

The Island Landscape

A Non-renewable Resource

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- *To serve as a bridge between the University and Island communities;*
- *To contribute to the formulation of progressive public policy on Prince Edward Island;*
- *To undertake comparative studies of Prince Edward Island and other islands.*

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Contents

Executive Summary	1
Landscape and Development on Prince Edward Island	2
Landscape as a Research Subject	2
The Value of Landscape on Prince Edward Island	4
The Island Landscape and Agricultural Development.....	4
The Island Landscape and Tourism Development.....	5
Managing a Working Landscape.....	6
Non-resident Land Ownership	6
Creeping Exurbia	7
Legislative Protections for PEI Landscape	9
Scenic Viewscope Zones and Special Planning Areas.....	9
The Lands Protection Act.....	9
Alternative Land Use Service (ALUS)	11
Landscape Management Tools in Other Jurisdictions	12
Overview	12
International and European Landscape Management	12
United Kingdom	13
United States and Canada	14
Islands	15
Applying Global Lessons to Islands	17
Moving Towards Landscape Management on PEI.....	20
Filling Gaps in the Management Framework	20
The Public's Role in Protecting Prince Edward Island Landscapes	20
Tools for Evaluating Scenic Viewscapes	23
Beyond the Aesthetic Value of Landscape.....	25
Possible Next Steps	25
Conclusions.....	27
References.....	29

Executive Summary

In Prince Edward Island, managing the land has always posed significant challenges for local administrators. At times the issue has simmered just below the surface; at others times, land use concerns have been the subject of widespread and very vocal debate. While the topic of land use is broad and far-reaching, one singular aspect of this issue — the Island landscape — elicits a common response, yet few solutions. Prince Edward Island's pastoral scenery is universally admired and indeed is a key element of the "Prince Edward Island brand." That unified appreciation is possibly where agreement ends, as preservation and protection face off against economic growth and development, tradition meets the forces of change, and individual property rights are challenged against the public good. How is a small, island-based administration to manage an admittedly very valuable scenic resource in the face of these conflicts?

Through discussion of land use and the value of the Island landscape, it has become clear that one useful step in a management process would be the proper identification of the most valuable of the province's scenic assets. While PEI as a whole is indeed very beautiful, it is neither practical or desirable to designate the entire landscape as a protected area or a national park. So how might the most aesthetic and culturally valuable landscapes be identified and protected for the appreciation of today's tourists and tomorrow's Islanders? This paper, based on primary research (Horne, 2007), demonstrates an efficient and effective landscape identification tool and proves that agreement can be reached on the relative scenic value of viewsapes. A review of landscape management techniques used elsewhere reveals a variety of systems and processes that take into consideration the aesthetic and cultural values of landscape. PEI lags behind most of the areas studied, and there are many critical issues to be addressed with respect to land use and coastal zone management. The research leads to the following conclusions:

- Landscape is essential to culture and identity; this connection may be especially acute on small islands.
- Where the tourism industry is key to economic health, landscape also has significant economic value.
- Institutional frameworks, public support and appropriate evaluative tools are necessary to identify and protect valued landscapes.
- Balancing landscape protection and competing development options is challenging; it requires publicly supported, holistic and consistently applied policy and planning.
- Cost-effective tools for measuring relative landscape value do exist.
- Other jurisdictions have approaches to landscape management that provide guidance for improving PEI's landscape management processes.
- Some regions have obtained national recognition for valued working landscapes.
- Some practical steps are suggested to advance landscape management and to better protect one of Prince Edward Island's most valuable (and non-renewable) resources.

Landscape and Development on Prince Edward Island

Landscape as a Research Subject

The economy of Prince Edward Island (PEI) depends to a large degree on the tourism industry and thus on the appeal of the Island's scenic viewsapes. Few would deny that PEI's scenic beauty is a major tourism draw, and that visual appeal plays a large part in both the quality of visitor experience and the quality of life of residents. Yet, land use decisions are typically based on agricultural productivity, potential for development or ecological importance. Aesthetics are rarely taken into consideration as a separate, inherently valuable factor.

At first glance, the value of beauty seems very difficult to measure. There is no consensus on how to accurately assess the economic value of a PEI viewscape, and the sense of well-being imparted by aesthetically pleasing surroundings seems even more challenging to evaluate. Assuming that there is some interest in preserving Prince Edward Island's scenic resource, is there also a way to measure the relative value of scenic viewsapes? Can we integrate such a tool in planning processes so that land use and development can proceed while maintaining landscape values?

We can begin our exploration of the issue by asking: what is landscape? The Oxford English 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". However, the relevant published literature clearly states 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.
(Government of New Zealand, 2006)

The European Landscape Convention defines landscape in similar terms: "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Natural England, n.d.3). The observation that landscape is experiential provides the challenge for measuring relative landscape values. If each individual's experience of the landscape differs, how is it possible to find agreement among diverse members of the public? How can landscape management decisions affecting the daily lives of citizens be made in a way that fairly reflects the general preferences and concerns of the local populace? The interdisciplinary nature of the field of landscape research causes it to be both fascinating and difficult to grasp. As a result, landscape research has often been neglected in favour of seeking answers to environmental questions that seem more amenable to straightforward scientific analysis.

On Prince Edward Island, a series of studies by land use commissions and committees have noted the need to grasp and untangle the thorny issue of landscape management. For example, a primary recommendation in the Landscape chapter of the Report of the Royal Commission on the Land, titled *Everything Before Us*, reads as follows: “THAT the landscape be of paramount consideration in government activities” (Boylan 1990: 311). A further eight recommendations 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. As of 2009, these recommendations have received scant (if any) attention.

The 1999 report by the Standing Committee on Agriculture, Forestry, and Environment included Recommendation number 76, which 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. (Government of PEI, 1999a: 39)

In the subsequent progress report, it is implied that the Economic Impact Survey conducted annually by the Department of Tourism somehow assesses the opinions of residents and visitors regarding landscape quality. However, these surveys are inadequate to assess attractiveness of the landscape; they merely indicate that visitors like to sightsee. Since 1999, there has been no effort to develop tools to help manage the province’s scenic resource. Meanwhile, this scenic resource has undergone significant change — not always, we would argue, for the better.

The Master of Arts in Island Studies thesis *Measuring Landscape Preferences* (Horne, 2007), on which this document is based, reports on how the scenic resource is managed in selected island and mainland jurisdictions. The analysis is summarized below. The thesis also demonstrates a method for evaluating PEI’s scenic resource by collecting the opinions of residents and other “scenery consumers” such as tourists. The method is straightforward, and can lead to consistent results that define and rate the relative attractiveness of viewsapes.

The goal of the research — and this document — is to stimulate development of an objective and practical methodology for identifying scenic viewsapes which could then be designated for protection under the provincial Planning Act. This would in turn facilitate the definition and promotion of appropriate development that could enhance PEI’s tourism product and contribute to the quality of life of Island residents. Horne’s research begins to address the 1999 recommendation “to assess the opinions of residents and visitors to Prince Edward Island regarding the quality and attractiveness of the landscape”. The second part of the recommendation, to assess “the impact of changes thereto,” requires further research. Finally, to take action based on such research will require an updated institutional decision-making framework for development — one that consciously takes into account the many benefits of scenic landscapes.

The Value of Landscape on Prince Edward Island

While most Island residents may take for granted the scenic beauty that surrounds them, they are also the first to boast about the Island landscape to visitors. If asked to describe PEI to outsiders, Islanders will often begin with the word “beautiful”. The Island’s scenic landscape is a key element of the province’s overall image, and has contributed greatly to the ‘brand’ that is Prince Edward Island.

