

CONSERVATION AND LOCAL COMMUNITIES: EXPLORING THE UPPER BAY  
OF FUNDY BIOSPHERE RESERVE INITIATIVE IN NOVA SCOTIA

by

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for the degree of Master of Environmental Studies

at

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DALHOUSIE UNIVERSITY

SCHOOL FOR RESOURCE AND ENVIRONMENTAL STUDIES

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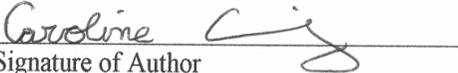
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## **ABSTRACT**

The Upper Bay of Fundy Biosphere Reserve Initiative (UBoFBI) began in the year 2000. The original proponents were an umbrella organisation of tourism groups from Nova Scotia and New Brunswick. It was to be the first inter-provincial biosphere reserve in Canada. Biosphere reserves are founded on a concept of responsibility to protect not only the landscape, but also to take into account the socioeconomic impact of conservation on the nearby communities (Kaus, 1992). In 2002, for a variety of reasons including perceived community opposition, the proponents withdrew from Nova Scotia.

Recognition as a biosphere reserve illustrates a voluntary long-term commitment at a local level for conservation and sustainable development. Three zones, each with differing levels of protection and development, the core area, buffer zone, and zone of cooperation characterize biosphere reserves. Biosphere reserves also encompass goals for the sustainable development of the surrounding regions. There are twelve biosphere reserves across Canada and an increased amount of time is being spent on the designation process and on community consultation efforts.

The general goal of this study is to explore the reasons why the UBoFBI was not successful in Nova Scotia. Insights gained from the research are used to make recommendations for future conservation projects, and to offer insight into the best practices to be used when working with communities to propose new conservation areas. Interviews were conducted in 2004 primarily in Northern Nova Scotia with community members and members of the planning committee. This rural area is where one of the most contentious community meetings was held. The research found that misconceptions abounded, and information obtained from anti-biosphere reserve websites influenced those opposed to the UBoFBI. Several factors were at play in Nova Scotia, including antagonism over Cape Chignecto Provincial Park, and confusion with Minas Basin Working Group community meetings. The UBoFBI shows us that public consultation needs to start earlier in the designation process. Projects should focus on a smaller area, growing larger as support and success is achieved. Knowing the history of an area is also key when proposing such initiatives. The process of achieving biosphere reserve designation can be difficult, and in some cases the biggest lesson to be learned is knowing when to continue and when to walk away.

## **Abbreviations**

BoFEP – Bay of Fundy Ecosystem Partnership

BoFPC – Bay of Fundy Product Club

BoFTP – Bay of Fundy Tourism Partnership

CBRA – Canadian Biosphere Reserve Association

CoRDA – Colchester Regional Development Agency

CREDA – Cumberland Regional Development Agency

CTC – Canadian Tourism Commission

CWS – Canadian Wildlife Service

FAO – Food and Agriculture Organization

ICC – International Coordinating Council

ICSU – International Council of Scientific Unions

IUCN – International Union for the Conservation of Nature and Natural Resources

JAG – Joint Action Group

MAB – Man and the Biosphere

MBWG – Minas Basin Working Group

SWNBR – Southwest Nova Biosphere Reserve

UBoFBI – Upper Bay of Fundy Biosphere Initiative

UN – United Nations

UNESCO – United Nations Educational, Scientific, and Cultural Organization

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## **CHAPTER 1: INTRODUCTION**

### **1.1 The Upper Bay of Fundy Biosphere Initiative Background**

In 2000, a project began to create an Upper Bay of Fundy Biosphere Reserve under the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) Man and the Biosphere (MAB) program. The Biosphere Reserve was to include both Nova Scotia and New Brunswick's Upper Bay of Fundy regions in Canada's first inter-provincial project. It would be the first marine focused Biosphere Reserve in Canada (Upper Bay of Fundy Biosphere Initiative Newsletter, 2002a). The original biosphere reserve proponents were the Bay of Fundy Product Club (BoFPC), an umbrella organization of tourism groups from both Nova Scotia and New Brunswick; they were interested in the potential of a Biosphere Reserve to attract tourists to the region (Bay of Fundy Ecosystem Partnership, 2001). The BoFPC wanted the Upper Bay of Fundy Biosphere Initiative (UBoFBI) to be largely a community-based effort. Many partners were involved, including economic development boards, tourism operators, habitat managers and university professors, in both Nova Scotia and New Brunswick (Upper Bay of Fundy Biosphere Initiative Newsletter, 2002a). Nova Scotia's Upper Bay of Fundy region was dropped from the initiative in the summer of 2002 for a variety of reasons including perceived community opposition to the project. This study explores the development of the proposal and the process by which Nova Scotia's Upper Bay of Fundy region was withdrawn from the proposed biosphere reserve. Since that time, the project has changed focus and efforts are being made to establish a biosphere reserve on the New Brunswick side of the Upper Bay of Fundy.

