19. Category number two (traditional development) received a mean score of

6.08 while the least favoured by this group was the undeveloped farm field scenes at 5.68.

The standard deviation of the image scores within these groupings ranged from 1.41 to

1.83. The standard error for each landscape category types was as follows: undeveloped

coastal 0.017; traditional development 0.019; farm fields 0.030; developed coastal 0.019.

Applying a t-test to these results indicates that the differences in scores is significant; $p<$
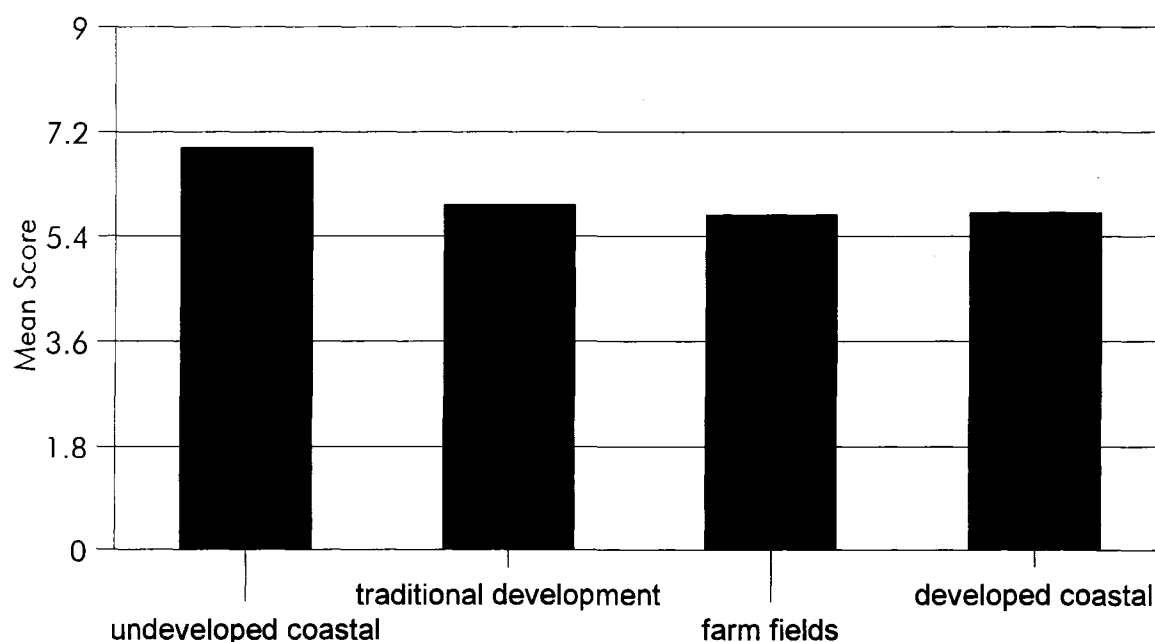
.01 for all comparisons.



*Figure 8:* Mean scores of Island residents by landscape category

The standard error between landscape category scores for the on-island group (Figure 8)

was as follows: undeveloped coastal 0.097; traditional development 0.144; farm fields

0.165; developed coastal 0.111. This group also preferred scenes with water; among

Island residents, undeveloped coastal scenes received the highest mean score at 6.93,

almost identical to that of the off-Island group. Scenes with traditional development such
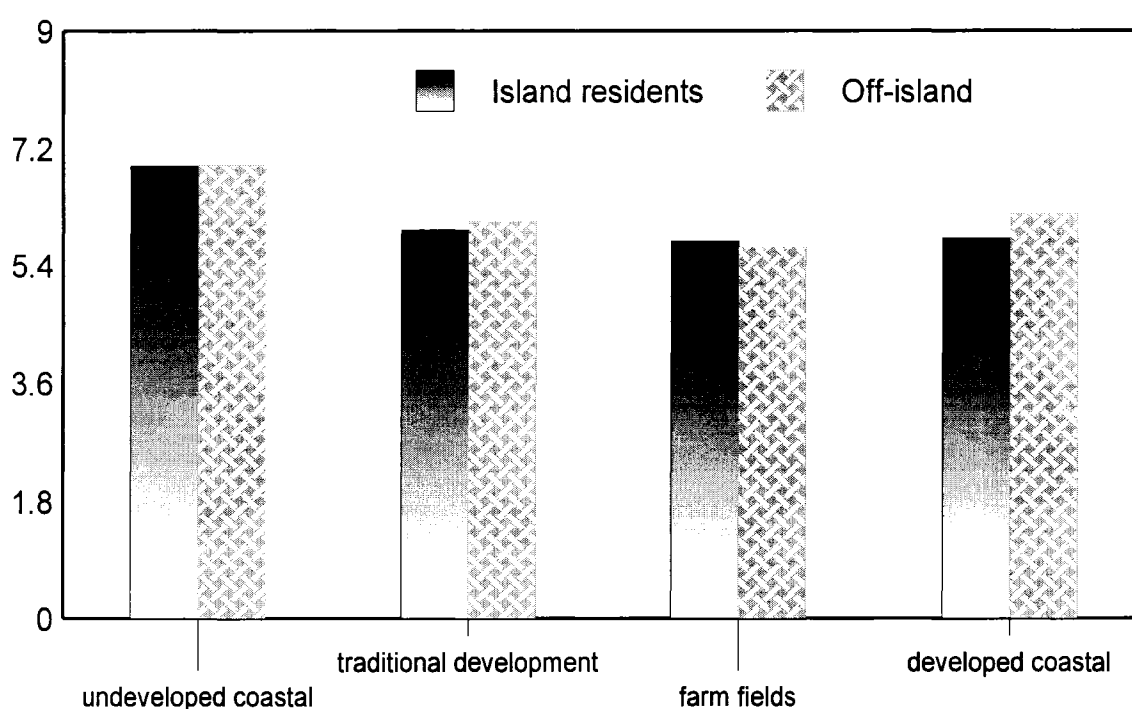


*Figure 9:* Mean scores by place of residence

as farm homes were rated at a mean score of 5.94; undeveloped inland scenes received a

mean score of 5.77; and coastal scenes with non-traditional development such as cottages

or large seasonal dwellings were rated at a mean score of 5.81. Once again the difference

in scores among the four categories is significant.

In considering the scores of the residents versus non-residents, the scores were

found to have a high degree of correlation, calculated at 0.912 which was significant.

*Figure 10*: Image #18



*Figure 11*: Image 15
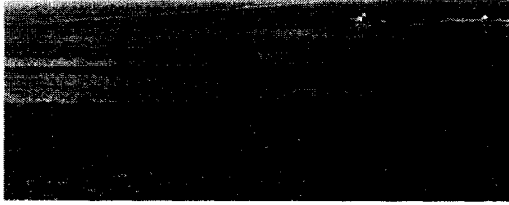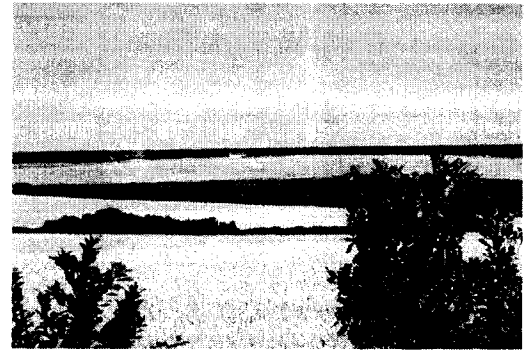
The results were also sorted by mean score (Figure 16) and it is quite revealing to note that the highest scores were apparently awarded to landscapes in categories one and two (undeveloped coastal and traditional development), with the exception of the top scoring landscape which was scene # 18 (Figure 10), a distant view of fields and water and one lone dwelling on the edge of a cliff, and scene # 15 (Figure11) which was a colourful view of ripe grain fields alternating with water and one lone distant cottage. (Both of these had been categorized in group #4, developed coastal, however this classification is open to interpretation since the open space was the dominant landscape feature in both instances.)

Aside from the two images above, undeveloped coastal scenes and those with traditional development attracted the top scores. As mentioned the scenes above (#18 and #15 or Figures 10 and 11) may have fit well in Category number one, undeveloped coastal, as the overall effect may be more of open space and water, than actual developed land. Examples of other scenes in the top ten scores and from the categories of one or two (undeveloped coastal or traditional development) are Figures 12 and 13.

*Figure 12*: Image #31


*Figure 13*: Image #25

It is revealing to look at the two lowest-scoring landscapes (rankings which both groups of respondents agreed on). The least preferred image of all 31 PEI landscapes was #19, a rural area of the Island with what seems to be ribbon development, and image # 3 which was a rolling rural landscape with power poles, a subdivision under development.


*Figure 14*: Image #19
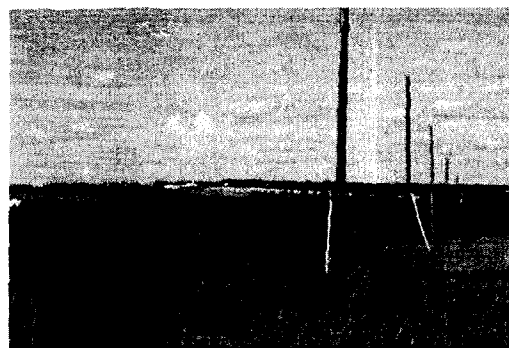

*Figure 15*: Image #3

The scores were also sorted by descending rank of preference score based firstly on the off-island group and secondarily by on-island, and charted below (Figure 16). The solid line represents the scores of the larger, off-island group; the broken line charts the corresponding score given each scene by the PEI-based group. The top ten lists of the two groups have nine images in common. While the general slope is the same, there are some scenes which elicited more noticeable differences in scores. (The full survey, with the
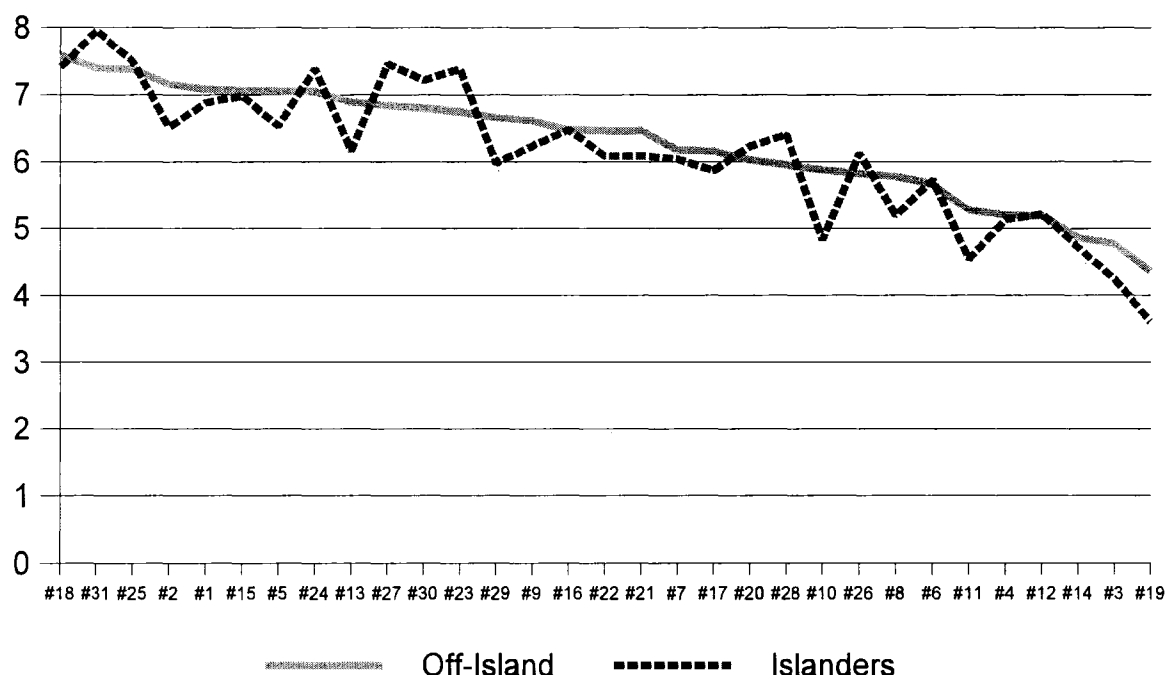
Figure 16: Scores sorted in order by residence

images in order is appended.) Scenes # 2, 13, 29,10, 8, 11 and 19 were less appealing to

Island residents. All but one of these photos included some degree of residential

development. Islanders rated only four scenes higher than the larger group: #30, 27, 23,

31. Of these, only one shows any development and that is the classic island farm home at

Springbrook (# 27), often portrayed in posters. Scene # 30 is of the rolling fields in New

Glasgow area and the other two are undeveloped shoreline. Once again landscapes from

categories one and two were popular. Images 18 and 15 also appeared in the top ten

though they were not as highly rated. Islanders preferred Image #31 above, giving it the

high mean score of 7.96, while Image #25 was rated at 7.5. In fact both top ten lists have

nine images in common, though the two groups did not rate each scene with the same

mean score.

## *Discussion*

The insights gained from this research may be applied to set the standard for a simplified tool of measurement that, combined with learning from a second qualitative landscape research exercise, could be used in a practical way to assist Prince Edward Island land-use policy makers. If it is to be acknowledged that the Prince Edward Island landscape now contains viewscapes worthy of preservation, this measurement system could prove useful. An inexpensive and easily administered on-line survey could quickly gauge the reaction of residents to specified scenes, possibly ones under threat of development or irreversible change.

The questions and presentation of the surveys were identical; both groups viewed the same survey questions in the same order and the invitation to click to link to the survey functioned in the same way for both the on-island and off-island groups. Possible differences for each participant could have resulted in terms of the various types of equipment used by the individual participants (i.e. colour resolution of monitors) as well as the aforementioned differences in internet connection speeds. As well, some of the respondents could be familiar (in person) with some of the scenes, while others may never have visited the province at all. Some consideration should be given to the possibility that some respondents were rating not just the scene or landscape but also the quality of the photography, which was intentionally not professional level.

Other limitations to this survey method (aside from a sampling process which leads to the inclusion of respondents who have for the most part some interest in the province) should be considered. While it was possible for the participants in each group to complete the survey only once (as limited by the survey technology), it would have been conceivable

for someone to complete each survey as they were served on separate sites. The only demographic question that was asked of the survey respondents regarded place of residence. Of the more than 1100 respondents in the larger sample, 3.48 percent live in Prince Edward Island. Due to the promised factor of anonymity, the responses of those 40 were not separated from the largely non-resident group, nor included in the on-island group.

While the Survey Console software subscription provided a powerful and efficient tool to reach large numbers of respondents as well as manage the resulting data, one particular drawback emerged once the survey building process was almost complete. Although the possibility to randomize the order of questions was a promised software feature, it was learned at the last moment that randomization could only occur if all the questions appeared on one "page." After weighing the options, it was decided that it would be preferred to present each image and rating scale on its own page to avoid distraction and scrolling issues, and to speed the load times of the image-heavy survey, and as a result all respondents saw the images in the same order. At least one study (Hagerhall, 2001, p. 86) has shown that the presentation order of the questions in that experiment did not affect results, but as acknowledged above, the lack of ability to randomize the photo order could be seen as a constraint.

The scenes were categorized after the responses were collected according to four groups which assisted in determining preferences for developed versus undeveloped landscape, scenes with our without water and traditional versus non-traditional styles of development. The researcher made subjective categorization selections and it is possible the scenes would have been placed in different categories by another independent

observer. Also other categories would have yielded different results, of course. This would make the subject of interesting further research. The presence of water in a scene is certainly clear-cut and able to be objectively categorized. In this survey, any built structure was included in the developed category, but developed versus undeveloped could pose some differences in categorization as pointed out earlier. Long-view photos with only one small housing unit could be considered by some as largely undeveloped. Most problematic is the definition of traditional versus non-traditional, and another survey could clearly set out the defining features of traditional farm homes as opposed to subdivisions, modern housing or other types of development that would not be considered traditional farm homes. The categorization of the photos made the analysis of the survey results manageable; comparing 31 scenes on a one-by-one basis would not be practical, but it must be pointed out that the scenes could have been grouped by presence of colour, by composition, by presence of vegetation or any of a number of other categories. With a focus on providing tools useful to planners, the above categories were imposed as supplying information on developed versus undeveloped lands especially related to shoreline property. The literature review revealed that islands often develop coastline policies; by categorizing the scenes based on the presence of water and developed versus undeveloped shoreline, the results could prove useful should the province of PEI wish to pursue a similar coastline planning exercise.

One other possible constraint to the research process was an issue over the potential recognition of dwellings in some of the images. In the case of one of the invited groups (who live mainly off-Island), it was highly unlikely that the dwellings would be known, but in the case of Prince Edward Island residents this possibility became much

greater. Without permission from the property holder to present the scenes that included their dwellings in the survey it was decided to replace those scenes (three in total) with more generic landscape scenes. This replacement might have weakened the overall result, since the rejected photos included modest dwellings with no vegetative cover and so could have elicited below average scenic beauty ratings. (A local controversy over the possible pejorative interpretation of their inclusion would have detracted attention from the important reason for the research – which landscapes do Islanders and visitors prefer?) Most other buildings in the images were presented from a distance and while locals may have been able to identify the structures, their inclusion was deemed by the researcher to be neutral.

Also in interpreting the results a certain number of subjective decisions had to be made when deciding how to categorize the landscapes; i.e. a coastal scene with one lone distant dwelling was categorized as "coastal developed" even though the development was not dominant to the photo.