The landscape has clear economic value, being a major motivator for visiting tourists. In fact, in the 2007 Tourism PEI Exit Survey, 36.7% of visitors cited “natural beauty and pastoral setting” as the primary features that attracted them to PEI. Another 23.2 % cited beaches and coastline (UPEI Tourism Research Centre, 2008). Not surprisingly, the top activity for visitors was sightseeing (74.8%). In other research (Government of PEI, 2005b) respondents were prompted to mention other things they liked about PEI, and once again “scenery” topped the list at 51%, while a beaches/oceans/coastline grouping (also key island landscape features) came in second at 34% (ibid: 4–5, 14). While it may not be possible to put an exact dollar value on PEI’s scenic resource, it is clearly a significant factor in the success of tourism, one of the province’s primary industries.

PEI’s other primary industry, agriculture, is the source of much of the visually pleasing patchwork quality of the landscape. Visitors describe the landscape with great admiration as a rolling and colourful quilt, made up as it is of fields of pasture, potatoes, grain and hay; demarcated by rivers, hedgerows and woodlots; and of course defined by the coastline, the ocean and the multitude of bays and inlets. This “working landscape” is visually appealing to many, and the often-noted neatness of the homesteads implies a culture of care that is also very attractive (Nassauer, 1997). Perhaps famous Island author L.M. Montgomery said it best:

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’ . (Montgomery, 1917: 11)

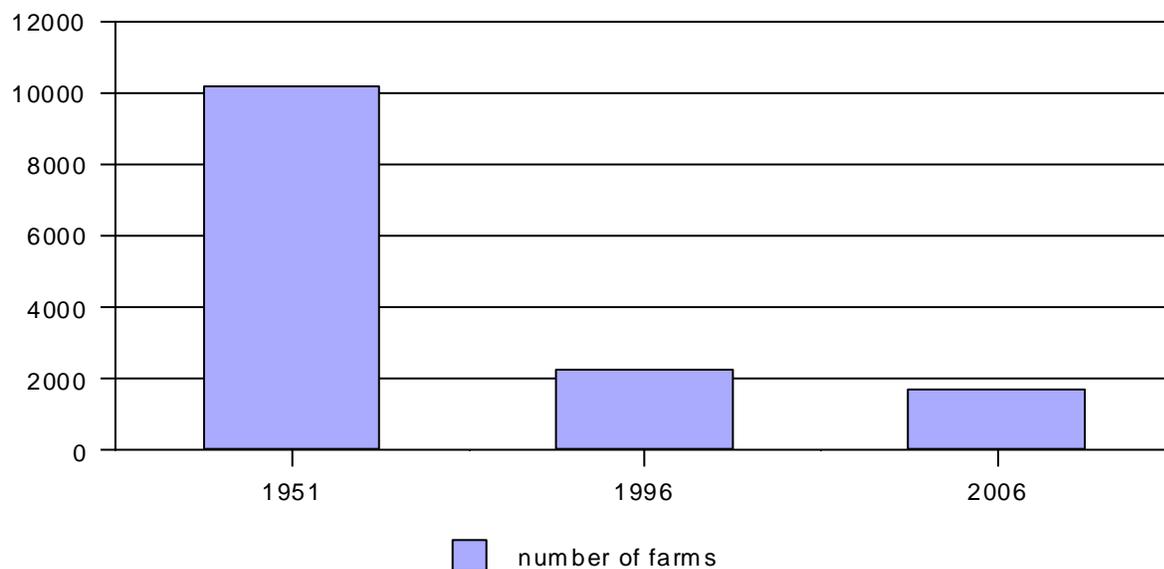
The Island Landscape and Agricultural Development

Out of a total Island land base of 5,656 sq. km or 1.4 million acres, almost half is currently covered in forest, scrub or tree plantations (Government of PEI, n.d.2) and 620,000 acres are “cleared for farm use” (Government of PEI, 2008b). Some of the changes in the PEI landscape since the mid 20th century are due to a shift in the agricultural industry. The number of farms has declined dramatically from more than 10,000 in 1951, to fewer than 2,000 in 1996 (Fig. 1). The decline continues, with the overall number of farms decreasing by 16.8% in the five years between 1996 and 2001, and by a further 7.9% from 2001 to 2006 (Statistics Canada, 2006). At the same time, average farm size has expanded from the traditional 90 acres at the turn of the 20th century

to operations averaging more than 300 acres in 2001 (MacKinnon, 2005; Statistics Canada, 2003). This trend to larger farms has been especially rapid since the 1960s.

For primarily economic reasons, the agricultural industry in PEI has shifted away from small mixed farms producing local food, and toward industrial scale monoculture for export. Not only did the average size of the farms increase, but the average size of farm fields expanded, which trend was accompanied by the removal of hedgerows and the infilling of wetlands, seeps and small streams. The increased size of farms and fields, and the size and prevalence of related infrastructure such as large, roadside, climate-controlled warehouses for potato crop storage, are changes that could be perceived to have negative impacts on the overall scenic resource.

Figure 1. Decline in the number of PEI farms, 1951 – 2006. (Source: Statistics Canada, 2006)



The Island Landscape and Tourism Development

Often, the economic health of an island depends heavily on the tourism industry. The “lure of the island” is undeniably appealing for vacationers, and tourists who come to PEI often cite “scenic touring” as a preferred activity. In the research conducted for this project (see below), both locals and tourists exhibited a clear preference for less developed, coastal scenes.

The sea-bounded nature of island landscapes both expands and adds value to the view. The ocean also limits the amount and extent of the land, making it seem somehow all the more valuable. However, although visitors have a great appreciation for the beauty of the PEI landscape, the rate of development — especially on shore frontage — may change that perception. While visitors are among the greatest appreciators of Island scenery, the very fact that almost one million people visit PEI each year means that increasing numbers and varieties of landscape-altering services

have been developed to meet the needs of tourists. Thus, the very landscape that has lured visitors may be placed at risk by the actions or demands of those same visitors.

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 generate questions and potential conflicts. A key question for discussion is: If an island places great value or depends to a large extent on income from tourism, should expectations for scenery be given more weight than the needs and wishes of residents who want to pursue other development projects or activities, which may degrade landscape value?

Managing a Working Landscape

PEI's landscape is a "working landscape" and so is, by definition, not static. Unlike a National Park or a designated protected area, a working landscape — no matter how scenic — will be subject to change. That change may enhance or detract from the overall scenic value. Lived-in landscapes are bound to change; no one expects or wishes to live in a museum. The goal must therefore be balanced development, which requires first of all an accurate assessment of the needs and values in play.

The question remains: how can one assess whether, or to what degree, a scene could support development without detracting from its overall appeal? There is ample evidence in the field of landscape research that community members can, in fact, agree on scenic preferences. Given a reliable and convenient measurement tool, perhaps Prince Edward Islanders can agree on which geographic areas and types of landscape have greatest aesthetic or cultural value. It is a logical extension to suppose that through a facilitated process, people could also come to agreement on the acceptability of a proposed change to a valued viewscape. This could be the basis for a landscape management system.