The objective of MAB is “to predict the consequences of today’s actions on tomorrow’s world and thereby to increase man’s ability to manage efficiently the natural resources of the biosphere” (di Castri, 1976, p.237). Biosphere reserves ‘take a people-centered approach in environmental conservation’ (Schaaf, 2003, p.193), and inherent within biosphere reserve infrastructure is the ability to combine public input with protected area decision-making (UNESCO, 1995). Designations such as biosphere reserves can be thought of as “value-added designations, which increase partnerships among federal, state and local governments, and private property owners for mutual benefit” (Yeager, 1999, p.288).

Public involvement is a key component in the successful establishment of protected areas (Salm & Price, 1995). According to Salm and Price (1995) social acceptance is an important criterion in the site selection of protected areas, and they suggest all efforts should be made to encourage local support. One of the tenets of biosphere reserves is that local people can be strong advocates of environmental conservation and therefore the mentality of protecting the physical environment with the exclusion of humans negates the role of local people in conservation (Laserre & Hadley, 1997). Kaus (1992) concluded that locals residing in and around protected areas often perceive conservation policies to be a threat to their use of the land and a possible threat to their livelihood. In theory, biosphere reserves offer flexibility for local communities that protected areas may not possess. Community involvement is incorporated in the biosphere reserve design process; building positive relationships with local communities in the area of a proposed biosphere reserve is one part of this process. In this thesis I

examine the situation in northern Nova Scotia where a Biosphere Reserve was suggested for the Upper Bay of Fundy.

## **1.2 Biosphere Reserves and People**

The idea that people are part of the environment is fundamental to the biosphere reserve concept (Ravindra, 1998). Biosphere reserves are founded on a responsibility to protect not only the landscape, but also to take into account the social impact of conservation on the nearby communities. Kaus (1992) considers that both the human and nonhuman components must be given equal consideration. UNESCO (1984) states in the following way that people are part of biosphere reserves, and should be considered as such by all those involved, “People constitute an essential component of the landscape and their activities are fundamental for its long-term conservation and compatible use. People and their activities are not excluded from a biosphere reserve; rather they are encouraged to participate in its management and this ensures a stronger social acceptance of conservation activities” (p.2). Hence, the ‘active participation of local populations’ is an important part of the biosphere reserve concept (Batisse, 1982). Caldecott (1992) considers that one of the most important causes of failure to attain a desired level of nature conservation when establishing a protected area is the lack of involvement by local people or users of the given area.

Biosphere reserves place importance on both the conservation and the social and economic development needs of local communities, which “is now recognized as vital to successful management of most protected areas” (Laserre & Hadley, 1997, p.2). By recognizing the needs of the community, Batisse (1982) argued that biosphere reserves

represent the type of protected areas many strict conservationists had been advocating for years. It is explicit in UNESCO's Seville Strategy for Biosphere Reserves that a tendency towards alienating local people is contrary to the biosphere reserve concept (UNESCO, 1995). In writing about Mexico's Mapimí Biosphere Reserve, Kaus (1993) argues "An understanding of the role of a protected area in the local people's lives (rather than vice-versa) is necessary for the success and stability of the conservation program" (p.404). Leadership is essential in any endeavour; local leadership an important factor in the success of biosphere reserves. Biosphere reserve designation may be wrongly perceived as another imposed scheme, which will negatively impact on local landowners and resource users. Roots (1989) therefore emphasizes the need for leadership from within the local community.

Caldecott (1992) considers that before attempting to collaborate with a local community, proponents must have an understanding of internal power structures. In research on the then proposed Southwestern Nova Scotia Biosphere Reserve, Ravindra (1998) discovered themes that would arise in the present research as well: a fear of government takeover, sovereignty issues, and struggles over power distribution. Ravindra had conducted research for her Master of Environmental Studies degree for York University on the Southwest Nova Biosphere Reserve, and subsequently was heavily involved with the Canadian Biosphere Reserve Association (CBRA) and biosphere reserves in Canada, including the UBoFBI. It is clear from the work of Batisse (1982), Roots (1989) and others that the challenges encountered in garnering public support need to be understood before initiatives for biosphere reserves are undertaken.