The low response (in terms of actual quantity of completed surveys) from Island residents could have resulted from one main factor: in areas with only dial-up internet access, the survey would have taken much longer and required a great deal of patience to complete. Participant statistics for the two groups confirm this theory. Of the total numbers who started the survey, 82.14% of the Tourism Industry Association of PEI (local) respondents completed the survey, while 91.33% of the larger Tourism PEI group completed the survey; a proportionately larger group dropped out from the TIAPEI survey (11.6% vs 6%). There is a clear indication that suggests that connection speed was a factor: the average time to complete the survey was ten minutes for Island-based TIAPEI-

member residents and only seven minutes for the larger and largely off-Island group. While this information was not collected by the survey software, it could be safely assumed given the above data that high-speed internet was much more available to the off-Island residents. An effort to better capture the opinions of Island residents in a focus group setting will be described later.

There were no open-ended questions included in the survey in order to simplify the analysis; however one or more open-text questions would have allowed for commentary regarding overall preferences or the Prince Edward Island landscape in general. Phase two of the research provides for more qualitative response to PEI scenery and viewscapes.

## *To Conclude*

The internet survey tool proved to be an efficient means to administer an image-based preference survey to a large and widespread group of respondents. The software was inexpensive and easy to use and assuming the availability of lists of names and email addresses (of people who have given their permission, of course), a web-based survey can be undertaken and completed quickly, allowing, for example, for possible on-the-spot assessments of landscapes at risk. Adverse ethical implications are few, due to the completely voluntary nature of the participation and the impersonal non-intrusive nature of the invitation. As per the details in the Information Letter in Appendix B, all participants were provided via a clickable link, with a complete description of the project, the names and contact information of the researchers, an approximate amount of time required and the promise of anonymity and the ability to withdraw at any time. The participants could also visit a web page where a study update was provided midway through the exercise.

The participants could also click on a link to read a debriefing letter at the close of the survey exercise.

It is apparent that there is a high level of agreement on preferred landscapes in Prince Edward Island. While the result that unobstructed views to the sea are preferred is not a surprise considering other research in locations outside PEI has revealed a preference for scenes that include water. (Nasar, J.L, & Li,M. 2004 and Hagerhall, p. 247). In a Scenic Amenity of the Lockyer study in Australia, "photos without water have an average scenic preference of 5.9. Those with water have a preference of 9.2." (Forest Images Pty. Ltd., 2002, p.29). The confirmation of this fact, along with other useful insights about landscape preferences, with hard data from both Islanders and potential visitors could prove to be a useful planning tool. A review of planning practices in other jurisdictions, especially islands, has shown that countries and provinces often develop special planning regulations for coastlines; limitations on development, requirements for unobstructed views and general public access are common components of coastal plans. While certain aspects of the Prince Edward Island Planning Act give special consideration to shore frontage, an earlier specialized coastal zone management plan has been merged into the current Planning Act and it has been stated earlier that only two Scenic Viewscape Zones have been identified to date in PEI.

The results of the survey showed clearly that people can agree on which viewscpes are more beautiful and that there is a high correlation between the two sample groups. The survey yielded large amounts of data that could continue to be analyzed against other single factors or landscape elements or new surveys could be readily built to determine

attitudes to such specific projects such as subdivision proposals, or the placement of wind turbines or cell phone towers.

# Chapter Five

# Tyne Valley Focus Group

## *Introduction*

In 1979, at an inaugural lecture at the University of Hull, Jay Appleton makes it clear that "'Landscape' is not synonymous with 'environment'; it is 'the environment perceived', especially visually perceived." (1980, p. 14). This approach is key to the more current interdisciplinary approach to landscape research. Appleton goes on to say "No theory of landscape aesthetics is viable unless it can find room for that enjoyment which we derive from understanding what we perceive." (Ibid.). While the on-line survey completed in phase one of this research project yielded quantities of data regarding preference, no information was obtained in the process about the feelings and attitudes of the respondents toward those or other scenes.

A second research phase, a focus group session, was undertaken to gather understanding of the more complex emotional and personal responses to landscape. This approach, to use Swaffield and Foster's description "seeks to value landscapes on the basis of their social, cultural or political significance." (2000, p. 15). Swaffield and Foster point out that while similar to the experiential approach, the socio-cultural research assumes that the values discussed and recorded are shared by community members and are not strictly individual reactions. The result is enhanced understanding of the landscape situation and people's responses to landscape, rather than a tool to predict future reactions of the population to specified scenes. During a focus group session in Tyne Valley, PEI, the

online survey was administered. As well, a new measurement tool, that of rating digitally altered photographs was tested. The Tyne Valley meeting not only supported the proposal that it would be possible to determine general landscape preference, but it added dimensions about landscape opinions beyond the simple scenic rating.

## *Method*

The quantitative data collected by the on-line survey was supplemented with a qualitative research phase in the form of a focus group in January of 2007. This process was intended to gain enhanced understanding of Islanders' attitudes to the PEI scenic resource base and issues of landscape management. A focus group interview session is not expected to yield predictive results; rather the purpose is "to identify landscape values and meanings as they are subjectively defined by the respondents." (Swaffield and Foster, 2000, p. 18). As noted in Chapter Three, the general trend in landscape research seems to be away from extensive data collection on preferences and toward a community style of research, as confirmed by Swaffield and Foster: "Focus groups are being widely used in community action research in New Zealand and internationally." (2000, p. 19). And Dutch landscape researcher Laura Jensen has observed the shift "from landscape being regarded mainly as a visual concept to landscape being about people and place," (2006, p. 162), bringing socio-economic aspects into the landscape assessment process.

Focus groups have been used extensively by market research firms, first becoming popular in the last half of the 20th century. Researcher Robert Merton is credited with developing some of the first focus group studies, exploring morale in the US military. "He found that people revealed sensitive information when they felt they were in a safe comfortable place with people like themselves." (Kreuger and Casey, 2000, p. 6). While

focus groups are widely employed to collect marketing intelligence, social scientists have

used the technique to collect the attitudes and opinions on topics such as "developing HIV

education in Zimbabwe (Munodawafa et al., 1995), understanding how media messages

are processed (Kitzinger 1994; 1995), exploring people's fear of woodlands (Burgess

1996) and distance interviewing of family doctors (White & Thomson 1995)." (Gibbs,

1997).

The process as described by Swaffield and Foster is simple on the surface:

> key informants and opinion leaders from a community are brought together for
>
> periods of several hours to several days. Typically, their interactions are
>
> orchestrated by one or more researchers, who guide the group through a process of
>
> identification of values and valued locations and, preferred actions, in relation to a
>
> particular landscape setting. (2000, p. 19).

While the process may appear simple, integrity in the recording and analysis is required.

The moderator must be aware of interactions within the group and ensure that no single

personal opinion dominates. The participants are selected according to their potential to

contribute to the discussion and, in this style of research, random selection is not advised.

According to Kreuger and Casey, "conventional methods such as newsletters, form letter

invitations, or announcements at meetings" (2000, p. 69) don't work, rather the invitation

process should be deliberate and carefully planned. The optimal size for a group is usually

from eight to twelve participants and the maximum suggested time period is two hours.

The agenda is well planned as well, generally following a set discussion guide. Every

effort is made to ensure that the participants are comfortable and feel secure in speaking

their mind in the setting and atmosphere created by the researcher. The sessions are

always recorded in either audio or video format, with the full knowledge and permission of

the participants, and notes are taken by an assistant or the principal researcher.

*Participants*

The participants for the focus group exercise were identified by a community

worker in the region, and they could be described as engaged, middle-aged residents, often

involved in the community. The Tyne Valley area (a primarily rural area of Prince Edward

Island just west of Summerside and about 100 kilometres from the capital city of

Charlottetown) was selected since it was the subject of a community accounts research

project in the summer of 2006, sponsored by the Quality of Island Life Co-op as a pilot

project to introduce the concept of community accounts, a program developed in

Newfoundland to provide an

> information system providing users at all levels with a reliable source of
>
> community, regional, and provincial data... about key social and economic
>
> indicators ... and including an additional account, termed Well-Being, allows users
>
> to compile indicators from each of the above domains to develop a better
>
> understanding of the factors that determine the status and progress of their
>
> communities and regions. (Community Accounts, n.d.).

It was assumed that this community would have had occasion to consider a broader

definition of quality of life and well-being and have taken note of elements of their

lifestyles beyond the more obvious such as household income or unemployment levels. In

other words, it was believed that residents of the Tyne Valley area might be predisposed to

talk about the value of beautiful landscapes and how the Island scenery contributes to their

quality of life. The participants were invited to the focus group session to discuss land use

in their community. Each of the potential participants (as identified by the regional community worker) was telephoned and the project briefly explained and then given a reminder call.

Eleven residents of the Tyne Valley area appeared at Britannia Hall for the January 22, 2007 focus group session. The names of the participants were suggested by a local community worker, selected for their interest in the region. Even after a postponement due to the weather, all the invited participants were willing to attend the rescheduled evening. The session began at 6:30 pm and lasted two hours. There was no remuneration offered, though Tourism PEI posters were handed out after the session and snacks were served. In keeping with the procedure for the Internet survey, there was no demographic data collected from the participants regarding age, gender, employment status, income or length of time they were resident in PEI. As with the level of detail in Phase One, the participants are known as residents of the Island.

*Procedure*

According to the requirements of the UPEI Research Ethics Board, consent forms and confidentiality agreements were signed and the researcher introduced the project and outlined the evening's agenda. The session was audio tape recorded with the knowledge of the participants. As an introductory exercise, the online survey scenes were rated and moderator led the discussion according to the questions listed and finally, the doctored images were presented and rated. The moderator was a last-minute replacement due to the weather postponement and the original designated moderator was not available. The moderator has worked in the region in the field of community development and he has an excellent reputation among the residents of the region. He could be counted on to be

respectful and neutral in his facilitation. The moderator was chosen for his background in community development, his knowledge of the region, and the fact that he is widely respected by area residents and others he has worked with. The fact that he was known by most of the participants and that he has an active interest in the topic himself were advantages in this situation, in the view of the researcher.

As mentioned, as an introductory exercise, the participants were first invited to rate the same Internet survey images (presented on a screen via an LCD projector) which were included in the quantitative research phase. As well, sets of images were discussed and scored — one of the set portraying natural, undeveloped scenes while the other displayed varying degrees of human intervention on the same scene (digitally altered photos). The same 0 to 8 preference scale was used for both exercises. In between the rating exercises, a facilitator guided the group in a conversation about the Island landscape using the following open-ended questions as a discussion guide:

a) What are the special places you are happy to see when returning home from a hectic day or a long vacation?

b) Do you ever choose specific routes of travel because you like the feel of a certain road or the sights along the way?

c) Where do you take visitors, to share in the area's special places?

d) Name the places you would be most upset to see turned into a parking lot or a subdivision.

e) Do you have special memories associated with any of the local landscapes?

f) What unique elements of your area's landscape make you want to live here? What aspects are you most proud of?

g) Describe changes to landscape that are positive in your view. Describe changes that have had a negative effect on the landscape.

h) Comment on the current PEI situation as concerns landscape management and planning.

i) Would you consider scenery a resource?

j) If you could only protect some views, how would you choose?

(Based loosely on Massachusetts Historic Landscape Preservation Initiative, n.d.).

This style of discussion points is intended to serve the purpose as described by Robert Preston (2001) in his Australian Scenic Amenity report

Focus group methods use social research techniques to understand and describe the feelings and perceptions of groups of people who interact with the landscape. It is usual to seek to describe the meaning that landscapes can hold for people. ...The technique can be used as a starting point to understand people's preferences for landscape, or it can be used to support expert or quantitative survey studies." (2001, p.8).

According to the requirements of the UPEI Research Ethics Board, consent forms and confidentiality agreements were signed and the researcher introduced the project and outlined the evening's agenda.

*Results*

Firstly, the results of the two photo rating sessions will be presented. While the presentation of the internet survey was intended mainly as a discussion starter for the group the scores of the 12 respondents were analyzed. It should be noted that the conditions differed between those who completed the survey on-line at a personal computer, and those in Tyne Valley who viewed the 31 scenes on a screen in a meeting

hall, using a paper and pen to complete the rating scale. The paper scale was a visual match for the online version in that the participants were asked to "please rate the scenes in terms of scenic beauty" and the nine buttons showed only "not at all" at the far left and "very" on the far right of the scale.

Comparing the scores of the Tyne Valley group with the scores of the on-Island and non-resident groups from the on-line survey provided confirmation that it is possible for scenic preference to be measured to provide consistent and reliable results. The correlation for the Tyne Valley scores for the 31 scenes was calculated at 0.879 against the non-resident group and .872 against the Island resident group. At 29 degrees of freedom for this set of measures, this r value is considerably higher than the approximate 0.35 value which would produce a 95 % confidence level.

*Rating the altered photos*

After the main focus group discussion, described below, the participants were asked to rate 12 more images. In this case, the set of scenes included six which had been digitally altered with a graphic design software to include housing developments, single houses or cottages. The original scenes were beauty shots taken by professional photographers and obtained from Tourism PEI to be used for this purpose. The images were presented on a screen via an LCD projector, in the same mode as the first 31 scenes, and the participants used the same paper rating scale which showed the check-off buttons and the words "not at all" and "very." The 12 images were presented with altered images randomly mixed with the originals and no specific introduction was provided to suggest that some shots had been adjusted; this did become clear to the participants during the course of the rating.

When the 12 score sets of the 12 images were sorted by mean score the altered

images appeared in the bottom score range and the six unaltered beauty shots received the

highest mean scores. The mean score of the altered group was 5.5 while the mean of the

beauty shots was 7.5. The standard error calculated for each of these sets (altered versus

not) was .273 and .220 respectively. The t test result of 5.799 is well above the

approximate value of 2 which would have produced a 95 % confidence level for this set of

measures. The rating of digitally altered images such as tested above would seem to offer

another efficient and useful tool for planners to collect public opinion on development
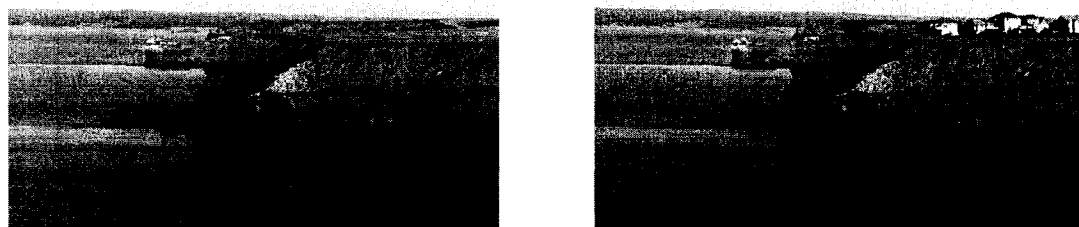
proposals.



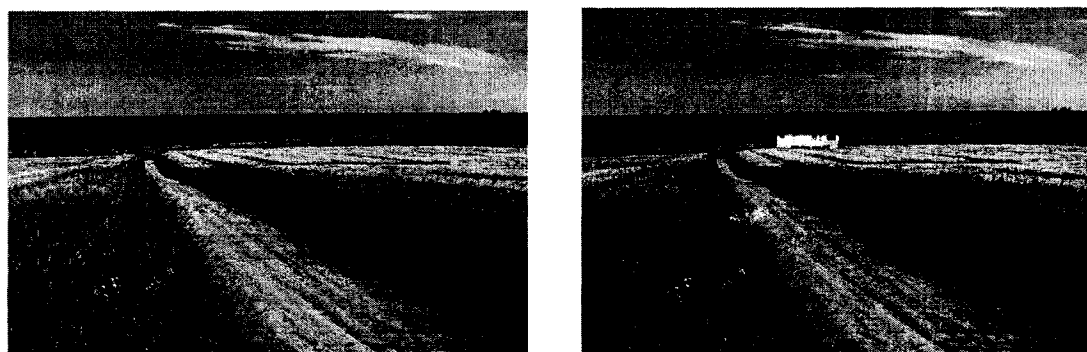*Figure 17*: Example of unaltered and altered photos



*Figure 18:* Examples of unaltered and altered photos

*The focus group discussion*

Three of the most significant observations can be summarized as follows. The experience of landscape is much more than strictly visual — sounds and smells often entered into the conversation about landscape. Secondly, nostalgia and fond memories colour perceptions of scenery. And finally, these local residents associated the concept of planning with urban areas and not necessarily their own community.

The types of commentary recorded in Tyne Valley would have been much more difficult if not impossible to capture in a questionnaire-style of survey. The responses were spontaneous and natural and the comments often spurred confirming remarks by those in the room. There is an apparent close relationship between these people and the place where they live. Some of the participants are Islanders by choice, others were born in Prince Edward Island and still live in the same general area.

The tapes were transcribed in an abridged version, then the comments organized according to similarities and consistencies. The notes were reviewed for frequency of comments, the amount of emotion that accompanied the comments, the apparent level of agreement within the group and the level of detail or example that may have accompanied the comments. The remarks prompted by the questions in the discussion guide may be summarized as follows.

Probably most striking was the clear message that these residents of Tyne Valley have an emotional attachment to their surroundings. The language that was used as well as the tone of voice communicated that strong connection: "gorgeous," and "beautiful," were descriptors employed. One respondent went so far as to say that both her arrivals to and departures from the Island caused her to "howl and bawl." Moments that inspired the

most emotion often seemed to be related to a return home, arriving by either bridge or ferry.

The notion of islandness is clear in the comments as many described beach and shore scenes as their favourites, and "could not live where they could not see the water." One participant, who had moved here 25 years ago from a Caribbean island said "when you are from an island you like to live on an island. And you would go to another island. As opposed to going to New York City - same with me when I left my island, I was happy to come to another." When asked where they would take visitors, almost all the responses involved shore locations or water scenes. The local sandhills (strip of dunes just off the northwest shore of PEI) are much appreciated, but other waterside locations across the Island had appeal such as Greenwich and Victoria by the Sea and Victoria Park in Charlottetown. One participant said "We take visitors out on a boat so they can see the island from the water." A scene as subtle as the dam freezing over inspired admiration.