Non-resident Land Ownership

In June 1997, a 13-kilometre bridge connecting Prince Edward Island to the mainland of Canada was completed. That year, the total number of pleasure visitors increased by a spectacular 62%, from 711,200 in 1996 to 1,155,600 (Government of PEI, 1999b). The tourism industry continued to push the expansion of facilities throughout the first years of the 21st century. Cottages were constructed, new attractions opened, and big box stores were built on the fringes of Charlottetown and Summerside. As a result of the easier access to PEI and the greater awareness of the landscape resources that developed 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 current (2008) prices of cottage lots advertised on various PEI real estate websites (e.g. michaelshomes.com, 5662121.com) may be out of reach for some Islanders, but appear to be bargains for many affluent North Americans.

Land ownership statistics are gathered by the Island Regulatory Appeals Commission (IRAC). IRAC highlights an area as a "special interest area" once non-resident ownership reaches 25

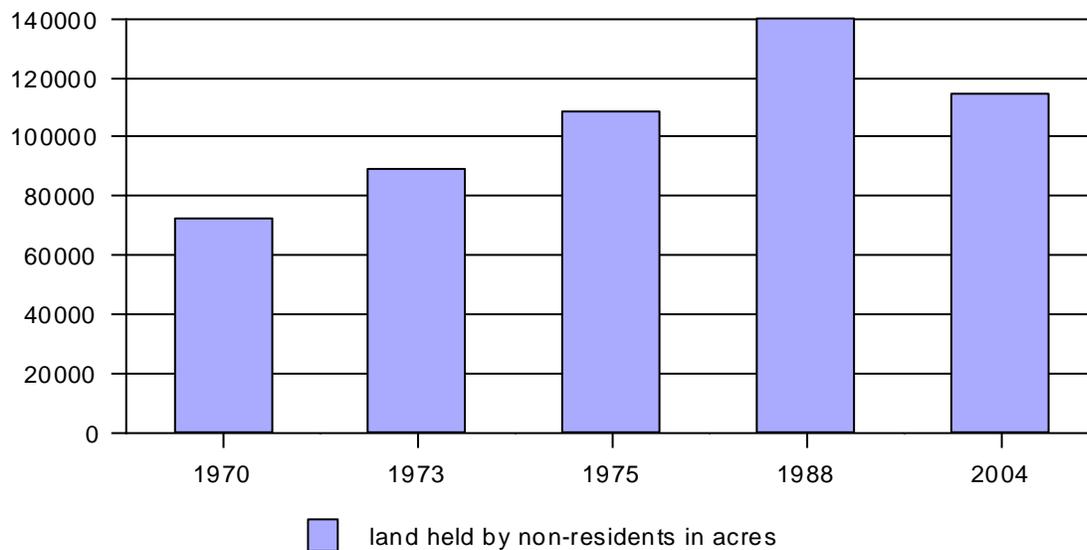
percent. Many of these areas are located along the coastline of the province. IRAC’s first published report on Trends in Non-resident Land Ownership included data for 1994-2000 (IRAC, 2000). The prevalence of non-resident land ownership on the coast can be clearly seen on the map provided in that report. The report covering 2001-2004 has also been released but as of November 2008, no more recent reports on non-resident land ownership were available.

In 2003-2004, 15 miles of shorefront were sold to non-residents (IRAC, 2005). It was noted that the proportion of non-resident land purchase applications involving shore frontage had increased (from 47% to 54%) as compared to the previous two-year period. IRAC reported that:

“The Commission believes that this indicates that shore property continues to be an attraction for non-residents. This report shows an increase in the number of applications for shore property although the number of actual miles decreased from 17 in 2002 to approximately 15 miles during this two year period.” (IRAC, 2005: 22)

As seen in Figure 2, the total acreage of PEI land owned by non-residents climbed steadily up until 1988 and then declined— perhaps reflecting a tendency for non-resident land-owners to transition into residents. More current data are not yet publically available.

Figure 2. Acres of PEI land held by non-residents, 1970 - 2004. Sources: IRAC 2000; IRAC 2005



Creeping Exurbia

The migration of Island residents to lots of land or small estates just beyond urban boundaries, in the countryside, or on the coast, leads to still more change to the traditional Island “working

landscape”. Research performed in other parts of the world generally indicates that most people prefer less developed, country scenery. Any trend to suburban-style development lining country roads certainly has the potential to detract from the overall aesthetic appeal of the PEI countryside.

Over the past decade, an average of 420 single family dwelling permits and 221 summer cottage permits have been issued annually by the PEI Department of Community and Cultural Affairs. In the 2001-2002 fiscal year alone, approvals were granted for 434 subdivisions, containing a total of 675 lots (Government of PEI, 2002: 30). Much of this development occurs outside of municipal boundaries.

While there are 75 municipalities in the province (Government of PEI, n.d.1; 2005a), most are too small to have the capacity for land use management. Some 82% of the land base is either unincorporated or is not subject to any municipal planning regulations. Taxes are lower in the unincorporated areas, where the provincial Planning Act is the only means to manage infrastructure development.

Some development restrictions have been imposed in special planning areas surrounding several larger municipalities, but the intent — to provide green space on the fringes of the urban areas — has been lost as developers take their subdivisions and infrastructure projects to lands just outside of the municipal buffer zones, where lower taxes create an incentive for strip development. New construction that occurs outside of municipal boundaries may meet the letter of the law, but the net effect is creeping ‘exurbia’, a term coined to describe the increasing trend of settlement on large plots beyond the suburbs. Even the provincial government itself stands accused of erecting public infrastructure on unincorporated land rather than within municipalities.

Legislative Protections for PEI Landscape

Scenic Viewscape Zones and Special Planning Areas

The concept of coastal touring routes has recently been developed, supported by local groups and two levels of government. Regional tourism associations have identified scenic lookouts, and the provincial Department of Transportation and Public Works has created pull-off areas along various roads so that people can admire these views. It is likely that other “lookout” spots will be identified in the future. But there seems to be a step missing, or perhaps further coordination required in this tourism product development process. The problem is that, as of March 2008, there was no indication that these lookouts and the associated viewscapes would be afforded any special protection (email communication, PEI Dept of Tourism).

PEI legislation does allow for the designation of Special Planning Areas, and areas of scenic beauty are recognized under the PEI Planning Act as Scenic Viewscape Zones. Once a scenic viewscape has been formally identified under the Planning Act, the Act can be used to prevent electrical poles and built structures from marring the view from the road (Government of PEI, n.d.3).

As yet, it appears that only two Scenic Viewscape Zones have been identified: Campbell’s Pond/New London and Borden-Carleton. It is not clear what criteria were used to designate these viewscapes; or what mechanism might be employed to apply this categorization in a broader way (for example through designation of Special Planning Areas); or how selection and protection of additional scenic viewscapes might proceed. An objective, acceptable and agreed-upon methodology is needed to enable identification of a greater number of scenic viewscapes for protection under the Act. Such a tool could also greatly assist in determining what is or is not appropriate development.

The Lands Protection Act

In the mid 1760s, while under England’s control, Prince Edward Island was divided into sixty-seven 20,000-acre lots or townships. These lots were allocated in advance of settlement to an elite group of absentee proprietors. Eventually, the land was purchased from the British landlords and returned to local ownership, but the issue of land control proved to be a sore point in the Island psyche.

In the 1960s, non-residents began buying up Island properties and as a result, substantial amounts of land in the coastal areas fell out of the control of local residents. The resultant surge in public concern spurred the government to action.

“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 distribution and its implications for the future. Some

viewed this as giving pre-eminent control of the province's agricultural industry to one company. This led to the introduction of Bill 37, the Lands Protection Act (the Act) in 1982." (IRAC, n.d.).