The present case study focuses on an attempt to establish a biosphere reserve, the UBOFBI, that failed, at least temporarily. Given the recommendations made by UNESCO and others, a hypothesis to account for this failure is that there was a lack of social acceptance. Understanding why certain biosphere reserve proposals do not come to fruition is a useful exercise for those proponents advocating the creation of biosphere reserves. For progress to be made, research cannot focus solely on those cases with successful final outcomes. If the reasons for failure lie with community opposition, many lessons might be learned by studying community involvement in unsuccessful ventures and exploring possibilities for alternative avenues to positive relationships with local communities and the public in general. Community support or opposition to a project will have definite influence on the outcome of a given proposal.

### **1.3 Research Question and Objectives**

The general goal of this study is to explore the reasons why the Upper Bay of Fundy Biosphere Initiative was not successful in Nova Scotia. The specific research objectives of this study are:

- To study the general framework of establishing a Biosphere Reserve.
- To examine the Upper Bay of Fundy Biosphere Initiative in depth.
- To understand how to foster improved relations between community members and advocates of conservation initiatives such as the Biosphere Reserve;
- To use the insights gained from the communities to make recommendations for future conservation projects, and to offer insight into the best practices to be used when

working with communities to propose new conservation areas, particularly biosphere reserves.

#### **1.4 Thesis Outline**

The thesis is organized into the following chapters:

- Chapter 2 provides a literature review focusing on biosphere reserves, and protected areas. Examples are drawn from both Canada and abroad. Background information on biosphere reserves is provided in this chapter.
- Chapter 3 is a literature review on public involvement; it looks at public participation methods, models of public participation, and lessons to be gained from public involvement.
- Chapter 4 outlines the research methods used during the study. It explains the case study approach used during the thesis, along with data collection, and analysis of results.
- Chapter 5 looks at the natural and human history of the study area in the larger context of the upper Bay of Fundy region.
- Chapter 6 provides an overview of the UBoFBI and the different phases of the project.
- Chapter 7 presents a summary of the significant issues and themes that arose from the research that influenced the outcome of the UBoFBI.
- Chapter 8 focuses on significant issues and themes arising from the research surrounding the process of proposing a biosphere reserve for the upper Bay of Fundy.

- Chapter 9 presents final conclusions and recommendations from this thesis. The Appendixes and a bibliography follow this chapter.

## **CHAPTER 2: LITERATURE REVIEW ON BIOSPHERE RESERVES**

*“Pursuing biosphere reserve designation can be volatile. Prudence will be required to know when to walk away. In some cases, public engagement creates a forum to bridge differences and in other circumstances, only the passage of time and unsubstantiated claims about possible negative effects create the opportunity.”*

*(Sian, 2000, p.92)*

### **2.1 Introduction**

In this chapter I provide a history of biosphere reserve development, an examination of biosphere reserve theory, as well as an overview of the designation process. Comparisons are drawn between protected areas theory and biosphere reserves, with the latter offering a new approach to conservation. Examples are provided from both Canada and abroad, with an emphasis on biosphere reserves in Canada and present trends in this country.

### **2.2 Biosphere Reserves and Protected Areas**

#### **2.2.1 Biosphere Reserves: Moving Beyond Traditional Protected Areas**

Traditionally, protected areas have been designed and designated using a top-down approach by government agencies without considering the local people (Kelsey, Nightingale, & Solin, 1995; Wells & Brandon, 1992; Batisse, 1997). There is growing recognition that successful long-term protected area management requires the cooperation and support of those who use and influence what happens in an area (Gubbay & Welton, 1995; Wells & Brandon, 1992) and as a result protected area management practices are changing. Increased community participation is thought to be one way to ensure that long-term management practices occur and a successful protected area is established

(Wells & White, 1995). Internationally, in some developing countries, the practices of autocratic regimes have resulted in a public that is suspicious of conservation in areas where local people have not been part of the decision-making process in the establishment of protected areas. In extreme cases, such as in African nations and the former Soviet Union, the protected areas have collapsed due to poaching, deforestation, and encroachment (Batisse, 1997). Such is not the case in Canada, and this study will focus on the Canadian situation.