A lot of nostalgia coloured the comments and responses which led to some consideration of the necessity of change. Examples were provided of places that could be at risk such as the Experimental Farm in Charlottetown which has been subject to frequent threats of development, or the lupins in Indian River which could be ploughed under. There was much appreciation for an old farm site in the neighbourhood and some wondered when the barns would finally fall down. The group agreed though, that this would be a natural process as opposed to alterations imposed on the landscape. There was concern for the demise of traditional PEI churches which are "being lost." In terms of nostalgia, many in the group mentioned picking berries as a child and this reminiscence prompted fond memories of those locations. The group also seemed to agree that their

associations with the landscape around them also involve people; that the friendliness of

the people plays a role in the image one has of a place (as opposed to a space).

There was great pride among the members of the group regarding the care taken by

Island residents when it comes to their properties and their surroundings. "People take

pride in their homes; no matter what economic strata you are from people try to take care

of their homes... they maintain as best as they can, the lawns are so nice, well kept, the

cemeteries, churches too.... Also manifest by the people who voluntarily mow their lawns

and then do the highway shoulder in front of their homes and voluntarily pick up trash."

As Joan Nassauer confirmed, the culture of care is intrinsically associated with the

aesthetics of working landscape.

It was also observed that the ideas of scenery and appealing viewscapes were tied

closely in their minds with protection of the environment. The forests and the water

sources were both topics of concern that seemed to be related to the idea of landscape.

One individual in the group had an active interest in woodlots and often referred to

favourite places involving treed areas while also expressing concern over the management

of PEI woodlands. Another had a background in municipal planning in another province

and had serious concerns over the future of the PEI water supply. While not strictly

related to the visual appeal of the landscape, these comments are consistent with the

research findings in that often environmental issues are tied to aesthetic results.

The group had a strong appreciation for the Island's built heritage, taking pride

when older homes were restored, and feeling loss when old buildings were falling down or

new construction did not fit in. Someone noted "not a tree with new housing

developments, looks really bad." Victoria by the Sea was especially appreciated for its heritage. As noted, the loss of traditional churches was considered especially unfortunate.

There was a definite opinion that the changes to the Prince Edward Island have not been especially positive. One respondent described the situation in New Glasgow: once there was just "one or two houses, and now almost cheek by jowl. One of the most aesthetic places on the Island has been ruined by the density and we are seeing that more and more." And the town of Kensington, once a pedestrian-friendly town, now seems "all built for cars, when I first moved here I used to go to Kensington to shop, but I stopped at Tim's the other day and realized the town has all changed ..." Another comment is revealing: "You should be able to tell when you are in the country and when you are in a town." It was also noted that these changes are gradual, and possibly not noticed until a larger shift has taken place.

Modern buildings mixed with traditional construction drew negative commentary. There was some criticism of the UPEI campus as a location where buildings have been constructed which do not appear to belong. Comments such as "jarring" versus "everything fits in" made it clear that the participants in this group valued a certain uniformity and harmony in the landscape. Developments underway along the Grand River (according to the group, four approved subdivision permits) were upsetting to all members in the group, many of whom had previously mentioned the Grand River Church as their favourite scene. Interestingly, when asked about land use planning in PEI at the close of the session, no one associated the Grand River projects with mismanagement of landscape, and more often assumed that planning had to do with urban areas. Some in the group described positive changes as well, where in the village of Tyne Valley efforts are being

taken to restore heritage houses and the village continues to maintain all essential services. Some in the group felt the waterfront in Summerside is undergoing positive development as well.

## *Discussion*

In summary, one of the most surprising revelations surrounded the comments related to the proposed developments at the Grand River Church location. This particular landscape has been photographed frequently and has been used by the Department of Tourism in posters and print materials; it is a classic kind of calendar shot. It was learned that four subdivisions have been approved for the shoreline of the Grand River in the vicinity of the Church and while everyone was very concerned about the effect on their favourite view, none mentioned the project when the topic of land-use planning was discussed. These residents, who were generally actively involved in community matters, seemed to accept the subdivisions as a matter beyond their control.

While all the members of the group are Island residents, and their responses were made from that point of view, they did suggest when asked about the limits or tolerance for development, that we would know when we had gone too far "when tourists stop coming." The value of the Prince Edward Island landscape as a tourist attraction is unquestioned. The connections between the landscape and other aspects of Island culture and heritage must be considered in the planning process as well. According to MacDonald and Joliffe a cultural rural tourism destination may be defined as "a distinct rural community with its own traditions, heritage, arts, lifestyle, places and values as preserved between generations." (2003, p. 308). All of the above entered into the discussion about landscape which took place in Tyne Valley, proving that the elements of landscape and

aesthetics may not readily be separated from other aspects of the local culture and "Tourists visit these areas to be informed about the culture and to experience folklore, customs, natural landscapes and historic landmarks." (MacDonald and Joliffe, 2003, p. 308). If sense of place is to be eroded, will visitors seek out destinations which have declined into placelessness?

*Limitations*

While it is agreed that the focus group process can be very revealing, providing rich detail about individual personal experiences and preferences as expressed in a group setting, there are possible drawbacks to focus groups. The task of defining the objective can be challenging. The line of questioning is soft and the topics are more about feelings and perceptions and not easily rated on a ten-point scale. In this case, the researcher wanted to supplement the data obtained by the on-line survey, to which a smaller (relative to the off-island group) size group of Island residents replied, with richer information about the attitudes to landscape matters within the province of Prince Edward Island. It seems apparent that there exists little political will to address the issue of the province's scenic resource, and it is important to ascertain if this is a result of public apathy or greater value placed on other aspects of the Island resource base, such as development potential. The researcher intended to determine if residents of one Island community placed sentimental and/or economic value on the scenes around them. As well, the focus group discussion was expected to reveal local attitudes to landscape change. The focus group, of course, does not lead to any generalizations about landscape attitudes across the province.

Other challenges related to this research technique have to do with recruiting group members, creating a comfortable setting where participants can speak their minds and in

this case dealing with weather delays and a last-minute change in moderators. At times the group can go off topic when one member dominates, or the general opinion can be swayed by one or more participants. Recording devices can stifle the natural responses or the recording can fail. If time is not well managed, the complete agenda may not be covered. Normally, more than one focus group session would be organized but the current research exercise intended to test the process, not necessarily gather results that would contribute to decision-making or future land policy. The session supported the hypothesis, that (in this case Island resident) respondents would express preference for some landscape over others. And analyzing the results of a focus session presents its own challenges — the researcher must approach this stage in a systematic and logical manner and produce a report that is able to be verified.

Limitations to this phase of the research involve possible prejudices of the participants as they were not screened in advance for political, personal or other opinions which could bias the response in the group setting. Neither was any data collected regarding gender, age, employment data or income; the on-line survey asked simply for place of residence information and the researcher had no intention of drawing any conclusions based on any of the above demographic detail. The fact that only one focus group session was held is not usual in this field of research, however the group session, as with the online survey is intended mainly to test the usefulness of the tool, rather than to gather data per se.

## *Conclusion*

When taken together, the results of both phases of the research paint a revealing and useful picture of landscape values in the public (including those located both on and

off the Island). Generally, there would appear to be widespread agreement in the types of scenes which elicit the most approval. It would not be difficult, in the opinion of the researcher, to structure a survey that would accurately capture the opinions and attitudes of stakeholder groups to landscape issues, especially when it come to relative aesthetic values. The fact that visual appeal is clearly related to community connections and personal experiences (as learned in the focus session) would require that the process include more than strictly quantitative data. The exercise of rating images which had been altered to show a possible future development was quite revealing and definitely warrants further exploration. Both the on-line survey and the focus session yielded useful insights as to landscape preferences and the two methods taken together provided a rounded assessment as well as potentially practical guide to landscape measurement.

# Chapter Six

# Ifs, Buts and Why Nots

What is landscape? At the close of this exercise which included an effort to

measure landscape preferences, a review of pertinent literature and a summary of both the

local and international situations as concerns landscape management, it seems worthwhile

to reconsider just what we mean when we speak of "landscape." While a dictionary

definition limits the meaning to "a view or prospect of natural inland scenery such as can

be taken in at a glance from a single point of view; a piece of country scenery" (Oxford

English Dictionary), those active in the field as well as the published relevant material

generally agree that "landscape" does not exist without the "experience of it." The New

Zealand Landscape Protection Act explains it this way:

> Landscape is a concept which refers to the broader physical environment, including
>
> land and water areas, and people's perception and appreciation of that
>
> environment. ... Landscape as a human experience combines both aesthetic values
>
> and other values which humans attribute to landscape. Used in this sense,
>
> landscape is not only the physical appearance of land but also the subjective
>
> baggage each person carries with them ... Everyone's landscape is different. What
>
> we perceive depends on our experience, knowledge, expectation and role. (NZ
>
> Landscape Protection Act, p.7).

*Ifs*

"'Landscape' has ecological, scenic, and cultural meaning ..." according to the Tasmanian State of the Environment Report. (Tasmania State of the Environment Report, Scenic Landscape Condition section). This human component of landscape provides the challenge for measurements associated with it; if each individual's experience of the landscape differs, how on earth can assessments be made that can find agreement among the larger public? How can landscape management decisions that so directly affect the daily lives of citizens be made in a way that attempts to represent the preferences of the generalized local population? While this paper focussed primarily on the aesthetic aspect of the landscape, there are, of course, many more facets to the topic, which may only serve to complicate or cloud the effort to objectively measure the value of one view over another. The interdisciplinary nature of the field of landscape research is what causes it to be both fascinating and thorny. Often, landscape research has played a secondary role to the more obvious environmental sector. In the words of Adrian Phillips "Lacking a coherent philosophy, think on quantification, and without a strong unified disciplinary core, it has often been viewed as a 'soft' topic." (2002, p. 3). Phillips points out that "because many of the values of landscape cannot be quantified, they are open to challenge in a world where what cannot be measured is at risk." (Ibid.).

The challenges of blending disciplines and quantifying intangibles have not prevented a multitude of researchers from trying, however. Theorists continue to attack the subject from all angles while policy makers the world over struggle to administer land

regulations that seek to protect views deemed valuable, maintain regional character or preserve the cultural heritage of a community.

This research project assessed the local landscape management situation in Prince Edward Island, a Canadian island province generally renowned for its scenery. The research also reviewed literature relevant to landscape preference measurement and undertook a two-phase study that included an on-line viewscape preference survey (with both on- and off-Island respondents) as well as a qualitative focus group session that discussed attitudes to the local landscape. The paper summarized landscape protection measures and regulations in islands and mainland jurisdictions in several countries around the world. In spite of the many individual responses to landscapes and scenery the study proposed that general preferences would emerge for some landscapes over others. The project determined that the Internet can serve as a functional and useful tool for administering this type of survey. As well, the project combined two approaches of landscape research – psychophysical and sociocultural. While a quantity of data suggested that one category of landscape could be shown to have more appeal over others, the discussions in the local community revealed that landscape elicits strong feelings that go beyond strict aesthetic ratings.

*Islands, Landscapes and Tourism*

Often, the economic health of islands depends heavily on the tourism industry. The "lure of the island" is undeniably appealing for vacationers and those vacationers cite "scenic touring" as a preferred activity. However, the very landscape that has lured visitors may be placed at risk by the actions or demands of those same visitors. The sea-

bounded nature of island landscapes both expands and adds value to the view with the addition of seascapes. At the same time the boundary of ocean limits the amount and extent of the land, making it seem somehow all the more valuable by virtue of these limits.

Many island tourism destinations have found themselves faced with this dilemma: a growing tourism industry, visitors searching for simpler times and restful scenery and island residents scrambling to keep up with the demands of tourists. These factors combine to produce possible conflicts. At what point do alterations to the landscape detract from its original appeal? If it is agreed that efforts must be made to preserve viewscapes, which of those views have the greatest value? Have island jurisdictions attempted to measure or place value on aesthetic surroundings, and how have they dealt with development challenges or the protection of landscapes and especially coastlines? Is the measure of scenic value completely subjective, made possible by a majority of opinion, or consensus, or is there a more objective means of measure that can be applied? Do valuable viewscapes comprise more than an aesthetic quotient; are there cultural, personal and historic reasons for protection? As noted, IUCN offers a category of landscape protection that could provide a solution for islands which exhibit a high scenic value but whose landscapes are active and lived-in.

Researchers in this field must also acknowledge that lived-in landscapes are bound to change — no one expects or wishes to live in a museum.

Landscapes are not static; their constant evolution is a result of changing natural processes, as well as the changing needs of our society. Only by understanding landscapes can we manage change that benefits current and future generations. ...

Ultimately, the challenge is to balance the needs of our society with the need to conserve wildlife, maintain natural resources and enhance local distinctiveness. (The Countryside Agency, 2006, p. 3).

Balancing the needs requires first of all an accurate assessment of the needs. If an island places great value or depends to a large extent on income from tourism, should those expectations for scenery and landscape overrule the needs and wishes of the residents? A necessary first step is to determine the extent of interest and level of commitment in a community. In some of the jurisdictions studied it was apparent that a healthy grassroots movement was often the instigation for greater governmental involvement in land use issues. While tourists and short-term visitors may have an active interest in the scenery of a destination, making it clear that travel decisions and activities are very often based on the physical attractiveness of the place, they are not generally in a position to influence local policy making.

And as earlier pointed out, visitors may actually be the landscape offenders, whether indirectly by demanding services and attractions that may not have been part of the traditional viewscape, or more directly by choosing to purchase and develop the landscape that attracted them to the destination in the first place.

Assuming a certain level of interest in and commitment to preservation of landscape, then each jurisdiction must determine process. While the above review of systems revealed that experts such as staff geographers or land use consulting companies may take on the role of assessing regional landscape resources, it is rare that they could do so in a theoretical vacuum. Community participation is an essential element in land use

management and the tools and methods for inclusion are varied. The Internet-based survey methodology tested in this project proved that it can effectively and efficiently collect data on preferences for one scene over another. In larger jurisdictions, it might be necessary to develop a model whereby the survey results could be applied to broader landscape groupings or adapted to mapping systems. In small islands such as PEI, it might be possible given the easy adaptability of the survey tool, the quick and inexpensive administration of a web-based survey and efficient collection of significant amounts of data that Internet landscape surveys could become a standard tool of planners. The use of the Internet also allows for efficient inclusion of opinions of non-residents, if that is the wish of the planners.

In this case the survey results supported the findings of other research in the area of landscape preferences. Firstly, clear indications of preference can be determined; overall, people do agree on which landscapes rate more highly than others in terms of scenic beauty. Secondly, place of residence is not necessarily a factor in the overall ratings; the landscape scores of Prince Edward Island residents followed the same general slope of the ratings made by non-residents, although the mean scores did differ for some scenes. Thirdly, when categorized into four general types of landscape, the survey results showed that one category, undeveloped coastal scenes, had more appeal than the others.

In the focus group setting, when asked to rate the scenes included in the online survey, there was general agreement on relative beauty of the 31 scenes. The altered photographs revealed clear preferences for undeveloped versus developed scenes. Moreover, the 11 members of the group felt strongly about the landscape in their

community and around the Island. The focus group discussion revealed clear emotional associations with landscape that must in some way be taken into account in land use planning.

*Reviewing the Literature and Approaches to Landscape Management*

A wide range of material was reviewed over the course of this research. The interdisciplinary nature of the landscape field led the researcher off in many directions. In the most narrow approach to actual scenic beauty measurements, the disciplines of land use planning and geography proved most fruitful and a good sampling of journal articles over the past 30 years did seem to show a trend in the research. Geographers and foresters were once preoccupied with developing a scientific measuring tool that would allow for the creation of objective scoring systems or a predictive instrument to clearly state the relative value of one scene over another. This exercise might often be performed by experts such as geographers or planners. Gradually, activity in the field has shifted to a much more socio-cultural base, where "landscape character" is the measure and the public is very much involved in the process. However the recognition of the social component of landscape values has not served to streamline the administration of land. The community involvement process is often time-consuming and reaching consensus can be very challenging when emotional attachments or personal memories are associated with the land.

In terms of technique and approach, two particular sources proved very useful: one was the summary paper from New Zealand (Swaffield and Foster, 2000), the other the Macaulay Institute in Scotland (The Macaulay Institute website). While concerned partly

with a review of work done in the context of New Zealand, the Swaffield/Foster paper did cover in a very cogent way the extensive body of international literature related to the subject of landscape management in general. Both authors are faculty members at Lincoln University, but the report was published by the NZ Department of Conservation and takes a very practical approach. The Macaulay Institute bills itself as the UK's premier land use research centre, publishing over 150 peer-reviewed papers in interdisciplinary fields dealing with land use to date.

Landscape was also considered from a philosophical and historic aspect and a certain amount of aesthetic theory contributed to the background reading. Islands and the tourism industry were also of interest for this research, especially as related to the value of the scenic resource. In an attempt to understand the current international situation as concerns landscape management, a large quantity of government websites were consulted and official reports reviewed. Of special interest were the documents posted at sites belonging to UNESCO and IUCN.

To fully grasp the Prince Edward Island landscape situation, the researcher looked at the history of the land question in PEI as well as studied the relevant legislation. Several interviews were conducted with bureaucrats working in the sector to round out and verify perceptions. Most useful from a PEI-specific point of view, with a very thoughtful and thorough consideration of all the issues related to land use in the province was the 1990 Royal Commission on the Land report, Everything Before Us by Doug Boylan. As well, to provide a lively current view to the issue of landscape, several recent articles in the media, both local and beyond, were consulted.