Under the Act, there is a limit to the total amount of land any individual or corporation may hold: a person may not own more than 1,000 acres, while a corporation is limited to 3,000 acres. The Act requires a non-resident individual or any corporation (local or off-Island) to apply to the Island Regulatory Appeals Commission (IRAC) for permission to purchase five acres or more, or to purchase shore frontage in excess of 165 feet. Government may approve a land purchase unconditionally, or impose certain restrictions. Exchanges of property within a municipality that has an official plan are not subject to the regulations of the Lands Protection Act.

Conditions imposed under the Act may involve particular land management measures, or may state that the land may not be subdivided except for particular purposes: i.e. agricultural, forestry or fisheries production; conservation or parks use; or a residential use by the owner (IRAC, n.d.). Once a conditional purchase is approved, the land in question becomes "identified" for non-development under the land identification program. IRAC clearly states that "The object of the land identification program is to prevent development of land identified for non-development use" (IRAC n.d.). However, the definition of "non-development" seems exceptionally liberal, allowing almost any type of agricultural or fishery use, as well as individual residential and recreational uses. In addition, it is not clear exactly how the Act as it is currently used actually protects land from non-resident purchase or from inappropriate development. The IRAC appears to refuse only 5-10% of applications from non-residents. In 2001, 4 of 104 applications were turned down; in 2002, 8 of 118 were refused; and in 2002-2004, 9 of 199 (IRAC, n.d.). Furthermore, the IRAC sends its recommendations to Executive Council, where the ultimate decision is made by the Lieutenant Governor in Council. Refusals and conditions recommended by IRAC are often overturned at the Executive Council level.

The Island Regulatory Appeals Commission publishes a list of exemptions to the Act that have been granted. Most exemptions appear to allow for expansion of food processing or forestry activities, but some involve land holdings that are designated as natural areas under the *Natural Areas Protection Act*. In addition, it is important to note that under the current legislative framework, some 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** [bold added]. This Order-in-Council comes into force on 24 October, 2006. (IRAC, n.d.2)

Alterations such as the above would seem to be completely contrary to the stated objective of the Act.

Alternative Land Use Service (ALUS)

As recently as March 2008, a new program was announced by the PEI Department of Environment, Energy and Forestry. Alternative Land Use Service:

...is an incentive-based approach for the conservation and protection of key environmental assets and services on PEI. The PEI ALUS Program seeks to reward landowners for public environmental benefits.... include clean water, improved flood control, fish and wildlife habitat conservation and carbon sequestration among others. The principle of ALUS is that it seeks to reward landowners when the public benefits are in excess of existing government regulations. (Government of PEI, 2008a)

This program, in keeping with other incentives for soil and water conservation, is not specifically designed to preserve landscape values. However, it may nevertheless help to restore attractive elements of the agricultural “working landscape” of PEI, such as riparian shrubs and trees.

Landscape Management Tools in Other Jurisdictions

Overview

Landscape policies of selected jurisdictions around the world were reviewed to gather information on ways and means that have been developed to manage scenic resources and address land issues from an aesthetic standpoint. Three islands were included in the review in an effort to identify island-specific concerns as they relate to protection of coastlines and conservation of scenery as a tourism resource. The examples documented included international, European, North American, New Zealand and Australian programs that involved at least two categories of process — legislative and community-based. These categories are not necessarily exclusive of one another. From the international level on down, approaches varied widely among continents and countries, with some regions leading the way in terms of both appreciation and protection of landscapes.

It was determined that Europe, and specifically the United Kingdom, may be among the most advanced practitioners of landscape management. This observation suggests that there is a different approach in European nations as compared to their former colonies. The more densely populated European states, with their long histories of human infrastructural development, are characterised by a keen appreciation for heritage that includes a relatively greater interest in landscape. By contrast, in the “New World”, wide-open space may be more taken for granted and a shorter span of development history may result in landscapes having less perceived heritage value. Perhaps as well, the concept of the rights of private landowners was strongly entrenched during the period of colonial occupation and development by European settlers who had been largely landless in their countries of origin.

International and European Landscape Management

The UNESCO World Heritage program and the International Union for the Conservation of Nature (IUCN) are two international agencies that have addressed concerns around landscape. These agencies perform research and identify valued landscapes for the purposes of protection. Of particular interest for PEI is that in 1992, UNESCO’s World Heritage Convention introduced a category called Cultural Landscapes (UNESCO, 2004). Also, the IUCN Category V Protected Landscape/ Seascape designation acknowledges the interaction of people and nature, and could potentially be applied to our working landscapes and seascapes. The IUCN definition for Category V reads as follows:

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. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area. (IUCN, 1994)

Safeguarding biodiversity is a management objective under IUCN Category V designations, but is not a factor in the case of the Cultural Landscapes category of UNESCO, the criteria for which are as follows:

...to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change. (UNESCO, 2008)

There also exists a European Landscape Convention (Natural England, n.d.3), which is primarily a policy and research body involving a network of national research institutes. A leader in this sector in Europe is certainly the United Kingdom. The legendary beauty of the British countryside is well protected with programs supported by extensive community involvement.

United Kingdom

In the UK, a well-established and seemingly successful model features an umbrella organization now called Natural England, which brings together English Nature, the Countryside Agency and the Rural Development Service. This holistic approach combines considerations of economic development, the environment, and scenery as a resource. The UK institutional framework is well supported by active community movements (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; as of 2007, 83% of English counties had completed assessments. England has been divided into eight “Joint Character Areas”, each of which exhibit a distinctive landscape type. The description for the sub-region “Isle of Wight” for example, begins like this:

“A small-scale island landscape with an often intimate feel and an overwhelming sense of discovery. There is a juxtaposition of varied and distinctive landforms, diverse land cover types and often sudden and dramatic views of the sea. The close relationship of the area to the sea is a vital ingredient of the island’s cultural heritage from prehistoric times.” (Natural England, n.d.2)

Obviously, administrators in the UK have given a great deal of thought to the landscape, as there are more than 150 of these very detailed descriptions. As well, 36 Areas of Outstanding Natural Beauty, covering 15% of England’s land, have been designated for the purpose of conserving and enhancing their natural beauty (which includes landform and geology, plants and animals, landscape features, and the rich history of human settlement over the centuries) (Natural England, n.d.4).

In the face of continuing land use changes and development pressures, new laws were incorporated into the Countryside and Rights of Way Act to help protect Areas of Outstanding Natural Beauty. Much of the responsibility under the Act lies with local authorities, who must prepare management plans that detail how each area will be protected. As well, funding was put in place to support delivery of the program’s objectives.

A less official designation has been developed for the British coastline: 33% (1,057km) of scenic English coastline is now conserved as Heritage Coasts. These special coastlines are managed so that their natural beauty is conserved and, where appropriate, the accessibility for visitors is improved (Natural England, n.d.1).

Rounding out the British land use planning toolkit is the Quality of Life Capital program which is often integrated into the Landscape Character Assessment process. Quality of Life Assessment is a tool for maximizing environmental, economic and social benefits as part of land-use and community planning.

A review of the extensive range of landscape evaluation processes in place in the UK did not uncover a comparable set of regulatory systems. It appears that the landscape management successes in the UK are due to widespread public participation in landscape categorization, quality of life assessments and sustainable planning, rather than to a complex set of bylaws or regulations. The general trend seems to be away from the numerical rating of landscapes, and much more towards a community planning process. This process engages local residents in defining the special features present in their own region.

United States and Canada

Land policy researchers Bengston, Fletcher and Nelson (2003), who summarized the United States' (US) public policies for managing urban growth and protecting open space, noted the lack of a comprehensive national land use policy. They proposed that land conservation measures may be categorized into three general groupings: acquisition of property, regulatory approaches, and incentives. Included in the category of property acquisition were parks and other lands acquired for the public good. Many land protection measures involve regulation to impose zoning, greenbelts, and development moratoria. Governments can also offer incentives, such as tax deferrals and tax credits for undeveloped land.

Government-initiated land protection efforts include acquisition of land for National Parks and National Heritage Areas. Perhaps most relevant to PEI is the inclusion of a separate category for valued shoreline and barrier islands. Assateague, Cape Cod and Fire Island are among this collection of National Seashores in the American National Parks system. The geographic area and range of protection and services varies from place to place.

Several federal, state, and local tax policies provide incentives for taxpayers to donate land, to employ easements for conservation purposes, or to commit to keeping their forest land intact. These policies include income tax deductions and credits at the federal and state levels, estate tax exemptions and use-valuation at the federal level, and use-value property tax at the local level. As well, some jurisdictions allocate a portion of real estate transaction taxes to land preservation.

While there does not seem to be any kind of European-style, pan-continental landscape convention in the United States, there are several national groups concerned with landscape and scenery. The groups are volunteer/non-profit, or government-initiated, or a combination. An example of a joint citizen-government effort is the National Scenic Byways program, which is "a voluntary, grassroots program that recognizes and supports outstanding roads" (National Scenic Byways Program, 2007). The Department of Transportation's Federal Highways Administration

provides resources to help manage the designated Byways, for which local groups make application.

Land trusts are the traditional volunteer approach to landscape preservation in the US, but other non-profits have also been effective. Scenic America, for example:

...is the only national non-profit organization dedicated solely to preserving and enhancing the visual character of America's communities and countryside. We accomplish this mission through national advocacy efforts and technical assistance services, local and national projects, and the support of our state affiliates. (Scenic America, 2008)

The American Farmland Trust is another non-profit volunteer organization “founded in 1980 by a group of farmers and conservationists concerned about the rapid loss of the nation's farmland to development” (American Farmland Trust, 2007).

Another agent of landscape preservation, The Cultural Landscape Foundation, is :

...the only not-for-profit foundation in America dedicated to increasing the public's awareness of the importance and irreplaceable legacy of cultural landscapes. Through education, technical assistance, and outreach, the Cultural Landscape Foundation broadens the support and understanding for cultural landscapes nationwide. (Cultural Landscape Foundation, 2007)

These are just a few of the social economy sector programs operating to preserve open spaces and promote sustainable development in the US.

When compared with the US situation, the list of non-profit organizations and government programs devoted to preservation of Canadian landscapes seems much shorter. The primary means of scenery (and environmental) protection has been the National Parks system. The Canadian Heritage Rivers program augments this by offering a degree of non-regulatory protection to about 30 river systems. Land trusts are operating in some regions, and provincial efforts such as Ontario's greenbelt program also acknowledge the value of open space. The land trust movement does not appear to be as organized or as sophisticated as in the US.

Islands

Islands of three jurisdictional levels were reviewed: the island nation of New Zealand; the Australian island province of Tasmania; and Quadra Island within the province of British Columbia, Canada. In each case the islands take stock of their scenic resources, but management efforts vary.

In New Zealand, an island nation that relies heavily on the tourism industry, the 1991 Resource Management Act is the primary means of landscape protection. A user-friendly guide to the NZ RMA begins thus (and resonates with the PEI situation):

New Zealand is just beautiful, isn't it? And this beauty is part of our everyday lives. On Saturday mornings we might be lying in bed in a suburb and by lunchtime be swimming at the beach, tramping through the bush or snowboarding down a mountain on fresh snow. We have more gardens and parks than you can poke a stick at. People come from all over the world to marvel at what some of us tend to take for granted. But if we look a bit closer at “clean and green New Zealand” we see things aren't that way at all. For years we've been damaging our soil, air and water in ways that couldn't be restored. This approach just wasn't sustainable and meant our grandchildren could have missed out on the quality of life that we have enjoyed. The Resource Management Act (usually called the 'RMA') is the main piece of legislation that sets out how we should manage our environment. It's based on the idea of the sustainable management of our resources, and it encourages us (as communities and as individuals) to plan for the future of our environment. (Government of New Zealand, n.d.)

A coastal policy established in 1994 under the Resource Management Act is currently (2008) under review, because New Zealand has recognized the need for more careful consideration of management plans for coastal areas. A proposed New Zealand Coastal Policy Statement details objectives and policies to achieve the purpose of the Resource Management Act. The proposal addresses subdivision, land use, and development; natural character including biodiversity and landscapes; public access; water quality; coastal hazards; historic heritage; and the definition of restricted coastal activities (Government of New Zealand, n.d.). While the country has policies in place, it is often up to local levels of government to administer regulations. These regulations may be difficult to interpret; defining ‘scenic’ or ‘appropriate development’ is not at all simple. Also, authorities have found that applying land use restrictions in communities made up of independent-minded islanders is a challenge.

Tasmania, an island province of Australia, is also reviewing its coastal policy. As in New Zealand, this policy is a decade old and by Tasmanian law, all state policies require review on a regular basis to ensure that they remain relevant and up to date. The policy aims to conserve the coastal area and promote its sustainable use or development. The objectives include the conservation or enhancement of public amenity and scenic values.

The expected outcome in Tasmania is that the visual values of the landscape will be protected and enhanced. In the response document filed during the Tasmanian community consultation process, there appeared to be a certain amount of frustration with the high-level nature of the policy statements. These are not meant to be self-executing, and the implementation role rests in the hands of local planning boards. The respondents to the consultation identified, among other things, a lack of “visual amenity tools” (Government of Tasmania, 1996:14). In both Tasmania and New Zealand, responsibility for managing the landscape resource seems to be in the hands of local administrations, and in both cases, people appear to be searching for workable scenic amenity tools which would help them develop and enforce regulations to preserve scenic values.

The island of Quadra is located just off the coast of (and belongs to the jurisdiction of) the province of British Columbia, Canada. It has no powers to enact legislation or control landscape development, but depends on provincial regulations and regional planning boards for any scenic protection activity. The planning process often takes into account scenic quality, and where no

official planning body is in charge, District Managers in the Ministry of Forests and Range can define visual quality objectives (VQOs) according to a Visual Landscape Design Training Manual. VQOs are based on both planning documents and community input, and may have arisen as a result of public pressure to resist impacts of extensive logging in many areas of British Columbia. A provincial inventory, which maps forestry and tourism capability in BC, has been developed to:

...provide the necessary information to identify the location of sensitive landscapes and known scenic areas, as well as provide management direction. Where landscape unit planning is initiated or under way, scenic areas may be identified and made known and VQOs may be established through this planning process. In the absence of higher-level plans, or for higher-level plans not specifically addressing the management of scenic areas and visual quality, district managers can use their own statutory authority to identify and make scenic areas known, and establish VQOs. (BC Ministry of Forests, 2001)

The BC policy regarding scenic resource defines visual quality objectives as:

...resource management objectives established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social values for the area. There are five categories; preservation, retention, partial retention, modification, and maximum modification. (WCELA, n.d.)

In other words, gradations of protection (or lack thereof) are applied according to planning objectives, which may be imposed by civil servants such as district forestry managers.