The extensive review of landscape management in other jurisdictions proved useful in providing a summary (not found elsewhere in the literature) of different approaches and attitudes and insight into processes. This section served to confirm that there is no one right answer, though some regions such as the United Kingdom seem to have advanced the cause to a very sophisticated level. Even in jurisdictions where landscape has played an important role over a long period of time, administering difficult concepts such as "appropriateness" has proved challenging. This portion of the research also revealed that greatest success comes with engaged communities and that there appears to be no consensus on landscape measurement tools. More than anything, the researcher was impressed by the extent of attention given to landscape in so many countries and the seeming lack of attention in Canada and especially Prince Edward Island.

In Prince Edward Island, the study base, the research revealed a long and thorny history related to the issue of land use. While both residents and visitors take great stock in the scenic beauty of the province, there seems to be little official consideration given to the current or future value of that resource. There is ample evidence that visitors have a great appreciation for the beauty of the PEI landscape, but the rate of development, especially on shore frontage may change that perception. The research conducted for this project showed a preference for less developed scenes. It was not apparent, in the investigation of the legislation or planning regulations or the application of the regulations, that scenic viewscapes as such warrant any special attention. In other words, except for two small special planning areas, development permits are awarded or refused on the basis of issues other than how they would affect the aesthetic resource of PEI. At the very least

the development of a specific coastal policy to treat in the near term the sensitive issues of galloping shoreline development would seem to be a wise choice for PEI administrators. As seen below, undeveloped coastal scenes are valued highly by both respondent groups.

The research itself revealed that people can agree on the relative scenic value of various viewscapes. For both groups, residents and non-residents, the standard error from the mean scores ranged from 0.017 to 0.165, suggesting a high level of agreement. One category of landscape, that of undeveloped coastal scenes, clearly received a higher approval rating than the other groups, and in a graph which displayed the descending mean scores for each scene in the survey, no undeveloped coastal scenes rated in the bottom third of the 31 mean ratings. Unobstructed views to the sea had the greatest appeal. While ratings for some individual scenes did differ somewhat between the two groups of respondents, the general slopes of the line graph are the same.

The method employed for the quantitative phase of this project proved the efficacy of the Internet as a tool for this type of survey. In total, almost 1,200 responses to the survey were collected. The only out-of-pocket expense was the survey software subscription. Completion rates were 82 % and 91 % – or of those who opened and began the survey, 82 % and 91 % answered all questions. While the survey can remain posted indefinitely, the response to the e-mailed invitation was generally received within the first week, meaning that results can also be obtained quickly.

The intent of the focus group was to obtain more qualitative information from local residents about their general attitudes to the landscape around them. The discussion guide centred on their feelings about special places in the neighbourhood as well their response

to changes in the landscape. The focus group participants also scored paired sets of photos, one of the pair having been altered to include development. This allowed the researcher to draw some conclusions as to attitudes to construction, subdividing and other land development activities.

*Buts*

While the results of the primary research seem clear – undeveloped seascapes have great appeal to both residents and tourists – the current Prince Edward Island legislative situation does not reflect that preference. By studying related legislation and land-use reports produced over the past 20 years, as well as through interviews with bureaucrats active in the planning sector, it is apparent that aesthetic value is not a consideration in most of the development activity undertaken to date, nor, given the apparent position of the current administration is this likely to change in the near future. Some progress has been made in protecting the safety on the highways, water tables or riparian zones but in general there is currently no "standard of beauty" that developers must meet in Prince Edward Island. Yet this is the province that makes a good deal of its living from its scenic attributes.

To a certain degree this may be explained by factors of islandness; a long history of absentee landownership followed by fierce individual sense of independence that is often seen in island communities means that rights of private property owners are guarded in high esteem. The close-knit connections often found in island communities also mean that residents feel it perfectly within their rights to expect to circumvent certain regulations and just may find the means to do so, making use of family ties or political favours. At the

same time, the close-knit community has learned that strong dissenting opinions are not often well received. A well-known land activist of the 1980s was both revered and reviled for his outspoken opinions on the visual future of the province. Marc Gallant's actions did lead to the protection of specific landscapes as well as the preservation of other aspects of Island heritage such as the wooden bait sheds on PEI wharves. His legacy lives on in the Montgomery Land Trust, but no individual activists have since surfaced to take his place.

Even with a useful measurement tool to guage the relative appeal of Island scenes, it is not clear that there is any will to effectively employ the results. In the case of jurisdictions which have successfully applied a combination of controls and purchase of development rights or outright land purchase, they have had the support of the residents who have often been vocal about what they value in their surroundings. Where scenic roadways have been developed in other jurisdictions for example, it has been proven that the net result is economic benefit for the region. One instance of a possible association of associating scenic beauty with the destination's brand positioning is worthy of further research as to possible associated value between scenery and tourism marketing. Whether the approach is top-down, bottom-up or meet somewhere in the middle, some modicum of interest must exist, or potential benefit identified, for land-use policy change to be effective.

*Why Not*

The information acquired during the course of the research regarding the IUCN Class V Protected Landscape and Seascape category is certainly intriguing in terms of Prince Edward Island. The IUCN definition for Category V is as follows: "Area where the

interaction of people and nature over time has produced an area of distinct character with ecological/cultural value and high biological diversity" and the objectives for this category include: "Maintain harmonious interaction of nature and culture; Support lifestyle in harmony with nature; Maintain landscape and species diversity; Provide opportunities for recreation and tourism; Bring benefits to local communities." (UNESCO, 2004). In addition, according to Adrian Phllips, the previouisly cited Welsh landscape researcher, managing protected areas in this category allows for much greater flexibility, the inclusion of traditional agricultural or fishery practices, and possible restoration of natural and cultural values. (Phillips, 2002). As Phillips points out there is value in linking the interaction between people and nature over time and while Box 1 in his IUCN Management Guidelines publication suggests that "Category V approaches are well suited to developing countries's needs," (Phillips, 2002, Box 1), it requires no stretch of the imagination to apply the following advantages to a Prince Edward Island situation:

> links people's needs and livelihoods to the conservation and sustainable use of natural resources and hence biodiversity; typically comprises a mosaic of land ownership patterns, including private and communally owned property; can accommodate, and increase respect for diverse management regimes, including customary laws and religious observance governing resource management; has important specific objectives related to conservation of cultural heritage; seeks to bring benefits to local communities and contribute to their well-being, through the provision of environmental goods and services; and has proven to work well in

certain places where strict protected areas have failed because of the difficulties of securing support from local communities. (ibid.).

The UNESCO Cultural Landscapes category is also of interest and in this case, does not require a component of biodiversity. In either case, it must be acknowledged that these issues of landscape preservation must first be addressed at a local level and the policies and land use plans should be in place that would allow for the proper management of any internationally designated cultural landscapes or seascapes.

Adequate evidence exists as to the high degree of attractiveness of the province's scenic resource. It is apparent that continuing development is changing that scenic resource irretrievably; some might say the situation is urgent. Perhaps some effort should be directed toward identifying the necessary steps to place parts or all of PEI on a UN tentative list for eventual designation by that international body. Adrian Phillips suggested in 2002 that addressing lived-in landscapes as IUCN Category V protected areas may be "An approach whose time has come." (2002, p. 13). He sees a possible shift from the priority focus on saving natural areas to greater attention to working landscapes. Guy Swinnerton seemed to agree that the Category V designation might be ripe for future consideration of new working landscapes. (2004, p. 84).

Another possible approach to acknowledging the net value of the landscape and the farms that define the PEI scene is to consider appraising the farm community as "natural capital," whereby farmers would be paid for conserving ecological goods and services. Pilot projects are underway in some parts of Canada to assess the practicalities of this

system; Canada's island province would seem an ideal laboratory for such a project. This approach has been used successfully by the European Union.

While less than ideal as a solution, some consideration should be given to a very simple technique of mitigation. Vegetative cover has been proven to lessen the detrimental effects of inappropriate development. Islanders are already keen gardeners and the soil and climate seem to lend themselves to propagation of all sorts of bushes and trees. This approach could be used after the fact as well as be included as a requirement in any new development proposals.

In no way are any of the above concepts to be interpreted as simplistic solutions to what is acknowledged as a complex issue; an issue that involves far more than the forces of pro- and anti-development. The paper is meant to present a rounded view of the situation surrounding the landscape resource, especially in Prince Edward Island, pointing out possible problems, suggesting tools to measure the resource and reminding readers of the notion of "place" which it is proposed, is highly developed in Prince Edward Island. How closely this sense of place is related to the physical aspect of the land, and how well it can survive in the face of "creeping sameness" are possible topics for another research project.

Some very practical actions could be taken on a local front to address the issue of the changing Prince Edward Island landscape:

a) Investigate the possibilities for UNESCO Category V Protected Landscape/seascape designation.

b) Develop a comprehensive coastal policy that would identify the most valuable viewscapes in addition to addressing other pressing issues of beach access, cottage lot subdivisions, salt water intrusion and so on.

c) Research the National Seashore model currently in place in some US states, especially in relation to the L. M. Montgomery Land Trust region

d) Standardize the measurement tools tested in this research in order that they provide planners with reliable systems for community input during the planning process.

e) Consider the brand value of the Prince Edward Island scenic resource from a tourism marketing standpoint.

f) Review other jurisdictions for solutions applicable to the Prince Edward Island situation.

*To Conclude*

"Yearning for an ideal and humane habitat is perhaps universal. Such a habitat must be able to support a livelihood and yet cater to our moral and aesthetic nature." (Meinig, 1979, p. 101).

Without doubt, the places we live in affect us in very many ways, and in ways extending well beyond basic physical needs. Comments at the Tyne Valley focus group session revealed that the connection with landscape is deep and personal, and that sense of place thrives where this connection exists. Can this co-dependence of connection to land and sense of place survive if land use policies ignore the more metaphysical aspects of community living, the elements of living that support our moral and aesthetic nature? The

musing may seem rhetorical, but the question is key as one considers how to value the view, or find useful measurement tools to assess the scenic resource.

The secondary research for this paper afforded a better understanding of how the landscape resource is managed in Prince Edward Island and in other jurisdictions, including islands, around the world. Best practices and current approaches and an extensive amount of literature in the field were reviewed. The primary research tested a survey methodology as well collected a significant amount of data as to landscape preferences of Prince Edward Island residents and visitors. The data does confirm in a defensible way that there exists a strong preference for undeveloped PEI coastline scenes, and it was shown that the Internet survey technique is one that could be simply and efficiently repeated. The fact that, in the case of managing the scenic resource, Prince Edward Island appears to lag behind many other island jurisdictions who depend on scenery for their economic future is disappointing. The review of other jurisdictions did provide very useful examples and success stories where islands have long considered the coastline as a valuable resource in and of itself.

To expand this research in a Prince Edward Island setting, a province-wide open-ended survey (also by Internet) could invite nominations for outstanding scenes from individuals (and visitors if desired). At the same time, a region of the province could undertake a "smart growth" pilot project, a planning exercise that would greatly extend the scope of the current land-use planning approach to include wider measures such as the quality of the landscape.

The value of landscape goes well beyond the superficiality of the aesthetic – the economic, cultural and ecological worth must be taken into consideration. When landscape changes, as it must, the changes should be evaluated in more holistic terms that measure not only environmental impact but include an assessment of the value of the view and the effect on the community.

There is no doubt that where we live defines us, much as we define our place. The importance of this relationship with place should not be underestimated. In the case of islands, and in the case of Prince Edward Island, the concept of place might well be considered the primary defining factor; if home is allowed to become "placeless," where does that leave an island people?

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# APPENDIX A

**A 1 - NUMBERED SURVEY IMAGES**

**A 2 - SAMPLE SURVEY PAGE**

**A 3 - FOCUS GROUP DISCUSSION GUIDE**

**A 4 - ALTERED AND UNALTERED IMAGE SETS**

Image # 1

Image # 2
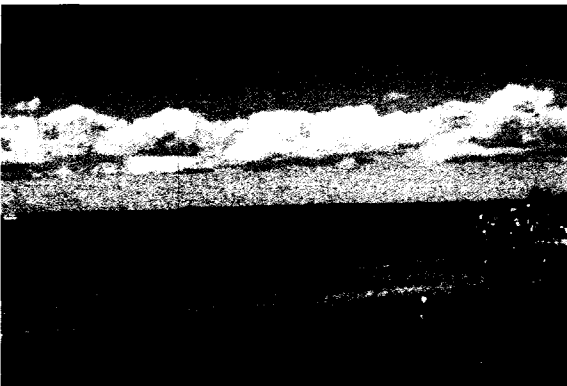
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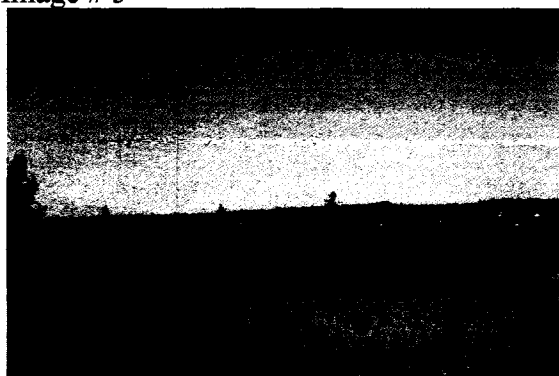
Image # 4

Image # 5

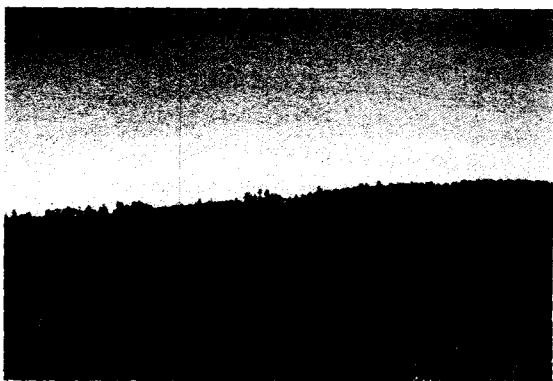Image # 6

Image # 7

Image # 8

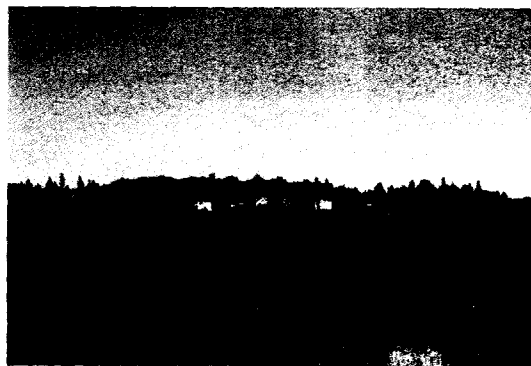Image # 9


Image #10


Image # 11


Image # 12


Image # 13


Image # 14


Image # 15


Image # 16

Image # 17

Image # 18
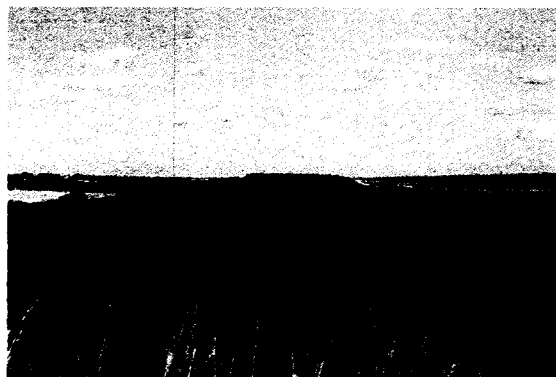
Image # 19

Image # 20

Image 21

Image # 22

Image # 23

Image # 24

Image # 25
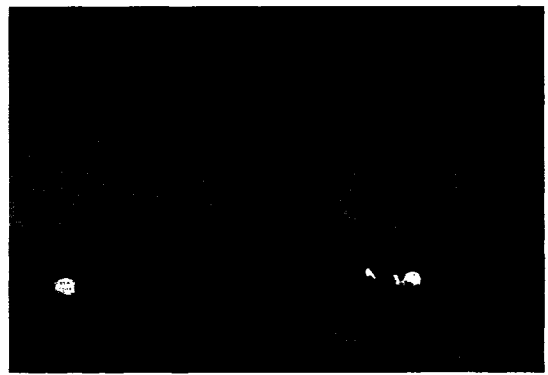
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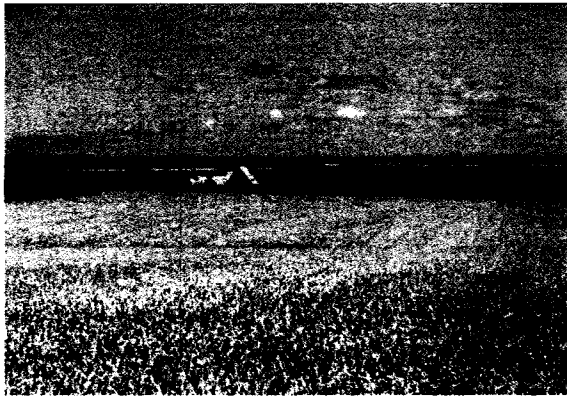
Image # 27

Image # 28
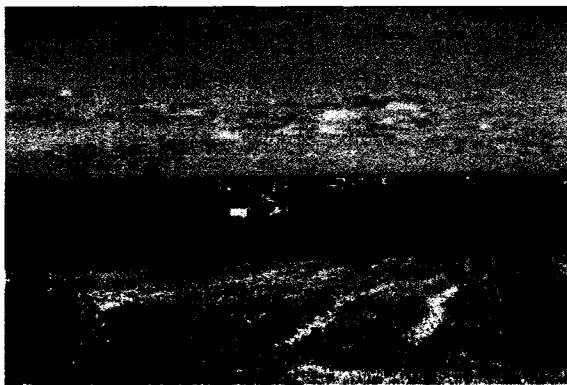
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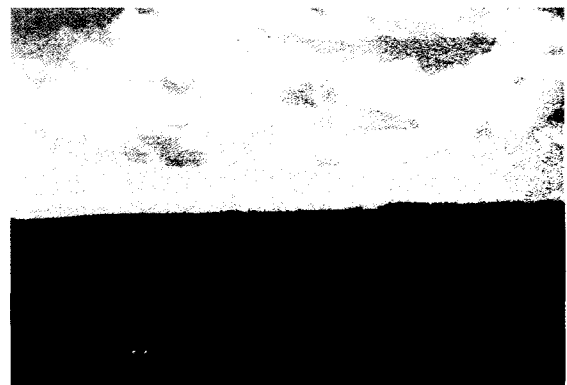
Image # 30

Image # 31

## A 2 - SAMPLE SURVEY PAGE

As a subscriber to Tourism PEI's e-mail newsletter you are invited to take part in a "Landscape Preference" survey. This is a project undertaken by a student in the Maste Arts in Island Studies program at UPEI. The survey will take less than 10 minutes to co If you would like more information about the survey please **click here**."