Applying Global Lessons to Islands

Islands, having a relatively high ratio of coastline to land mass, contain some of the world's most treasured scenery — that of coastal views. But, although feelings for land run strong, development pressures are also powerful. Depending on their circumstances, islands may experience intense development pressures. This varies according to various factors, for example: native population density; proximity to heavily populated mainlands; degree of linkage to the mainland; perceived rarity or exoticism; and geographic location, i.e. whether they are tropical, temperate or polar.

From the review of landscape management in various jurisdictions it can be seen that appreciation for the scenic value of the landscape is neither universal nor managed in any uniform manner. Some islands and island nations, such as Britain, boast comprehensive landscape management. The amenity of scenery is uppermost in the intent of environmental management plans and legislation. At the other extreme are islands where the value of landscape is rarely or not at all mentioned; or, scenery is valued but only as a secondary feature of ecological resources. Without doubt, all jurisdictions face challenges in managing landscape resources.

One consistent finding in the review is that an engaged local community is key to effecting shifts in land use policy. That a highly engaged local community can spell success in this sector is demonstrated in the UK's Campaign to Protect Rural England. With a membership of more than

60,000, the Campaign has appreciable impact, such that 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.

Where international landscape protection programs exist, such as the European Landscape Convention or the UNESCO and IUCN landscape categories, these serve mainly to provide guidance or validity to more local efforts. But, 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 programs is difficult. 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. However, certain trends may be perceived and valuable lessons learned from leaders in the field. In some jurisdictions landscape preservation is achieved by zoning; in other instances, to preserve landscape values, property owners are compensated financially for development rights; or, properties are purchased outright by the state.

As for assessment methods, no one system prevails for determining the 'value of the view,' nor was it clear that any one system of landscape evaluation was most successful. The coastal policy reviews underway in New Zealand and Tasmania reveal a common problem: there is a lack of clear direction when deciding on landscape protection actions. Terms such as 'appropriate' are too vague when considering specific development proposals. Even where reasonably hard calculations of scenic quotient were performed, the route to achieving the 'perfect landscape' was not obvious.

The IUCN Category V Protected Landscape/seascape designation is one option that could prove very suitable to many small island situations where the land base is limited and the scenery is not untouched or pristine. As in Europe, where the bulk of the designated Category V protected landscapes now exist, small islands may exhibit relatively high population densities; a highly developed tourism industry; domesticated, working landscapes; and the absence of large expanses of wilderness. These conditions invite application of the Category V designation, though IUCN planners caution that the category is not meant to be a catch-all. Areas that have exceptional scenic qualities; where there is a strong connection between culture and nature; that 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 that contain Category V designated landscapes, including the Vinales Valley in Cuba; the vineyards of Pico, Portugal; Öland Island in Sweden; the Cordilleras in the Philippines; and the first designated Cultural Landscape, Tongariro National Park on the North Island of 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 ..." (ibid: 2.2.3), opening the door to greater attention for island systems, marine environments and other coastal zones.

The suggested management guidelines for the special areas designated as Category V (quoted below) deserve consideration by jurisdictions such as Prince Edward Island where it is the working landscape, rather than pristine scenes, that forms the basis of the scenic resource. The IUCN guidelines for management of Category V landscapes (Phillips, 2002) read as follows:

- * to maintain the harmonious interaction of nature and culture through the protection of landscape and/or seascape and the continuation of traditional land uses, building practices and social and cultural manifestations;
- * to support lifestyles and economic activities which are in harmony with nature and the preservation of the social and cultural fabric of the communities concerned;
- * to maintain the diversity of landscape and habitat, and of associated species and ecosystems;
- * to eliminate where necessary, and thereafter prevent, land uses and activities which are inappropriate in scale and/or character;
- * to provide opportunities for public enjoyment through recreation and tourism appropriate in type and scale to the essential qualities of the areas;
- * to encourage scientific and educational activities which will contribute to the long term well-being of resident populations and to the development of public support for the environmental protection of such areas; and
- * to bring benefits to, and contribute to the welfare of, the local community through the provision of natural products (such as forest and fisheries products) and services (such as clean water or income derived from sustainable forms of tourism).

A great deal of expertise lies within the IUCN and it is an excellent source for guidance in this field, but ultimately the responsibility for the land lies within local jurisdictions. In the case of PEI, some local level of designation and concrete management provisions would need to be in place before appealing to the IUCN or any international body for recognition.

Without further research it is impossible to say whether island administrations are any more or less concerned with landscape than those of mainland jurisdictions. The notion of landscape character may be more clearly articulated within island communities, where a sense of place often thrives. 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 research, that water views are generally considered superior to land-based scenes (Government of Scotland, 2006). This places a great responsibility in the hands of island administrations to properly take into account the special value placed on seascapes.

The politics of defining the most valuable views on islands can be fraught with difficulties, especially where a variety of jurisdictional levels confront the issues. While it may be admirable that island administrations hand off the landscape planning function to local communities, they must not do so without providing adequate direction or clear policy. In small island societies where the government fails to provide legitimate, clearly articulated leadership, land use debates can turn into a popularity contest wherein highly engaged individuals on both sides of the issue gain public prominence and tussle it out. This usurps the political space and often leads to a stalemate and consequent inaction. Meanwhile, the march of development continues.

Moving Towards Landscape Management on PEI

Filling Gaps in the Management Framework

In comparison to all the other jurisdictions under review, Prince Edward Island seems to have one of the least effective means, and has taken the least action, to protect its valuable landscape resource. The review of the Island's legislation, planning regulations and the application of the regulations revealed that scenic viewsapes as such do not warrant any special attention. With the exception of two small special planning areas, development permits are awarded or refused on the basis of issues other than how they would affect the aesthetic resources of PEI.

As will be seen in the research results described below, undeveloped coastal scenes of PEI are valued highly by both residents and tourists. However, current legislation does not reflect that preference. From 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 has not been a conscious consideration in most decision-making for developments approved to date. Some progress has been made in maintaining safety on the highways by regulating the placement of private lanes; recent policies encourage protection of water tables and riparian zones; but in general there is 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. At the very least, the adoption of a specific coastal policy to treat the sensitive issues around galloping shoreline development would seem to be a wise course of action for PEI administrators.

The IUCN Class V Protected Landscape and Seascape category, described earlier, is certainly intriguing in terms of Prince Edward Island. The UNESCO Cultural Landscapes category is also of interest and in this case, does not require consideration of biodiversity. In either instance, landscape preservation must first be addressed at a local level. Policies and land use plans must be in place to allow for the proper management of any internationally designated cultural landscapes or seascapes.

The Public's Role in Protecting Prince Edward Island Landscapes

In the jurisdictions studied, it was apparent that a healthy grassroots movement was often the instigation for greater governmental involvement in land use issues. Tourists and short-term visitors may have an active interest in the scenery of a destination, and travel decisions and activities are very often based on the physical attractiveness of the place. However, visitors are not generally in a position to influence local policy making. As pointed out earlier, visitors may actually be the landscape offenders, whether indirectly by demanding services and attractions that have not 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.

Where other jurisdictions have successfully applied controls, purchased development rights or made outright land purchases, they have had the support of their residents, and local people have often been vocal about what they value in their surroundings. In addition, local benefits have often been clearly articulated. For example, where scenic roadways have been developed, the net result — economic benefit for the region — has been explicit. Whether the approach is top-down, bottom-up or some combination of efforts, some modicum of public interest must exist, or some potential public benefit must have been identified, for viable changes to land-use policy to ensue.

On first glance, land issues would seem to have preoccupied the PEI public over the past 30 years, beginning with a 1973 Royal Commission on Land Use and Land Ownership, followed in 1990 by a Royal Commission on the Land, and in 1996-97 by a government-appointed Round Table on the Land. The Round Table held 36 meetings and heard from 70 local groups and individuals. However, all this activity led to little real action. Public discourse concerning landscape on PEI has not resulted in any strong, coherent movement comparable to that in Britain. To a certain degree, this may be explained by historical factors. During the Island's colonial period, a backlash against absentee landownership engendered a sense of independence that is often exhibited in the form of fiercely protected private property rights. As a result, local and provincial governments have been reluctant to try to impose limitations on landowners.

For example, most forested land on PEI is privately owned, and in the late 1990s an effort to regulate private woodlot management in PEI met with resistance and limited success. A series of recommendations by the Forest Partnership Council covered such aspects as “intent to harvest” forms, minimum age standards for harvest of softwood, and pre-harvest assessment by Forestry staff. These recommendations were rejected at meetings organized across the province by a small but very vocal group of woodlot owners (MacDonald, 2001).

Regulations controlling agricultural practices have also evolved very slowly despite clear evidence of fish kills, eutrophication and pollution of groundwater linked to industrial farming inputs. In general, individual farm owners do not appreciate the imposition of regulations or directives that would control the use of the farmland or the operation of the business. The 1993 Final Report of the Special Legislative Committee on the Lands Protection Act implies that some progress may have been made since the 1973 Royal Commission on the Land:

Over the years, meanwhile, a more favourable climate for land use restrictions has begun to emerge. There is a growing awareness that an individual's use of his or her land can have social, economic, or environmental impacts that go far beyond the boundaries of the land. (Government of PEI, 1993)

However, the 1990 Royal Commission on the Land recommended province-wide land use planning, and zoning of farmlands. As of 2009, no such action has yet been taken outside of municipal boundaries. Some would suggest that this is the result of local resistance by strong-minded individuals.

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. What is more, they just may find the means to do so, making use of family ties or political favours. At the same time, in a

close-knit community, strong dissenting opinions that suggest a change in the status quo are often poorly received.

A case in point is that of the well-known land activist of the 1980s, Marc Gallant, who was both revered and reviled for his outspoken opinions on the visual future of the province. He is quoted in a 2004 CBC Compass story (from 1996 archive footage of an interview on a PEI shoreline):

If we don't have the courage, if we don't have the determination to protect this province, however difficult that might be, we're going to end up losing it. Twenty years from now there'll be none of this left; Islanders will have no access to it. There'll be 'No Trespassing' signs and we'll have no access to our own beaches.
(RUK, 2006)

A YouTube video made recently on the same site confirms that Gallant's fears were well justified. Montgomery Land Trust member Peter Rukavina has videotaped a series of shoreline "monster homes" recently built in the central north shore area that the Land Trust is attempting to preserve.

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 at the head of a wider landscape protection movement.

A PEI volunteer group, the L.M. Montgomery Land Trust was founded in 1994 to work to preserve the scenic agricultural coastal lands on Prince Edward Island's north shore. The group noted the downturn in the Island's agricultural economy and the growing pressure to sell farmland for development. They identified for protection the area between French River and Sea View, which has special significance for the heritage of *Anne of Green Gables* author L.M. Montgomery. The Trust works with landowners to identify alternatives to selling land for development, using a variety of mechanisms to preserve the region's precious viewsapes. The purchase of development rights for some properties has led to the successful preservation of a few parcels that were at risk, and the Montgomery Land Trust has just announced (March 2008) a new project known as the L.M. Montgomery Seashore. The project identifies as a priority for conservation five kilometres of shoreline and 622 acres of land made up of 11 privately owned parcels. The Trust hopes to work with landowners and various levels of government to preserve the area as a heritage landscape (L.M. Montgomery Land Trust, n.d.).

The Institute of Island Studies has also been active in community engagement on the topic of land use, organizing numerous forums and publishing research papers and reports (e.g. Land Policy for a Small Island; Focus on the Land, Preparing for the Royal Commission; Forests and Forestry in Prince Edward Island; Agriculture on PEI — Papers from a Symposium).

In 2005, the Iris Group organized a public forum on the land called "The Narrowing Landscape", which attracted excellent speakers and large group of concerned citizens, and served to point out that none of the issues have changed in the past three or four decades.

Beyond public agitation and numerous commissions and reports, other agencies have taken their own routes to protect some portions of the province's land resource. The Island Nature Trust, in particular, has had considerable success in purchasing environmentally significant property across the Island, but their impact on the visual resource of scenery is indirect. The PEI National Park and provincial parks also play a role in land protection but once again, the motivation is not generally the scenic resource.

Assuming, based on the above evidence, that a certain level of public interest in and commitment to preservation of the landscape does exist on PEI, the government could reasonably instigate a process for public involvement in landscape management. Although 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 an institutional vacuum. Mechanisms for coherent community participation are essential for effective land use planning and management. A first step could be to gauge the level of interest and level of commitment in the resident community. Once it has been established that public interest is engaged, a variety of potential tools and methods for inclusion of the populace in policy development are available.

Tools for Evaluating Scenic Viewscapes

Several key factors must combine before a community can successfully take stock of and protect its scenic resource. Most importantly, residents and policy makers must acknowledge the value of the landscape and commit to its protection. This goes beyond day-to-day pride of place; if a location is deemed to be beautiful, then proposed changes must be carefully evaluated and consideration given to the net effect on overall scenic worth.

If it is agreed that efforts must be made to preserve viewscapes, then research is needed to determine which views have the greatest value. Research is also required to determine the point at which alterations to the landscape detract from its original appeal. When island jurisdictions attempt to measure and place value on aesthetic surroundings, how should they best deal with the related challenges of protecting those landscapes, and especially coastlines? As noted, IUCN offers a category of landscape protection that could provide a solution for islands that exhibit a high scenic value but whose landscapes are active and lived-in. Within such a framework, should the measure of scenic value be based on a majority opinion or consensus, or is there some objective standard that can be applied? Do valuable viewscapes comprise more than an aesthetic quotient? Should cultural, personal and historic reasons also trigger protection?

If the local population grasps the concept of scenic value, and legislative or other management processes are available to manage landscape and scenic viewscapes, some simple evaluation tools do exist that can be applied to support the landscape protection effort. Whereas in the past it may have been difficult to determine landscape preferences or assess the effects of proposed developments, current technologies permit swift and efficient feedback using extremely effective visualization techniques.

The local landscape preferences in Prince Edward Island — a Canadian island province generally renowned for its scenery — were assessed in 2006-07 using an on-line viewscape preference survey with both on- and off-Island respondents. The survey was augmented by a qualitative

focus group session that discussed attitudes to the local landscape (Horne 2007). In spite of the many possible individual responses to landscapes and scenery, it was hypothesized that general preferences would emerge for some landscapes over others.