Please rate the viewscape in terms of scenic beauty



\*

   C   O   C   C   C   C   C   C   C

not at all

very

Please rate the viewscape in terms of scenic beauty

http://www.surveyconsole.com/console/loadResponse.do?editMode=true     12/28/2006

## Focus Group Discussion Guide:

a) What are the special places you are happy to see when returning home from a hectic day or a long vacation?

b) Do you ever choose specific routes of travel because you like the feel of a certain road or the sights along the way?

c) Where do you take visitors, to share in the area's special places?

d) Name the places you would be most upset to see turned into a parking lot or a subdivision.

e) Do you have special memories associated with any of the local landscapes?

f) What unique elements of your area's landscape make you want to live here? What aspects are you most proud of?

g) Describe changes to landscape that are positive in your view. Describe changes that have had a negative effect on the landscape.

h) Comment on the current PEI situation as concerns landscape management and planning.

i) Would you consider scenery a resource?

j) If you could only protect some views, how would you choose?

(Based loosely on Massachusetts Historic Landscape Preservation Initiative, n.d.

# APPENDIX A - 4: ALTERED AND UNALTERED IMAGES
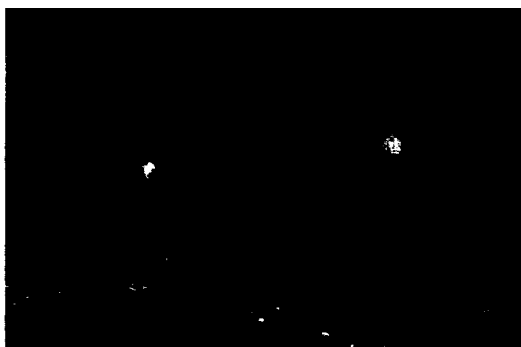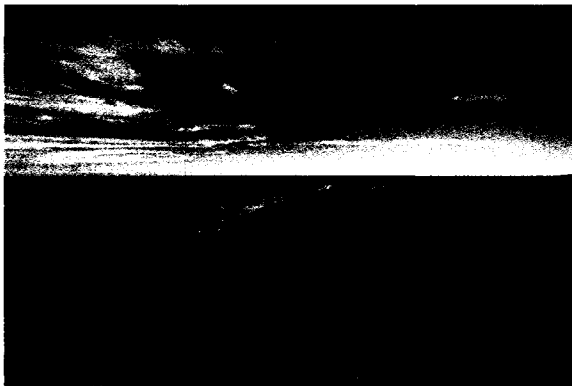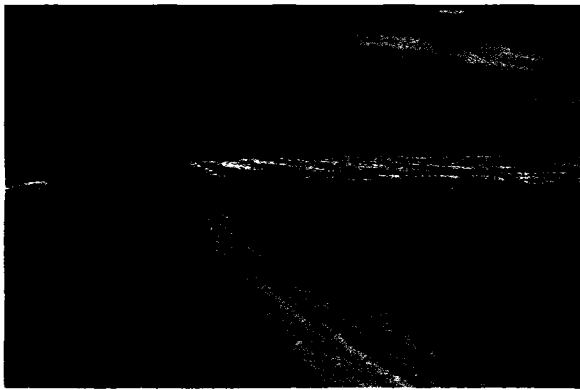
APPENDIX B: Review of land management practices in other jurisdictions

*International and European Landscape Management*

The issue of landscape preservation is not unique to Prince Edward Island or islands in general, but rather is one of international concern. With varying degrees of success, jurisdictions around the world have wrestled with how to manage the changing scenery for hundreds of years. In 1972 UNESCO signed a World Heritage Convention, noting that the world's natural and cultural heritage is at risk and setting as a priority a means of "establishing an effective system of collective protection of the cultural and natural heritage of outstanding universal value." (UNESCO World Heritage, 2007). The Convention selects several categories worthy of protection including a category called sites: "works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view." (UNESCO World Heritage, 2007) making it clear that UNESCO places value on sites with aesthetic importance.

It is especially interesting to note that the World Heritage identification process has acknowledged that islands have something special to offer in terms of world heritage: it is a fact that fully 13 % (or 108 of 830) of UNESCO World Heritage sites are on islands or else are islands in toto, even though islands occupy only 1.86 % of the world's surface area and 7 % of its land area. (Baldacchino, 2006, p. 3).

The International Union for the Conservation of Nature and Natural Resources (IUCN), mostly known as The World Conservation Union, has created a committee called the World Commission on Protected Areas whose mandate is "To promote the establishment and effective management of a world-wide representative network of terrestrial and marine protected areas, as an integral contribution to the IUCN mission." (World Commission on Protected Areas, 1995-2006, themes page). The World Conservation Union is the umbrella for a network of expertise called the World Commission on Protected Areas, a widespread group with 1200 members spanning 140 countries. The Commission has a goal to promote the establishment and effective management of a world-wide representative network of terrestrial and marine protected areas, as well as to help governments plan protected areas, to support protected areas managers; and to increase investment in protected areas (World Commission on Protected Areas, 1995-2006, about page).

A Protected Landscapes Task Force has been established by the IUCN, whose mandate is to "promote and demonstrate the value of Category V Protected Landscapes as a functional and practical mechanism for the protection of biodiversity cultural diversity and the sustainable use of resources." (ibid.). A recent update reported on a number of papers which have been published and one workshop was held in 2006. Category V Protected Landscapes are defined in the short form as "Protected Landscape/Seascape: Protected area managed mainly for landscape/seascape conservation." but in greater detail from the 1994 Guidelines for Protected Area Management Categories as: "Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity." (Phillips, 2002, p. 9).

In the Introduction to the IUCN Guidelines document, Yolanda Kakabadse claims "The category V approach is not a soft option; managing the interface between people and nature is just about the toughest challenge facing society ... Protected Landscapes are an idea whose time has come" (Phillips, 2002, p. xv). While Category V Protected Landscapes are currently concentrated mainly in Europe, it is expected that the designation will become more widely applied in the future, including in developing countries.

Several other international organizations concern themselves with heritage sites and protected landscapes including the International Centre for Protected Landscapes which is a training and development centre offering protected area management techniques. Two examples of international movements that could likely be classed as grassroots are: Landcare –"a conservation movement that brings local communities, private corporations and government agencies together to support hands-on action to promote sustainable land and water management." (Grayson Landcare, 2003-2007); and PLN — Private Landowner Network, "an Internet resource that has been designed to aggregate service providers and information to assist and facilitate voluntary private land conservation initiatives." (Grayson Landcare, 2003-2007). Neither of these initiatives are dependent on government guidance or support and rather rely on community engagement and personal responsibility for the land, leveraging volunteer activity and corporate support. The Landcare movement emerged in Australia in the late 1980s and has become well established there, with fringe groups in North America. In many ways though, in spite of UNESCO declarations and international grassroots movements, the issue of land often becomes one of very local concern.

*European Landscapes*

According to an agri-environment group "the state of European landscapes has received, over the last years, increasing attention from policy makers and researchers at both national and international level ... This is rooted in culture, tradition, aesthetics, identification and in the environment." (European Landscapes, n.d.). The European Landscape Convention, which was signed in October of 2000, covers several areas including cultural, economic and environmental issues. Specifically regarding scenic resource the Convention states that the landscape is "an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas." (Council of Europe, 2000, preamble).

The European Landscape Convention has as its goal the protection and management of all landscapes. The Convention also acknowledges the value of living landscapes, and recognizes the notion of distinctive characters among regions. Although the Convention may not carry significant legal or policy-making powers, it does manifest a real concern with the threatened landscapes of Europe. Landscape Europe is an interdisciplinary network of national research institutes with expertise in landscape assessment, planning and management at the interface of policy implementation, education and state-of-the-art science in support of sustainable landscapes. A document dated October 30, 2003, and titled *Synthesis of the received information concerning summary descriptive note on the landscape policies pursued in the council of Europe member states*, reveals that each European country has a slightly different approach to landscape policy and the few islands included in the summary (Malta and Cyprus) did not specify landscape

policies that were significantly different or more advanced than those of mainland states. (Council of Europe, 2000).

The United Kingdom has without doubt taken a strong lead in the field of landscape appreciation and protection; the UK situation will be discussed in greater detail later in terms of land management process. Long-time attention to this subject has led to an advanced system of identifying and handling the world-renowned British countryside. The current accepted process involves a Landscape Character Assessment which these days places more emphasis on community participation and depends less on singling out spectacular scenes for preservation. In addition to the straight-forward land use planning process, though, Natural England contributes to the landscape effort with programs like Eat the View, which supports local sustainable agriculture, ultimately protecting the surrounding landscape. As well a Quality of Life Assessment technique is now under review by Natural England, as a means to integrate several important economic, social and environmental factors into the land-use planning process. This approach seems admirably holistic and many would agree that the success of the UK efforts is evident in the current scenery resource which attracts sightseers (and film-makers) from around the world. Of course the residents of Great Britain, Scotland and Ireland themselves use the countryside extensively, touring the villages and hiking the walking trails.

These government-led programs though, and the accompanying National Parks, Areas of Outstanding Natural Beauty and Heritage Coastlines, are well supported by massive effort at the volunteer, community level. One such volunteer program is the 80-year-old Campaign to Protect Rural England, a movement with 60,000 members who describe themselves as "the champions of England's countryside." (Campaign to Protect Rural England, n.d.). The very well-organized association uses research on which to base its campaigns and lobbying efforts and takes credit for the establishment of the national parks program as well as Areas of Outstanding Natural Beauty and greenbelts.

The National Trust concerns itself with the English countryside and environment; the Trust manages over 1,120 kilometres of coastline for example, and protects over 90,000 hectares, most of which continues to be lived in, worked on or with open access to the public. (National Trust, 2007). English Heritage protects primarily built heritage, but also works to advise local authorities on preserving special conservation areas that can include villages, country houses, parks and greens. Another movement, Common Ground, is an original concept in the field of conservation "distinguished by the linking of nature with culture, focussing upon the positive investment people can make in their own localities, championing popular democratic involvement, and by inspiring celebration as a starting point for action to improve the quality of our everyday places." (Common Ground, n.d.). These are a few of the ways that the British public has embraced and supported the concept of landscape character and landscape protection. The wide-ranging, well-established nature of these movements serves to validate the government programs and in general it seems that the famed British views are highly valued at all levels.

*North America*

In North America, there does not appear to exist a similar pan-continental type of convention or landscape declaration as is found in Europe. Specifically in the United States, various organizations and levels of governments have taken on the issues of landscape, all the

way from the national Take Pride America government-led program of volunteers who work to improve public lands such as parks, forests and recreational land, to the extremely local land trusts of all shapes and sizes. The following several paragraphs describe some of the many American efforts to look after their landscape, an exercise which could serve to point out that in spite of (or perhaps because of) living in one of the world's most active economies, many American citizens and legislators support the land conservation movement.

Some of the early North American research in this field was done by staff of the Forest Service of the US Department of Agriculture and scientists within this division (including Terry Daniel and Ron Boster, 1976) worked to refine the Scenic Beauty Estimation Method. A paper published in 1976 by USDA Forest Service takes seriously concerns over how to properly measure scenic beauty and properly apply learning to land use planning and management. This type of research became the standard for landscape planners for much of the next decade or two. As we have seen, however, gradually researchers began to devote more attention to more qualitative aspects of landscape measures, looking for ways to incorporate the cultural/social aspects in an overall evaluation that includes aesthetic measures.

Even in the face of extensive local interest in the subject of landscape and open space preservation in the United States, the US Department of Agriculture reports that land is being developed at the rate of 365 acres per hour, or three million acres per year, while various conservation efforts manage to protect no more than two million acres per year – a net loss of at least one million acres of farmland or other open space each year. (Forbes, 2003,p. 79).

The United States Department of the Interior has developed guidelines for the preservation and treatment of cultural landscapes, defined as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." (US Department of the Interior, Preservation Brief 36). The National Parks Service (of the Department of the Interior) treats the landscape issue as part of a broader mandate to preserve and protect the environment and the landscapes that receive the attention of this program may often be treated as quasi-parks properties that may be preserved, restored or rehabilitated. It is likely that the National Environmental Policy Act of 1969 in the United States, which requires aesthetics to be considered in all federally funded projects, prompted much of the empirical research on measuring landscape quality (Brush et al., 2000, p. 39). Also the National Heritage Areas program is active in preserving spaces of cultural value.

Land use issues and land conservation though, generally fall under the jurisdiction of the individual states and as we see below many states have successfully passed land conservation and open space propositions over the past several years. In a 2004 article in the journal *Landscape and Urban Planning*, three researchers summarized US public policies for managing urban growth and protecting open space (Bengston, Fletcher and Nelson, 2003). They note a lack of a national land use policy in the United States. According to Bengston, Fletcher and Nelson, the land conservation measures may be categorized into three general groupings which include acquisition of property, regulatory approaches and incentives (2003). In the category of property acquisition we would find parks and other lands acquired for the public good. A great deal of the land measures fall into the public policy instrument of regulation which includes zoning, greenbelts, or development moratoriums. Governments can also offer incentives such as tax

deferrals and credits. The authors did not discuss private sector or volunteer land conservation measures in the US.

They also comment on the wide-spread popularity of the smart growth concept; Smart Growth Network is a partnership between the US Environmental Protection Agency and several non-profit and government organizations. (Bengston et al., 2003). "The Network was formed in response to increasing community concerns about the need for new ways to grow that boost the economy, protect the environment, and enhance community vitality. The Network's partners include environmental groups, historic preservation organizations, professional organizations, developers, real estate interests; local and state government entities." (Smart Growth Network, 1993-2007).

While the Environmental Protection Agency supports smart growth and US departments of Agriculture and the Interior have supported evaluation and protection of scenic resources, Scenic America is a grassroots movement that aims to: "Safeguard America's natural beauty and community character." (Scenic America, 2006). The group targets billboards, power lines and telecommunication towers as blights on the landscape and supports community planning, scenic roadways and tree conservation.

A spinoff of the Scenic America movement is the National Scenic Byways program, through which a community may apply for designation as a nationally significant roadway in terms of scenic, natural, historic, recreational, archaeological or cultural attributes. National funding of up to US $300 million over the next six years is available to designated roadways for planning, promoting and scenic easements. Now marking its tenth anniversary, the America's Byways designated roadways number 126. The program's definition of "scenic" goes beyond breathtaking vistas to include natural and man-made panoramas. The National Scenic Byway's website "invites you to come closer to America's heart and soul ..." (America's Byways, 2006).

A note on process is worthy of inclusion here; while the scenic byways are community initiated, a federal program, Resource Conservation & Development, administers a program that offers technical and financial help to local scenic byways projects. The professional staff advises the volunteers using tools such as a public Landscape Preference Survey, inventories and mapped resource data. (America's Byways, 2006). It is very interesting to note that "the designation of Scenic Byways increases visitation to an area, especially by people in higher- income brackets. Scenic Byways typically generate $30-35,000 per mile from non-residents each year." (Hess, Sheppard, and Strain, 1998). The conference report goes on to say "The Blue Ridge parkway, one of the best known and longest running scenic routes, contributes over $470 million per year to the local economy." (1998). These figures are clear vindication of scenery as a valuable resource that goes well beyond the fuzzier measures of community well-being and local character preservation.

Another grassroots group which appears to have been very effective in both drawing attention to farmland loss and attracting funds to forestall the loss is the American Farmland Trust. Their website states that America is losing more than one million acres of farmland each year and the "Trust is committed to protecting the nation's best farm and ranch land and improving the economic viability of agriculture." While this group may be grassroots in its origin, the Trust appears to run a sophisticated program of lobbying and policy influence as well as research and supports purchase of development rights with an overriding goal to keep

farmland in active production. The group takes credit for the creation of 27 state-level and 60 local-level farmland protection programs and considers itself as the "catalyst for unprecedented levels of funding for federal programs that protect farmland and improve the environment," estimating the dollar value of that commitment at $3.5 billion (American Farmland Trust, 2006).

"The Trust for Public Land (TPL) is a national, nonprofit, land conservation organization that conserves land for people to enjoy as parks, community gardens, historic sites, rural lands, and other natural places ..." (Trust for Public Land, 2007). So states the TPL website, and this group claims an impressive record that has completed "more than 3,000 land conservation projects in 46 states, protecting more than two million acres. Since 1994, TPL has helped states and communities craft and pass almost 300 ballot measures, generating over $19 billion in new conservation-related funding." (Trust for Public Land, 2007). The Trust for Public Lands works with willing landowners, community groups, and national, state, and local agencies to develop conservation initiatives as well as provide research and land transaction supports and promote awareness.

Yet another national American association is dedicated to the cause of land conservation and protection of open spaces. The Land Trust Alliance represents no fewer than 1500 local and regional trusts across the United States, a number that is triple the 450 land trusts that existed in the country in 1982. The Alliance states that over nine million acres have been protected by local and regional trusts, but at an estimated rate of loss of open space or farmland at one million acres per year, perhaps all these efforts will not be enough to stem the tide of creeping sameness. At least 15 members of the Land Trust Alliance concern themselves spcifically with island protection. Locations such as Bainbridge Island Land Trust in Washington state and on the east coast, the Calusa Land Trust in Florida or Deer Island area in Maine, have made special effort to preserve open space and landscape character. (Land Trust Alliance, 2007).

The Nature Conservancy is a powerful US-based nonprofit that concerns itself with protecting biodiversity in all states and around the world by protecting lands and waters. While aesthetics is not an issue for the Nature Conservancy, the protection of habitats will often lead to preservation of key open spaces, otherwise threatened by development. The Conservancy's Land Preservation Fund is considered one of its key tools to advance the mission of protecting biodiversity and it claims to have protected more than 92 million acres of land and water to date. It is very interesting to note that the Conservancy has taken a specific interest in islands: "one-third of our country programs are island nations, and many states are working to preserve their unique islands. In recent years, we have engaged in partnerships with many island leaders to create a global framework for island conservation." states the Conservancy (The Nature Conservancy, 2007). In March 2006, the Conference of the Parties to the Convention on Biodiversity (COP8) committed to work for world-wide island biodiversity. The resulting Global Island Partnership has many lofty goals including the mission to advance sustainable livelihoods on islands. The Nature Conservancy does not priorize aesthetic value of landscapes however, and conserving activities are centred on environmental issues (often leading indirectly to preserving landscapes and open space of aesthetic note).

Much attention has been given in recent years to the notion of sustainable development, a possible close relative to the popular smart growth movement. The smart growth mantra promotes economic development along with protection of open spaces. While growth and

protection may be compatible in land use management programs, it will become clear that communities and governments must identify areas requiring or meriting protection and define priorities.

Many states have allocated significant budgets toward acquisition of open spaces, some raising funds through real estate transaction taxes, others making use of bond issues or federal funds combined with fundraising and donations. For example: "In the 2000 general election, Americans voted on 174 different land conservation bond measures around the country. These were local and state-wide elections where Americans were given the option to vote for higher taxes to raise public money to save land for open space and biological diversity." (Forbes, 2003, p. 93). Forbes goes on to make the wry observation "That year when we had a very difficult time choosing our next president, Americans were resoundingly clear about their attachment to the land: 83 % of those ballot measures passed." (2003, p. 93). Similarly in other recent years, 90 % of 92 measures, 70 % of 137 measures and 75 % of 141 land conservation measures passed around the United States. Clearly the American population is ready and willing to support actions that protect the land, even at the expense of increased government spending or paying higher taxes.

The governors of the New England states got together as early as 1988 "to put together a list of all the unprotected open spaces and working landscapes within the region that New Englanders, by consensus, consider special places that help create the distinctiveness of their corner of the country" (Hiss, 1989, p.58). Prior to that, Massachusetts had already undertaken a landscape inventory of its own. One of the earliest in the US was surely the Massachusetts inventory of scenic features in 1929, which did result in protection of significant landscape features but in the opinion of Tony Hiss, largely ignored the working landscape. A later inventory (1982) eventually led in 1988 to a Design Manual administered by the Center for Rural Massachusetts. The state was divided up into six physiographic regions and the researchers included suggestions from local residents to round out the selection process. When the researchers filed their report " 4 % of the land in the state, about two hundred thousand acres, seemed to deserve a 'distinctive' rating and 5 %, or a quarter of a million acres, could be considered 'noteworthy.'" (1989, p.59).

One of the authors of the Design Manual is quoted a saying "There's usually a broad consensus among local people on the special places in their own neighbourhoods" (1989, p. 62). According to the Tony Hiss (1989) article, the Commonwealth of Massachusetts began purchasing development rights from farmers in the 1980s. Currently the Massachusetts Department of Conservation and Recreation claims to offer a "host of landscape preservation programs;" the Heritage Landscape Inventory Program has as its overall goals to increase awareness and help communities plan for preservation. Heritage Landscapes in Massachusetts are defined as those special places that help define the character of the community and some examples could include scenic roads, farms, and river corridors.

In Rhode Island, development began to boom in the 1950s leading to large expanses of land being transformed into suburban house lots and commercial development. In response, the state initiated the "Green Acres Program," which used a combination of state bond monies and matching federal and local grants. A report in the 1960s identified Historic Points of Interest, Scenic View Areas, and Special Topographical Features of the State of Rhode Island and in the

1980s an inventory of significant sites was published recognizing RI's "scenic rural landscapes, roads, and vistas of as important cultural and economic resources." (Rhode Island Landscape Inventory, n.d.). The 1990 Rhode Island Landscape Inventory (based on the Massachusetts model) categorized the landscape into three main groups (Physiogeographic, Created and Visual) and applied three ratings: distinctive, noteworthy or common. The inventory found that 15 % of Rhode Island's land base could be classified as distinctive while the other two categories together make up another 26 %. (ibid.).

A number of programs are used to purchase and protect land in Rhode Island and other states: the Agricultural Land Preservation Program  preserves land through the purchase of farmland development rights; State Land Acquisition uses state, federal and foundation funds to acquire property for recreation, hunting, fishing and other outdoor activities; Forest Legacy uses federal funds to acquire easements to protect the state's forest resources; North American Wetland Conservation Act acquires easements or fee title to protect waterfowl habitat.

Within the American National Parks system there are about ten National Seashore designations. Areas such as Fire Island, NY; Padre Island, Texas; and Assateague Island, Marlyland are protected for their special shoreline value. These sites are generally undeveloped but may be open to for recreational purposes.

Even with seemingly forward-thinking planning regulations and an actively involved governing council, sometimes community residents who care may need to step in to change the course of development. A very interesting case was described in a recent New York Times article headlined "When the Barn is the Battlefield." Anahad O'Connor (2006) describes the scene thus:

> On a hilltop in this old farming town 60 miles north of New York City, a red dairy barn sits along a hairpin curve, framed by a backdrop of pristine woodlands that sweep far into Connecticut meadow, crisscrossed by streams and treaded by bobcats, foxes, and the occasional moose. (2006, p. B1).

A 36-lot subdivision has been approved for the site which calls for the razing of the barn, but in the minds of many local residents, the traditional red barn has come to symbolize all that is disappearing as a result of creeping exurbia. "It reminds us of the day when farms framed Patterson," (ibid.) says one of the area residents. The barn is just one aspect of a ten-year negotiation between a California developer and the town which has seen the proposal scaled back from 128 homes to 36. This incident is one specific example of the complications related to the land protection process even in jurisdictions where zoning is in place and residents are engaged.

The Cultural Landscape Foundation is a not-for-profit foundation dedicated to increasing the public's awareness of the country's cultural landscapes. The Foundation makes use of an interesting public relations device called Landslide, which aims to bring attention to landscapes at risk. In 2002, the Foundation focussed on designed landscapes; the current list identifies seven rural, working landscapes. As the Foundation states, "Many of these places are also rich in cultural values, often identified with a community, an ethnic group, or a site that reflects the cultural identity of ordinary working people who shaped the landscape. From a small family farm to tens of thousands of acres of vernacular lands, *Landslide: Working Landscapes* celebrates this astonishing and fragile aspect of our cultural patrimony." (Landslide: Working Landscapes). The Foundation is interested in landscapes that "can range from thousands of acres

of rural land to homesteads with small front yards. They can be man-made [sic] expressions of visual and spatial relationships that include grand estates, farmlands, public gardens and parks." (ibid.).

Several more groups appear to be active in this field in the US, including the following. The Alliance for Historic Landscape Preservation is a US-based "inter-disciplinary professional organisation... dedicated to the preservation and conservation of historic landscapes in all their variety, from formal gardens and public parks to rural expanses." (The Alliance for Historic Landscape Preservation, n.d., homepage). The National Trust for Historic Preservation is concerned with historic buildings and communities at risk in the US.

The American corporate sector has not been completely deaf to the concerns of preservation of open space and Walmart has taken steps to "offset the footprint of Walmart's domestic activities on at least an acre by acre basis" (National Fish and Wildlife Foundation, 2007). The program is primarily to protect habitat and to date has conserved 360,000 acres. In Maine for example, 312,000 acres in the Downeast Lakes area of Washington County will be protected. Similar to the Walmart program is the North American Ducks Unlimited which conserves, restores and manages wetlands. Both of the above have as a side benefit the resulting conservation of open space though neither program is specifically concerned with viewscapes *per se.*

And so with very little effort an astonishing array of public land management activities in the US was uncovered. This wide range of trusts, grassroots movements, government programs and corporate donations appears not to be coordinated in any overriding way however. In the United Kingdom, Natural England has undertaken to oversee not only landscape management, but has integrated issues of biodiversity, historic character, air and water quality and recreation, all of which can be readily admitted are intrinsically intertwined. Both the UK and the US demonstrate a high level of activity in the field of landscape protection at all levels.

It may not be possible to state with certainty what causes a populace and a government to attach themselves to an issue such as landscape aesthetics, but it is probable that perceived threat of loss is a strong motivator. Even in a country as expansive as the United States, where land use is primarily the responsibility of 50 local governments, it seems that public opinion can shape land policy in a very real way. While at first glance, enlightened land use policy is an important part of any hope for the future of local landscape character, one must not underestimate the contribution of an engaged and vocal community.

Even if landscape actions are not coordinated under a continental body such as the European Landscape Council, or an umbrella organization such as Natural England it is apparent that communities working on a very local basis can have an impact just as state governments can respond to local concerns with positive policy actions. What might on the surface appear to be disjointed initiatives across geographical and jurisdictional levels in the United States can be assessed as real actions with real results both large and small. If the group in New York state succeeds in saving the local barn, or if the Scenic America association prevents the installation of one more billboard, then some steps will have been taken to protect the American landscape heritage.

*The landscape movement in Canada*

The researcher is left with the general impression that in Canada landscape preservation is

an issue of lesser importance than in the US or many European countries. One chart that could confirm this impression was produced by EarthTrends in 2003. The chart measures Biodiversity and Protected Areas, and even though Canada has about half the land mass of North America, the country has only about 20 % of the total protected area in the continent (of the total 32,568 hectares of protected areas in the continent in the IUCN categories III, IV and V which includes Protected Landscapes and Seascapes, Canada has only 6,435 hectares). (Earthtrends, 2007, Biodiversity and Protected Areas, country profiles).

The federal government effort that comes closest to identifying and protecting landscapes of value would be the national parks program. Its mandate states that "On behalf of the people of Canada, we protect and present nationally significant examples of Canada's natural and cultural heritage and foster public understanding, appreciation and enjoyment in ways that ensure their ecological and commemorative integrity for present and future generations." (Parks Canada, 2007, Mandate).

The researcher was unable to turn up any other federal program related to landscape protection. It is heartening to learn that Canada considers its national parks effort about 60 % complete (that more parks will continue to be named in future) and that it has as well several tentative sites for the UNESCO World Heritage designation, suggesting more landscapes of note will be preserved. This will have little to no impact on the everyday working landscapes such as those found in Prince Edward Island, however. There appears to be no national scenic roadways program, nor country-wide farmland preservation initiatives. Unlike the United Kingdom, other parts of Europe and even New England, the types of scenes treasured in Canada's smallest province – the classic working countryside — do not currently appear to fall into categories considered to be "landscapes of note" within that country's national park programs.

According to a World Conservation Monitoring Centre chart, published in Guy Swinnerton's 2004 article, Canada has over 3,224 protected sites, totalling one million square kilometres. Of those, 772 sites fall into the IUCN category V - protected landscapes/seascapes. However, Swinnerton goes on to clarify that his ongoing field research suggests that "A substantial number of the areas that are currently recorded under Category V would likely be assigned to a more appropriate IUCN protected area management category or in some instances deleted from the list" (Swinnerton, p. 82). He says that in Canada "more careful attention needs to be given to identifying protected areas as category V." (ibid.). In other words, while there are good examples of Category V landscapes within the 772 sites, "The potential exists for justifiably adding a variety of areas to the category V list." (Swinnerton, p. 84).

Swinnerton also addresses cultural landscapes pointing out that traditionally, natural and cultural aspects of land management were mutually exclusive. Cultural landscapes combine "works of nature and humankind, they express a long and intimate relationship between peoples and their natural environment." (UNESCO, 2007, Cultural Landscapes). Often in Canada, protection measures centred around environmental or biological concerns — protecting wilderness for the preservation of biodiversity or rare and dramatic landforms. Even internationally, the level of interest in cultural landscapes is still growing — only 37 sites have been identified by UNESCO as Cultural Landscapes. Now, however, the tide seems to be turning and there is a much greater openness to merging protection measures; "protected landscapes/seascapes and cultural landscapes have much in common, particularly the

involvement of local people" (p. 85). "Scenic quality, diverse habitats, traditional land use patterns, and local customs, livelihoods and beliefs, which are all significant to protected landscapes/seascapes, are also frequent characteristics of cultural landscapes." (p. 86). Swinnerton concludes with the suggestion that Canadian agencies and citizens should be convinced of the relevance of the IUCN Category V Protected Landscapes/Seascapes for future landscape management planning.

The Category V Landscape/Seascape has great potential relevance to Prince Edward Island, a province which is essentially without wild places. As esteemed Island poet, Milton Acorn, said in his famed poem *The Island*

> Nowhere that plowcut worms
> heal themselves in red loam;
> spruces squat, skirts in sand
> or the stones of a river rattle its dark
> tunnel under the elms,
> is there a spot not measured by hands;
> no direction I couldn't walk
> to the wave-lined edge of home.
> (Acorn, 1975, p. 13).

While this domestic, pastoral landscape is very much shaped by its residents, the tame aspect of the Prince Edward Island scenery very likely forms a good part of its appeal. Joan Nassauer has confirmed that a cared-for place has great appeal. The very nature of a working landscape, however, means that it is all that much more subject to change and more specifically susceptible to the pressures of development. This paper attempts in a small way to help determine if the renowned beauty of Prince Edward Island is at risk to these changing forces; the responses of both residents and visitors show that they appreciate less rather than more development in the Island landscape. Could a designation such as the UN Category V classification help to legitimize the value of the PEI scenery resource while at the same time helping to devise management plans that are currently lacking? The UN experience with Category V Landscapes and Seascapes in other regions would be very valuable in determining how to protect that which has been deemed valuable without unduly impeding the normal business of the community.

Environment Canada does administer an Ecological Gifts Program which allows landowners to donate land or development rights and qualify for tax concessions. However it is not clear under the criteria for the designation of ecological sensitivity that land could qualify for strictly aesthetic reasons. The program brochure specifies property that may qualify should contain "features that have been conserved in their natural state," (Environment Canada, 2002) — a rare condition in rural PEI and a stipulation that would not necessarily assist in the preservation of the bucolic working countryside scenery so admired in Prince Edward Island.

A major player in the land conservation sector is of course the Nature Conservancy of Canada. Since 1962, NCC has secured a long-term future for more than 1,200 properties, comprising 1.9 million acres of woodlands and seashores, internationally significant wetlands, threatened prairies, and a host of other natural places

(coincidentally totalling an area about the size of Prince Edward Island). (Nature Conservancy of Canada). The Conservancy has developed an Eco-regional Planning methodology which helps the organization identify sites that would sustain the plant and animal species of the region. The stated goal of the Conservancy, however has to do with protection of biodiversity rather than landscape or viewscapes in and of themselves.

A survey in 2000 of 82 land trusts across Canada revealed that, of the 58 land trusts that took part in this study, 39 own land or hold conservation easements. (Watkins and Hilts, 2001, p. 2). These trusts protect over 200,000 acres of land collectively. Individually the scope and abilities of the various trusts vary widely. The Ontario Land Trust boasts 32 member groups in the province and Nova Scotia, New Brunswick and Manitoba also have nature trust or habitat heritage groups as members of the Ontario alliance. The Land Trust Alliance of British Columbia has more than 40 regional trusts as members, 14 of which are island-based trusts; one of interest to this project could be the Islands Trust Fund which has as its area of concern 470 islands between Vancouver Island and the British Columbia mainland, recognized as one of the most ecologically significant regions in the world. The Islands Trust Fund was established in 1990 to preserve and protect unique ecological or cultural properties in the Islands Trust Area and currently has 63 protected areas established and carefully managed for conservation. "This legacy of special places will protect at least 25% of the remaining Coastal Douglas-fir and Coastal Western hemlock ecosystems in the Islands Trust Area ... as well as a variety of significant cultural landscapes that help preserve the scenic, rural and marine character of the area." (Islands Trust Fund, n.d., vision statement).

"Scenic, rural and marine character of the area" are key words in relation to this research, but not all land trusts specify landscape character in their goals. The Nova Scotia Public Lands Coalition has many varied member groups including tourism associations and woodlot owners groups, but the overriding vision is that public lands should remain wild lands. As mentioned, Prince Edward Island does have the Montgomery Land Trust which is concerned with preserving the scenic amenity of one small area of the province's north shore. As well the Prince Edward Island Nature Trust has been active protecting land, but not specifically for reasons of aesthetic landscape preservation.

Le Conseil du Paysage Québécois was incorporated in 1994 creating a partnership to protect provincial landscapes. In 2000 the group succeeded in developng and publishing a "Charte du paysage Quebecois" which sets out the goals and principles of the group. Notes from a recent meeting of the association suggest that while adequate legislation is now in place to protect specific landscapes in the province, there appears to be no great interest in doing so. (Conseil du Paysage, n.d., Charte and quoi de neuf).