The on-line survey proved the efficacy of the Internet as a tool for this type of study. A set of 31 PEI landscape snapshots, such as might be seen from a car window, were posted online. Both residents and non-residents were invited to score the scenes in terms of scenic beauty. The scoring offered nine gradations from “not at all” (scenic) to “very.” Subscribers to the Tourism PEI e-mail newsletter (most of whom live off-Island), as well as subscribers to the Tourism Industry Association of PEI’s E-news received the invitation to participate in the survey. In total, almost 1,200 responses to the survey were collected; by far the largest percentage of the respondents lived off-Island (1148 vs. 46). The only out-of-pocket expense was the survey software subscription. Completion rates for surveys of local and off-Island residents were 82% and 91%, respectively; that is, of those who opened and began the survey, 82% and 91% answered all questions. While a survey can remain posted indefinitely, in this case most responses to the E-mailed invitation to participate in the survey were received within the first week; thus, results can be obtained very quickly. The trial proved that internet surveys and digital photo alterations can allow communities to participate directly in a landscape evaluation and planning process.

The results revealed that the notion that “beauty is in the eye of the beholder” is not particularly relevant. The respondents demonstrated clear preferences for some types of landscape scenes and agreed on the relative scenic value of various viewscapes. For both residents and non-residents, the standard errors around the mean landscape value scores for individual scenes were very small (ranging between 0.017 and 0.165), suggesting a high level of agreement among participants. One category of landscape, that of undeveloped coastal scenes, clearly received the highest approval rating. In a graph which displayed the descending mean scores for each of the 31 scenes used in the survey, no undeveloped coastal scenes rated in the bottom third of the 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 slopes of the lines, when graphed, were the same.

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 slope as the ratings made by non-residents, although the mean scores did differ for some scenes. Thirdly, when scenes were categorized into four general types of landscape, one category — undeveloped coastal scenes — had more appeal than the others.

The Internet-based survey methodology tested in Prince Edward Island effectively and efficiently collected data on preferences for one scene over another. In small islands such as PEI, Internet landscape surveys could become a standard tool of planners because of 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. In larger jurisdictions, it might be necessary to develop a method whereby the survey results could be applied to broader landscape groupings, or adapted to geographic information mapping systems used in land-use planning.

An on-line survey allows for anonymity, which is an important factor in small, close-knit communities. However, it is also true that Internet access, especially high-speed, may be less readily available in rural areas. The use of the Internet does, however, allow for efficient inclusion of opinions of non-residents, if that is the wish of the planners.

Beyond the Aesthetic Value of Landscape

While the survey data indicated that one category of landscape had more appeal than others, focus group discussions in the community of Tyne Valley revealed that landscape elicits strong feelings that go beyond strictly aesthetic ratings.

The intent of the focus group was to obtain more in depth, qualitative information from local residents about their attitudes to the landscape around them. The discussion guide centred on their feelings about special places in the neighbourhood as well their responses to changes in the landscape. The focus group participants scored paired sets of photos, one of the pair having been altered to include development. This allowed the researcher to draw some conclusions about attitudes to construction, land subdivision, and other land development activities.

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 group also 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. Their discussion revealed clear emotional associations with landscape that must in some way be taken into account in land use planning. The vocabulary and tone of voice recorded in Tyne Valley communicated a strong connection with the land: “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. When asked where they would take visitors, almost all the responses involved shore locations or water scenes. 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 lupines 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 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....” (Horne, 2007, from transcript of Tyne Valley focus group).

Possible Next Steps

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. One possible approach is to identify the necessary steps involved in placing parts or all of PEI on a list for potential designation by the UN or the IUCN. Adrian Phillips has suggested that addressing lived-in landscapes as IUCN Category V protected areas may be “...an approach whose time has come” (Phillips, 2002: 13). He sees a possible policy shift from the current focus on saving natural areas, to pay greater attention to working landscapes.

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 valued landscapes as well as 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 the 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 lend themselves to propagation of all sorts of bushes and trees. This approach could be used after the fact, and could also be included as a requirement in new development proposals.

In no way are any of the above ideas to be interpreted as “silver bullet” solutions to what is acknowledged as a complex issue — an issue that involves far more than the forces of pro- and anti-development. This document seeks to present a preliminary but textured view of landscape resource issues on 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 truly related to the physical aspect of the land, and how well it can survive in the face of “creeping sameness”, are topics for future research. This research would address Recommendation #76 in the 1999 Standing Committee’s report, which called for an assessment of the impacts of changes to the landscape. Also of interest would be to test proposed Island development projects with three-dimensional visioning technology such as that which is available in the Collaborative for Advanced Landscape Planning laboratory at University of BC. In a more academic/Island Studies sphere, it could also be useful to measure the relative importance placed on landscape by islanders as compared with mainland residents.

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

- a) Government and industry should consider the brand value of the Prince Edward Island scenic resource from a tourism marketing standpoint.
- b) Government agencies could standardize the measurement tools tested in this research, to provide planners with reliable systems for community input during planning processes. Internet surveys and other graphic tools that can be used to determine landscape preferences would not only serve to assist planners, but could be used to draw local attention to scenery as a valuable resource.

- c) To expand this research in a Prince Edward Island setting, a province-wide open-ended survey (also by Internet) could be used to invite individual residents, and visitors if desired, to nominate outstanding scenes.
- d) At the same time, the province could undertake a “smart growth” pilot project. A regional planning exercise could extend the scope of the current land-use planning approach by including the quality of the landscape. This should be supplemented by research into landscape as a resource for community well-being; and an assessment of impacts of the loss of scenic Island landscapes.
- e) PEI could investigate the possibilities for IUCN Category V Protected Landscape/seascape designation.
- f) Research into the National Seashore model currently in place in some US states is recommended, especially in relation to the L. M. Montgomery Land Trust region on PEI’s central north shore.
- g) It would be advisable for the province, through a public process, to develop a comprehensive coastal policy that would identify the most valuable viewsapes in addition to addressing related, pressing issues such as: beach access for shellfishers, recreational fishers and beachgoers; increases in cottage lot subdivisions; potential for salt water intrusion where coastal groundwater is heavily exploited; and climate change preparedness in light of escalating rates of coastal erosion.
- h) A review of a wider range of jurisdictions might identify other potential solutions applicable to the Prince Edward Island situation.

Conclusions

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: 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 a sense of place thrives where this connection exists. Can this connection between physical surroundings and personal identity 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 review of global best practices and current approaches included in this paper has afforded us a better understanding of how the landscape resource is managed in Prince Edward Island and in other jurisdictions, including other islands. It is disappointing that, in terms of managing the scenic resource, Prince Edward Island appears to lag behind many other island jurisdictions that

depend on scenery for their economic future. Other jurisdictions provided useful examples and success stories that demonstrate the benefit of approaching the coastline as a valuable resource in and of itself.

Both a quantitative on-line survey and a qualitative focus group method proved practical and efficient to use in measuring landscape preferences. The survey methodology successfully collected a significant amount of data concerning landscape preferences of Prince Edward Island residents and visitors. It was shown that the Internet survey technique is one that could be simply and efficiently repeated. The data confirm, in a defensible way, that there exists a strong preference for undeveloped PEI coastline scenes. Use of these tools would certainly enhance the ability of policy makers to make decisions on the relative values of viewsapes. Landscape surveys could be used to further refine preference data either by landscape type (agricultural vs. urban, coastline vs. inland and so on), or by specific scene. They could also be used to decide on special designations for particular viewsapes, or as tools for assessing public opinion on impacts of individual development proposals.

The value of landscape goes well beyond the aesthetic. Economic, cultural and ecological worth must also be taken into consideration. When landscape changes, as it must, the changes should be evaluated in more holistic terms. Measurements must reflect not only environmental and economic values, but also the many values inherent in the view, including its effect on the culture and identity of 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 in community identity. If, through lack of adequate land use and development planning and control, home is allowed to become 'placeless', where does that leave an island people?

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