The Ontario Greenbelt has an ambitious plan and a checkered history. "The Greenbelt is key to permanently protecting greenspace and containing urban sprawl in the Golden Horseshoe." (Ontario Ministry of Municipal Affairs and Housing, 2006, Greenbelt protection) and the Act of 2005 aims to protect 1.8 million acres of environmentally sensitive land from urban development and sprawl – an area larger than Prince Edward Island. This includes one million newly protected acres known as the

protected countryside. This action is important in that a large proportion of Canada's most valuable farmland lies within this region while at the same time, the Toronto area is one of the most rapidly growing areas of Canada. Similar to the Smart Growth programs in the US, legislation proposes Places to Grow, redeveloping brownfields and making best use of municipal resources, infrastructure and public transit. The Greenbelt supports agriculture and designated farmland and discourages urbanization. (2006, Agriculture in the Greenbelt). As well, the program promotes Greenbelt Goodness, similar in some ways to the UK's Eat the View, where the food grown within the greenbelt is advertised as fresh and produced by neighbours who are protecting the local environment. However, the Agricultural Advisory Team recommended that the government not provide direct compensation to farmers for loss of perceived future opportunities. The reaction to this move was not unanimously positive; in March 2005 hundreds of farmers blocked the roadways around Toronto protesting the government's stand on farm subsidies and the new greenbelt legislation, property rights and what protest organizers call the over-regulation of rural Ontario. Regulating land use is rarely a smooth process.

*The "How To"*

While the research turned up many types of landscape management efforts and techniques, it could be instructive and relevant to review briefly how some of the more advanced programs actually evaluate landscapes and priorize protection activities. A level of concern and awareness is the obvious necessary first step, each jurisdiction having developed their own means to deal with the process of identifying landscapes of note and applying protection measures. Moerover, in this modern age of rapid change, it is generally not quite so simple as applying a formula that selects the best views, then legislating a "do not touch" edict thereafter. Most jurisdictions will readily admit that working landscapes are just that, continuing to work and evolve and that many land agencies these days will prefer to claim that they are managing landscape change rather than imposing an inflexible set of land use strictures. As we see below, Natural England is one of the leaders in the field especially when it comes to process, and that agency aims to "conserve and enhance the local distinctiveness" rather than place any region under a glass dome as a laboratory landscape.

In the United Kingdom, the issue of landscape management has been evolving over a longer period of time and the latest iteration of a system to conserve the countryside and its local distinctiveness is Natural England which brings together English Nature, the Countryside Agency and Rural Development Service. The agency is responsible for designating England's finest countryside as National Parks and Areas of Outstanding Natural Beauty, encouraging sustainable land management, planning for rural areas, and promoting development that respects the character of all landscapes and meets the needs of local communities. In their own words: "We are the government's statutory advisor on landscape. All of our work contributes to conserving and enhancing our countryside and its local distinctiveness." (Natural England, 2006a, Landscape). It is important to note that "local distinctiveness" is key in the view of Natural England. Perhaps the pure goal of aesthetic preservation is being replaced by a more community-

minded goal that keeps in mind the needs and wishes of the local residents.

Natural England's landscape work is not limited to designated landscapes or Areas of Outstanding Natural Beauty as they are called, but also includes the urban fringe area (so susceptible to development pressures) and efforts to support the ability of farmers to continue productive agricultural activity (which results in a net landscape benefit). In addition, Natural England is working on projects such as Eat the View, Quality of Life Assessment and Countryside Character Assessment.

This last appears to be a well-thought out approach to community planning that is sensitive to landscape issues. It is about the relationship between people and place, states the Countryside Agency. "It helps us identify the features that give a locality its 'sense of place' and pinpoints what makes it different from neighbouring areas." (Natural England, 2006b, Landscape Character Assessment: Guidance for England and Scotland) or "Landscape character is a distinct, recognisable and consistent pattern of elements in the landscape that makes one place different from another, rather than better or worse." (The Countryside Agency Landscape, Access and Recreation, 2006, p. 9).

Topic Paper 1, *Recent practice and the evolution of Landscape Character Assessment*, describes the development of landscape evaluation methodology in the United Kingdom from the 1970s to today. The transition began with a seemingly objective process that emphasized evaluation of the landscape and included a quantitative measure of landscape elements (what makes one landscape better than another). In the next decade the process began to involve more subjective input and greater emphasis on classifying and inventorying landscapes. In the 1990s in England and Scotland stakeholders were more involved in a process now called Landscape Character Assessment which, rather than calculating a measure or evaluation of landscape, aims to characterize and assess potential. Now, planners and community residents are looking to express what defines the character of their region; what makes one area distinct from another. "Many believed it was inappropriate to reduce something as complex, emotional and intertwined in our culture as landscape to a series of numerical values and statistical formulae." (Swanwick, 2002, p.1). This shift in direction seems to have led to a wider concern for countryside in general, rather than devoting energies to identifying the special and dramatic scenes.

The notion of Landscape Character Assessment seems to have caught on in the UK; Topic Paper 1 estimates that 83 % of English counties had completed assessments. Character area descriptions use a standard format that summarizes the physical characteristics but also includes historical and cultural influences, buildings and settlements. Secondly the assessment should identify opportunities to conserve or enhance the character. According to the Topic Paper: the assessment "provides a common framework within which the Countryside Agency and other organizations can work in developing policy and practical initiatives." (Swanwick, 2002, p. 3). The assessment process is seen as a useful tool for engaging stakeholders as well.

In actual practice, the assessment process is followed by the development of a "landscape strategy." The strategy document describes the features or characteristics of the area and offers strategies to conserve the landscapes, retain local characteristics or

distinctive rural settlements. (The Countryside Agency Landscape, Access and Recreation, 2006, p. 11).

Examples such as the Stirling Landscape Capacity Assessment study reveal that some of the factors under consideration in the process are related to sensitivity and capacity. The assessment was carried out by a private sector planning company and provided information to allow the local council to best manage development while maintaining community character. (Swanwick, p.13). While aspects such as visual sensitivity, landscape character, or the integrity of historic resources may be considered in other planning exercises it is certainly not always obvious in the result. The renowned and apparently well-preserved British landscapes are clear evidence of a system that would appear to function reasonably well.

The above Character Assessment process has not over-ruled the existing system of Designated Landscapes in the UK, however. In addition to eight national Parks and 36 Areas of Outstanding Natural Beauty, fully 33% of the English coastline is conserved as Heritage Coast. The management plan for these regions includes conserving the beauty of the shoreline and where possible improving access for visitors. (The Countryside Agency Landscape, Access and Recreation, 2006).

In New Zealand, the process of landscape protection is supported with clearly spelled-out legislation and regulation, but even here, the laws are challenged and not all results fall in favour of the environmental protection advocates. Firstly, in New Zealand, much as in the UK, an assessment exercise is undertaken, but this process is built more on the evaluation methodology where contextual description, landscape description, and landscape characterization result in the overall evaluation. The exercise does involve community participation and includes an assessment of factors such as historical associations, natural science factors and aesthetic values. Once a NZ landscape has been defined under the Resource Management Act, further planning and development decisions should comply with restrictions according to the category.

It is encouraging to observe that British communities do not rely completely on the government-sanctioned Landscape Character Assessment process however. As noted above, many local volunteer associations are very active throughout the country, indicating a high level of concern and suggesting a greater potential for success. In regions where top-down zoning or land-use planning exists in isolation from the residents of the land, it is more likely that efforts will be met with resistance. While some regions exhibit a high level of local concern for landscape issues at the community level, it is not clear what situation caused this heightened sensibility or desire to act through volunteer and grassroots avenues to dedicate themselves to the cause of landscape protection. In New Zealand, an environmental advocacy organisation, the Environmental Defence Society (EDS), has as its primary concern the area of landscape protection. As a network of professional people the group has been active in lobbying as well as assisting local residents understand the Resource Management Act. The Society has also promoted the purchase by government of special landscapes. EDS believes there should be greater focus on finding alternative methods of protecting special places.

The Queen Elizabeth II National Trust enables landowners to protect special

features on their land through its open space covenants. The definition of open space includes "any landscape of aesthetic, cultural, recreational, scenic, scientific, or social interest or value," (QE II National Trust, n.d.) making it clear that scenery and aesthetics have high value for the Trust. QEII Trust also owns 27 properties, which collectively protect over 1,800 hectares of significant habitat. These have mostly been gifted to the Trust. Effective stewardship of these properties is greatly assisted by local communities and management committees. Just a few of the other environmental associations in New Zealand which concern themselves with open space and landscape are: Eastern Bay of Islands Protection Society, Friends of Golden Bay, Friends of the Shoreline, Save Happy Valley Coalition and so on.

*Landscapes and Islands*

As for islands and landscapes, three islands have been selected in various locations with varying jurisdictional levels (Zealand, Tasmania, and Quadra Island off British Columbia's coast), which have all shown an advanced degree of involvement in landscape planning and concern for coastline. Each island will be review New ed in terms of specific interest in scenic resource and process in managing the resource. This could prove useful for any administration considering a means to evaluate and protect landscapes of value.

NEW ZEALAND:

New Zealand is an island nation renowned around the world for its spectacular beauty which (in spite of its somewhat remote location with challenging means of access) exerts considerable draw as a tourist destination. Professor Dame Anne Salmond states the situation very well in a Heritage Landscapes Think Tank of 2003: "Ours is an island nation, surrounded by the Pacific, Te Moana-nui-a-Kiwa, a vast sea which covers about a third of the earth's surface. The exploration of this great ocean was difficult and dangerous, and New Zealand lies in its remotest reaches." (2003, p. 1). Dame Salmond wisely states "The land was here first." (p. 1). She believes that heritage places must be preserved if New Zealand is to successfully define itself as a nation. She sees five challenges: "Find a philosophical framework; Establish a means to judge landscape significance; Develop legislative frameworks; Work together; Find positive ways to celebrate the country's heritage sites and landscapes." ( p.2). This paper is most concerned with challenge number three: "Establish a means to judge landscape significance," though the last challenge (to celebrate the landscape) certainly could apply in Prince Edward Island as well.

The value of this fine New Zealand landscape has not gone un-noticed and legislation was created in the early 1990s to address the issue of threatened landscapes in the country. The Resource Management Act, passed in 1991, is meant to protect (among other things) "outstanding natural landscapes, the natural character of the coastal environment and other water bodies, areas of historic significance and landscapes that contribute to the amenity of the area, as well as areas with significant indigenous flora or fauna" (Resource Management Act Guide, Introduction, p.3). Specific attention is given to the coastal environment, surely a function of islandness.

It seems that in New Zealand, much of the actual protection responsibilities under the act has devolved to local regional councils and territorial authorities. The FAQ section of the Environmental Defence Society's Community Guide to Landscape Protection under the Resource Management Act 1991 states that "a number of bodies have different roles in managing landscapes under the RMA" (Peart, 2005, p. 4). It also seems that all landscape management processes do not necessarily run smoothly in New Zealand. For example, news headlines posted on the country's Environmental Defence Society's website might suggest that even the best-intentioned legislation does not always achieve the desired results and that administration challenges are ongoing: "RMA's critics ignore economic importance of our landscape;" "Call for more checks on development, landscape could be damaged;" "Population and holidays put pressure on space;" and "Battle of landscape vs lifestyle."(Environmental Defence Society, n.d.).

In more measured terms, Simon Swaffield (cited earlier for his summary on approaches to landscape evaluation) and Carys Swanwick, both of Lincoln University, pointed out at a university opinion site in May 2006 that

> Landscape has been in the news a lot recently. Landowners and developers are making frequently emotive challenges to District Councils who attempt to identify landscapes that require protection under the Resource Management Act. Communities and conservation groups voice equally heartfelt concerns about the effects of development upon New Zealand's coastal and rural landscapes. The Parliamentary Commissioner for the Environment has concluded that the current system of management is failing to deal adequately with cumulative landscape change. (Swaffield and Swanwick, 2006).

Swaffield and Swanwick agree that the local councils have been handed ever greater responsibility with very little guidance. "Many small rural authorities lacked necessary skills or resources." (ibid.) and "The whole question of landscape values and distinctiveness that provides communities with a sense of their place in New Zealand has been drawn more deeply into an adversarial legal process." (ibid.). Swaffield advocates the successful approach pioneered in the United Kingdom, discussed earlier, where beyond designating special or outstanding landscapes, communities have taken to identifying what makes their place distinctive, or what defines the essential character of the landscape, rather than better or worse, or more or less important.

Also of interest on the New Zealand landscape management scene is the issue of wind energy. At least one organization, the Uplands Landscape Protection Association, has come out swinging against large wind farms. "No landscape can remain unscarred by a major construction initiative ... Local vistas will never be the same again." (Upland Landscape Protection Society, feedback, 2006) and in somewhat more graphic terms a comment from a local farmer: "I, like many farmers, was not aware of what was really happening in our area and to what extent these proposed wind farms would impact on this area. It was not until I saw the simulated photos of the Trustpowers proposed wind farm and said oh Shit ..." (2006) and from another resident: "Lord – it's the Colorado of my youth. All gone now. Majestic hilltops replaced with trophy houses and irrigated golf courses. Guard it with your life." (2006).

As an island nation, New Zealand is obviously cognizant of the huge potential value as well as the related risks associated with its island status. The coastlines of New Zealand have warranted special attention and specific policies related to the shoreline. As recently as August 2006, the New Zealand Department of Conservation made a move to review the Coastal Policy Statement, originally introduced in 1994. The existing Coastal Policy states among other things that appropriate development should occur only in areas where the natural character has already been compromised and that sporadic or sprawling subdivision or development should otherwise be avoided in the coastal environment. It is clear that New Zealand takes seriously its status as an island with valuable coastal resources. Once again, though, it appears that the national government of New Zealand does not consider its role as one of management or control; rather that responsibility is placed elsewhere: "decisions on environmental matters are most appropriately made by the communities directly affected ..." (Department of Conservation Policy Statement Review, 2006, p. 8). National policy statements are meant to guide local authorities.

However the Coastal Policy Review places coastal landscape character at the very top of possible issues under discussion. The Review acknowledges a national priority "for preservation of natural character of the coastal environment of New Zealand, including protection from inappropriate subdivision, use or development" (2006, p. 24), making it clear that shoreline landscape is high on the review agenda and the first chapter of the review deals precisely with Natural Character and Landscape, stating that: "The preservation of natural character in relation to specified water bodies and the coastal environment is fundamental to the RMA ..." (p. 24). Unfortunately neither natural character nor landscape are clearly defined in the Act, and the discussion paper suggests that there is demand for national guidance to assist in the identification of same. While Policy 1.1.3 deals specifically with landscapes, seascapes and landforms and visually significant features, the report suggests that "clearer guidance on how to identify outstanding landscapes could assist decision-makers." (p. 27). As well, the report acknowledges the fact that in the past ten years the existing policy has not been effective in stemming the growth of sprawling or sporadic subdivision. Posing a question very relevant to this research project, the discussion paper asks: "Do you see a need for clearer policy....on the identification and protection of outstanding landscape? What criteria would be appropriate for identifying and determining the significance of outstanding landscapes?" (p. 30).

The appearance of this coastal policy discussion paper at this time is of great interest, since it shows first of all that this island nation gives special attention to its shoreline and secondly, that in spite of a 15-year old legislation meant to protect the coast, there would seem to be ongoing issues related to the administration and management of coastal policy, and that in at least some cases, the desired result is not evident.

A conference scheduled for May 2007, organized by the New Zealand Environmental Defence Society and titled "Beyond the Resource Management Act" will focus on what the next generation of environmental planning legislation for New Zealand might look like. The group believes that the legislation has not achieved all it might

have, and the conference will no doubt take on land and other environmental issues of the future.

So in terms of jurisdiction, New Zealand is an independent island nation with complete authority to manage its valuable landscape and seascape resources, and yet it appears that all is not well in the eyes of local residents and 15-year old legislation may not have achieved all the intended results. Certainly, land management process has no obvious or simple solutions; perhaps it is too much to expect that broad national policies can be successfully applied and administered even in a relatively small island country. One ongoing issue seems to be that criteria for identifying outstanding landscape are not yet clearly specified. Terminologies such as "outstanding" or "appropriate" leave much room for interpretation, leading ultimately to confusion, especially when regulations are administered by another jurisdictional level. The fact of islandness determines high priority on coastline and the island's status as a country allows it to manage according to that priority. Is it only the process that creates difficulties, or does the nature of island politics in general both enhance participation and stall effective action?

TASMANIA

This island province of Australia has much in common with Prince Edward Island (as well as several points in direct contrast to PEI!). In light of this, it seems worthwhile to reproduce here portions of the chapter on Scenic Landscape Condition of the Tasmania State of Environment report of 2003:

> Landscape is fundamental to Tasmanians' self image and sense of place. While it is difficult to quantify its monetary contribution, landscape character is important to the State and to local communities for economic and social benefits. Landscape character has a critical role in attracting the visitor to Tasmania and contributes to the sense of place experienced by visitors and locals alike. (Tasmania Resource Planning and Development Commission, 2003, Scenic Landscape Condition, Background).

Tasmania has made some good progress in the landscape domain; now 78 % of community plans include special area provisions, which could include Landscape Protection or Landscape Values Protection Areas, Landscape and Skyline Protection Areas and Scenic Corridor or Scenic Protection Areas. (Tasmania Resource Planning and Development Commission, 2003).

Tasmania has nearly 5000 kilometres of coastline and about 90 % of the population lives, works or plays on or near the coast (Department of Primary Industries and Water, Managing Our Natural Resources) and as with New Zealand, the coastline of Tasmania has warranted special attention. The State Coastal Policy of 1996 is currently under review and a recent review "of implementation of the Coastal Policy conducted in 2000 found that insufficient guidance and assistance to planning authorities was a problem." (Department of Primary Industries and Water, 2005). Over the course of the current review (2006), 111 written papers were submitted, indicating a high level of interest. Also recently a public consultation process looked for "Better Planning Outcomes" suggesting that, as in New Zealand, land management continues to be a topic of interest. Among the range of tools identified to assist in administering the State Coastal Policy are "visual amenity tools." (Department of Primary Industries and Water,

2005). "The focus needs to be on providing guidance to local governments." (2005). One of the overriding principles in the Tasmania Coastal Policy is "To conserve and enhance public amenity and scenic values." (2005).

The desire to conserve scenic values is common to both New Zealand and Tasmania, but in both cases there are ongoing challenges in guiding local governments, agreeing on sound methodology for identification of the most valuable landscape resource, or obtaining workable "visual amenity tools." At both jurisdictional levels, the issues of landscape management often seem to end up in the hands of local communities, and even though national or provincial policies exist the less than clear-cut nature of defining the value of beauty means that controversies can erupt or communities are left foundering. Of course, both sides of the development/preservation coin include intense proponents for their cause; finding a middle ground may seem to be impossible in some instances. Once again, in the case of island societies the residents often hold intense beliefs, especially when it comes to their surroundings, and they do not hesitate to become involved.

From a more political standpoint, the Tasmanian Green party has a very interesting take on the net value of the state's coast: "The Tasmanian Greens also recognise that Tasmania's coastline makes a significant contribution to Tasmania's brand, and that the maintenance of the scenic, cultural and environmental values of our coastline will benefit Tasmania's economic future by maintaining the core brand value of 'pristine.'" (The Greens, 2002-2007). Over the course of considerable research in the issue of land management especially in the context of islands, this is the first instance that the worth of the scenic, cultural and environmental values of the coast is tied so specifically to a marketing concept or state brand. The Green party's goal of attaching the concept of pristine to the Tasmania brand is a lofty one. The much-used and some might say over-used term, pristine, implies untouched, a condition that is rare in most areas of the developed world. The following news report has further comment on the notion of pristine as a core brand value (and has a certain resonance with the earlier cited NY Times story about coastal real estate in Atlantic Canada).

A 2004 Australian Broadcasting Corporation news story about a proposed project at Ralph's Bay notes the increasing demand for waterfront property and the ever more grandiose proposals for seaside projects:

> While Tassie's real estate boom appears to have plateaued, seriously cashed-up interstate developers have twigged to the charms of the state's spectacular coastline. One proposal, from a Sydney developer, for instance, is for a $400 million marina and housing estate near Hobart. It's a new chapter in one of Australia's oldest community conundrums – striking the balance between our hunger for coastal living, protecting the environment, government regulation, and the profit motive. (Nettlefold, 2004).

Among the many polarized reactions to the 800-home development project was this comment from Judy Jackson, Tasmania Environment and Planning Minister: "It's not a pristine area by any stretch of the imagination." (Nettlefold, 2004). Perhaps "pristine" is beyond the reach of most developed nations, a situation causing prompt

identification and protection of what special landscapes remain to be all the more urgent.

In fact to an outsider, it appears that the Tasmanian political scene is dominated by tussles over issues related to the environment and that two powerful groups at opposite ends of the spectrum go head to head on a regular basis over major land use questions. As an island state of Australia, Tasmania does exert control over most local issues having to do with land, but in the case of stalemate then the state government leaves itself vulnerable to over-ruling national policies. As the Greens and the greens battle it out with the developers, inappropriate development projects such as Ralph's Bay may be stalled, but is there any real progress toward an island-wide program of coastal protection that is both manageable and palatable to the majority of Tasmanians? In spite of a finely worded statement in the recent Environment report, there does not appear to exist any cohesive approach to protecting the much extolled scenic resource. Once again the politics of land set in an island situation lead us to wonder if factors of islandness are an advantage or an inhibitor, a blessing or a curse?

QUADRA ISLAND

Moving down one further level of jurisdiction, the research focusses on the Canadian island of Quadra, located just off the coast of the province of British Columbia (BC). In the words of one of the websites promoting Quadra Island:

> Quadra Island is home to a vibrant community with strong ties to the land and sea. Some islanders continue to make their living in traditional resource-based industries like fishing and forestry. Others work as artists, writers ... Known for its inspiring natural beauty and relaxed atmosphere, Quadra is an ideal destination for unforgettable experiences. (Discovery Islands, 2006).

The off-shore island has a population of just 4,000 and is part of a British Columbia planning district including and surrounding Vancouver Island. The Island appears to have no official jurisdictional powers but it is evident that the residents take an eager interest in the fate of the Quadra Island landscape.

According to BC's Land Management Bureau, strategic land use planning was not emphasized in BC until recently. But growing demands, coupled with a greater awareness of environmental, economic and social issues, led to increasing land use conflicts. (BC Integrated Land Management Bureau, n.d.). In 1992, the province introduced the Protected Areas Strategy. Now more than 80 % of the province has approved or under-development strategic land use plans. The province maintains that strategic planning serves to significantly reduce land use conflicts. More than 12 % of the BC land base is now designated as protected area, up from about 6 % in 1992. (BC Integrated Land Management Bureau, n.d.). On a provincial level, the virtues of land use planning in British Columbia are well understood. How does this play out on a small off-shore island with a high level of interest in its visual resource?

In the Quadra Island Management Zone three values are identified as high priority for protection: biodiversity, coastal and shorelands wildlife values, and visual qualities, especially in association with marine recreation and road corridors. The local community also specified the importance of visual quality in areas of present and future high use and the need to protect adjacent marine viewscapes. (BC Integrated Land

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Management Bureau, 1997).

A recent directive by a forester in the BC Ministry of Forests and Range is a clear indication of just how far the province and the local planning boards are willing to go to preserve landscapes of value. In 2005 the Minister of Forests and Range delegated authority to District Managers to establish visual quality objectives and to establish scenic areas. In a process that seems quite clearly defined the District Manager can take into account community input, existing planning documents, visual landscape inventories and training manuals and impose a visual quality order that is considered to be consistent with established objectives. As part of its participation in the Vancouver Island Land Use Plan, Quadra had previously specified that visually sensitive areas were of primary importance. A document dated December 2005 presents the rationale for the "Order to Establish Scenic Areas and Visual Quality Objectives" for a region that includes Quadra. The Forester is presented with the task of "balancing forestry and tourism economic activity and the associated management of viewscapes,"– a challenge indeed! (British Columbia Ministry of Forests and Range , 2005, p. 6).

Judging by a plan drawn up by the Landscape Architecture Programme at the University of British Columbia, the notion of landscape character in relation to Quadra Island is well developed. In concert with the residents, a detailed study addresses the "Essence of Quadra" with an aim "to assess the existing character of spaces and places within the South Quadra study area for the purposes of identifying areas in need of protection and/or enhancement (of character)." (University of British Columbia Landscape Architecture Programme, 2001).

A federally funded mapping project helped the residents of Quadra take inventory of local resources and better equip them for planning activities. "Sustaining the island's natural beauty, resources, and recreation options is a primary goal of the Quadra Island Mapping Project (QIMP), a program run by four non-profit societies..."(Natural Resources Canada, 2006). The Island's natural beauty seems to be at the forefront of many local initiatives.

As with other jurisdictions, landscape and special protection activities are often spearheaded by local volunteers. In the case of Quadra two organizations seem immediately obvious: the Quadra Island Conservancy and Stewardship Society and the Greenways Trust. The Conservancy was started in 1990 with the support of the Coast Islands Conservancy; it is now a registered society with 450 members. The Greenways Land Trust concerns itself with a larger region and broad issues of habitat protection and waterways improvements.

In summary, perhaps the Quadra Island example offers some learning in that possible success lies in blending bottom-up involvement with clear-cut top-down direction. In other words, directives from provincial ministries based on sound planning principles plus an extensive community consultation process may be better accepted by an engaged local community. As well, exercises undertaken to clearly define the character of the area assist in decision making.

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# APPENDIX C - ETHICS LETTERS AND CERTIFICATES

# PARTICIPANT INFORMATION LETTER

You have been invited to participate in a research project on Measuring Landscape Preferences conducted by Carol Horne under the supervision of Dr. Thomy Nilsson in the Masters of Arts in Island Studies program at the University of Prince Edward Island. This study is being conducted to fulfill the requirements of the Masters of Arts in Island Studies degree.

This research is partly in response to Recommendation #76 of the 1997 Prince Edward Island Round Table on Resource Land Use and Stewardship which suggested that "The Department of Economic Development and Tourism assess the opinions of residents and visitors to Prince Edward Island regarding the quality and attractiveness of the landscape and the impact of changes thereto." The aim of the study is to develop a public preference landscape measurement tool based on survey results. This should be useful to policy makers in Prince Edward Island in ongoing land management processes.

Participation in this project will take approximately 10 minutes of your time, and your participation in the research project will pose no harm to you. Your participation in this research project is entirely voluntary. You may stop your participation in the research project at any time, without penalty or prejudice. Note that your consent to participate in the research is inferred from the return of a completed survey. All information collected in the course of this project will remain confidential and anonymous, and you will not be able to be identified from any of your responses. Only Carol Horne and Dr. Thomy Nilsson will have access to the data resulting from this research project. All data resulting from the research project will be retained for a period of five years from the completion of the research, after which time it will be destroyed by cleaning and erasing the data from the server site and shredding anyy paper versions.

If you have any questions or concerns about this research project, you may consult with Dr. Thomy Nilsson,

For access to the full results of the research project once these are available, please contact Carol Horne,                                    OR visiting www.peiplay.com/landscapesurvey no sooner than June 2006.

This research project has been approved by the Research Ethics Board of the University of Prince Edward Island. Any concerns about the ethical aspects of your involvement in this research project may be directed to Lynn MacPhee, telephone                    , email:

**DEBRIEFING LETTER - ONLINE SURVEY**

Thank you very much for participating in this research project on Island landscape preferences conducted by Carol Horne under the supervision of Dr. Thomy Nilsson This study is being conducted to fulfill the requirements of a Masters of Arts in Island Studies at the University of Prince Edward Island.

This research is partly in response to Recommendation #76 of the 1997 Prince Edward Island Round Table on Resource Land Use and Stewardship which suggested that "The Department of Economic Development and Tourism assess the opinions of residents and visitors to Prince Edward Island regarding the quality and attractiveness of the landscape and the impact of changes thereto." The aim of the study is to develop a public preference landscape measurement tool based on survey results. This should be useful to policy makers in Prince Edward Island in ongoing land management processes.

Note that your consent to participate in the research is inferred from the return of a completed survey. All information collected in the course of this project will remain confidential and anonymous, and you will not be able to be identified from any of your responses. Only Carol Horne and Dr. Thomy Nilsson will have access to the data resulting from this research project. All data resulting from the research project will be retained for a period of five years from the completion of the research, after which time it will be destroyed by deletion from the hard drive.

If you have any questions or concerns about this research project, you may consult with Dr. Thomy Nilsson at _____ . For access to the full results of the research project once these are available, please contact Carol Horne _____ or by visiting www.gentleisland.com/landscapesurvey after June 2006.

This research project has been approved by the Research Ethics Board of the University of Prince Edward Island. Any concerns about the ethical aspects of your involvement in this research project may be directed to Lynn MacPhee

# FOCUS GROUP CONFIDENTIALITY AGREEMENT

I consent to participating in focus group research on:
Measuring Landscape Preferences

I, _____(Name),
in participating in discussions with focus groups for research agree to the following:

I will treat the information that the participants in this study share with me with respect by:
1.      Not continuing with a line of questioning if any participant has indicated that she does
        not want to address issues being raised
2.      By protecting all participants' confidentiality AT ALL TIMES
3.      Referring to each participant by number ONLY
4.      Not disclosing the information exchanged during the focus group session with any other
        individual except for :
        Other focus group members
        The Focus Group Facilitator
        The Principal Investigator, Carol Horne

Any questions or concerns regarding your involvement in this research study may
be directed to Carol Horne, phone ███████                                    Or Dr.
Godfrey Baldacchino at                          Any concerns about the ethical
conduct of this study may be directed to the UPEI Research Ethics Board

Participant's Name (please print): _____

_____
Participant's Signature_____

Date:       /     /
        D     M     Y

# FOCUS GROUP FACILITATOR AGREEMENT FORM

**I consent to facilitating focus group research on  Measuring Landscape Preferences**

I, _____(Research Assistant Name),

 in facilitating discussions with focus groups for research agree to the following:

1.    Clearly identifying the aims of the present study

2.    Treating the information that the participants in the study share with me with respect by:

-Not continuing with a line of questioning if any participant has indicated that she does not want to address issues being raised by the questioning
-By protecting their confidentiality AT ALL TIMES
-Referring to each participant by number ONLY
-Not disclosing the information exchanged during the focus group session with any other individual.
-Making sure that the participants cannot be identified in any way by any of their responses either to the survey with which they will be presented, and to my focus group questions, and ensuring that no identifying information is included either on the surveys or in the transcripts of the focus group discussions conducted during the course of the present study.
- Erasing the audio-recording of each focus group discussion immediately after I have transcribed it

Any questions or concerns regarding your involvement in this research study may be directed to Carol Horne phone █████████                          Any concerns about the ethical conduct of this study may be directed to the UPEI Research Ethics Board at _____.


Focus Group Facilitator's Name (please print): _____
___

Focus Group Facilitator's Signature: _____
___

Date:  _____ / _____ / _____

# MEASURING LANDSCAPE PREFERENCES

## DEBRIEFING SCRIPT

Thank you again for participating in this study. The topic of the Prince Edward Island landscape is of great interest to me and as a result of this interest was a natural subject for my thesis requirement toward the Masters of Arts in Island Studies program at UPEI.

The primary aim of the present community meeting was to obtain some qualitative information about how Islanders feel about the landscape and the value of the PEI scenery. I have already received responses to a more quantitative phase of the research where people on and off the Island were invited to complete an on-line landscape preference survey where they rated PEI scenes according to their scenic beauty. I am continuing to analyze this data.

This evening I was looking for your comments on how the landscape around you affects your lives and to get an idea of which types of scenes you prefer. Firstly, I requested that you complete the same survey that was administered online last year. Secondly, we looked for your open-ended comments in response to the discusson guide. We also asked that you compare sets of scenes to determine your level of preference for developed versus undeveloped landscapes. Information obtained from all phases will contribute to the Masters thesis to be completed before March 2007.

To obtain a copy of the results of the study, please email me or telephone me. My contact details are provided to you on your Participant Consent Form. Also, please do not hesitate to contact me should you have any further queries about the study and/or your participation in the study.

I would also like to remind you that the results of the study are strictly confidential. You will not be able to be identified from any of your responses to the surveys that you completed, nor from your discussion of the two articles. Moreover, once the audio-recording of your group discussion has been transcribed, the audio-recording will be erased and you will not be able to be identified after transcription. All other data will be kept in sealed boxes for a three-year period, after which time it will be destroyed. You are also asked to respect the rights of other members of your focus group to privacy and confidentiality by not disclosing any information that was shared and disclosed during the focus group sessions. You should, however, remember that although every attempt has been made to protect your anonymity in this study, it cannot be guaranteed.

Again, I would like to thank you for your participation in this interesting and important research.

# Participant Informed Consent and Privacy Form

*I the undersigned agree to participate in the Landscape Preference Measurement Focus Group. As well, I agree to keep confidential any comments made by other participants in the group session. I acknowledge that participation is voluntary and that I can withdraw at any time.*

I understand my participation involves:
- being a member of a focus group
- completing an anonymous survey about my preferences for PEI landscape scenes
- being asked to discuss my feelings about PEI landscape
- having my responses recorded and later transcribed for analysis for a student research project
- respecting the privacy and confidentiality of the other members of my focus group by keeping confidential any information that is disclosed and shared during the focus group session
- if I am interested, contacting Carol Horne in March of 2007 for the final results of the Measuring Landscape Preferences research project.

I have read and understand the material in the information letter and I understand that in addition to acknowledging that my participation is voluntary and that I can withdraw at any time:
- I can refuse to answer any question
- any information I provide will be kept confidential
- that I must keep confidential all information disclosed during the session, including comments made by other participants
- I am not unconditionally guaranteed anonymity, although every effort will be made to guard the identity of participants
- I may keep a signed, dated copy of the Informed Consent Form, the Focus Group Confidentiality Agreement and the Focus Group Facilitator Form.
- I may contact the University of Prince Edward Island Research Ethics Board at _____ or by email at _____ if I have any concerns about the ethical conduct of this study.
- Or I may contact the Researcher, Carol Horne, phone 902-████████, or Dr. Godfrey Baldacchino at _____ if I have any concerns about this study, or any questions about the conduct or results of this study.

---
**Signature**                                   **Date**

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**Signature of Person Obtaining Consent**        **Date**
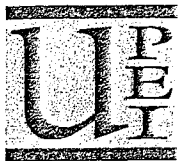
UNIVERSITY of
PRINCE EDWARD ISLAND

550 University Avenue
Charlottetown
Prince Edward Island
Canada C1A 4P3

February 17, 2006

**To:** Ms. Carol Horne
Institute of Island Studies

Dear Ms. Carol Horne,

*Re: "Measuring Landscape Preferences"*

The above mentioned research proposal has now been reviewed under the expedited review track by the UPEI Research Ethics Board. I am pleased to inform you that the proposal has received ethics approval.

The approval for the study as presented is valid for one year. It may be extended following completion of the Annual Renewal and Amendment Form. Any proposed changes to the study must also be submitted on the same form to the UPEI Research Ethics Board for approval.

Sincerely,

Malcolm Murray, BA, MA, Ph.D.
Associate Professor of Philosophy
Chair, UPEI Research Ethics Board

cc: Dr. Katherine Schultz, Vice President, Research & Development, UPEI

Dr. Thomy H Nilsson, Psychology