The International Union for Conservation of Nature and Natural Resources (IUCN) stresses the need for buffer zones around protected areas (Batisse, 1997). Protection cannot stop completely at the boundaries of protected areas, but must include a measure of protection in the surrounding areas as well. Buffer zones are part of the biosphere reserve concept. In general, biosphere reserves are a more flexible form of conservation than many other types of protected areas (Forbes, 2003). Biosphere reserves are best thought of as a management tool. Each biosphere reserve is unique and there is no one model for all: “The concept of a biosphere reserve is not a fixed agenda for a given area, but a basis from which to develop a workable management plan compatible with local customs and conservation interests specific to the region” (Kaus, 1993 as cited in UNESCO, 2002, p.24). The goal of biosphere reserves is for all groups of people in an area, from residents and landowners, to administrators and researchers, to come together to work for the mutual benefit of all participants (Kaus, 1992), “if conservation is to hold any chances of long-term success, protected areas need to be open, interacting with the broader region of which they form part, with local people fully involved as key stakeholders in an area’s development” (UNESCO, 2002, p.17). Ravindra (1988)

considers that proponents should focus on biosphere reserves as coordinating mechanisms to encourage collaborations among other environmental groups.

The original goal of the MAB Program was the formation of a global network of biosphere reserves; these were to move beyond individual nations' protected areas systems such as national parks, provincial and state parks, and others. The creation of the MAB Biosphere Reserve Programme initiated a brand new approach to conservation that was intended to provide a global exchange of ideas and information (Canada MAB, 2004). UNESCO (2002) stresses that traditional conservation practices should, however, not be eliminated altogether since some areas need to retain a high level of protection with low human impact (UNESCO, 2002). In Canada, biosphere reserves have tended to be extensions of national parks rather than replacements for national parks. Because the parks are generally barely large enough to serve their conservation function, managers have reasoned that by creating biosphere reserves in the greater region of the park, it will be more secure, and the regional society, culture and economy will benefit in the long term. Although many of the biosphere reserves in Canada are associated with national parks (i.e. Waterton, Southwest Nova, Riding Mountain, Niagara Escarpment, Clayoquot Sound, and Southwest Nova Biosphere Reserves), they are also associated with other protected areas such as Ramsar sites (i.e. Lac Saint-Pierre, Long Point), International Peace Parks (i.e. Waterton), provincial parks (i.e. Clayoquot Sound), migratory bird sites (Redberry Lake), wilderness areas (Southwest Nova), and marine parks in the case of the Charlevoix biosphere reserve (Ravindra, 2003a).

### **2.2.2 Biosphere Reserve History**

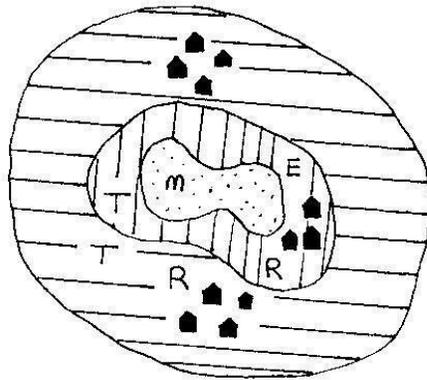
In 1968 UNESCO convened the first International Biosphere Conference in Paris. This conference was organized in conjunction with other government groups such as the Food and Agriculture Organization (FAO), the International Council of Scientific Unions (ICSU), and the IUCN. As a result of this conference, a recommendation was made to launch worldwide a research program on “the interaction of ‘man’ and the ‘biosphere’” (Schaaf, 2003, p.186). The UNESCO MAB Programme commenced officially in the 1970s with the designation of the first biosphere reserves (Batisse, 1990; Batisse 1982), emphasizing local needs and perceptions in reserve planning and management (Wells & Brandon, 1992). The first 56 biosphere reserves received their designation in 1976, and an additional 61 biosphere reserves were designated the following year. By 1981 there were 208 biosphere reserves in 58 countries (UNESCO, 2002). Today there are 440 biosphere reserves in 97 countries worldwide (UNESCO-MAB, 2004). The MAB Program initially encompassed other projects, but by the 1992 UN Conference on Environment and Sustainable Development in Rio de Janeiro, biosphere reserves had become the foundation of the MAB Program (Schaaf, 2003).

### **2.2.3 Biosphere Reserves Explained**

Biosphere reserves can be thought of as ‘sites for experiments in sustainable living’, as well as a process for capacity building and community socio-economic development (Miller, Ravindra, & Willison, 1999). UNESCO (2002) describes biosphere reserves as “internationally recognized areas, which seek to demonstrate the value of conservation within a particular natural region, and to reconcile the conservation of

biological diversity with its sustainable use” (p.114). Biosphere reserves are created to meet the following goals (MAB, 2004):

- To conserve biological diversity;
- To maintain healthy ecosystems;
- To learn about natural systems and how they are changing;
- To learn about traditional forms of land-use;
- To share knowledge on how to manage natural resources in a sustainable way;
- To co-operate in solving natural resources problems.



-  Core Area
-  Buffer Zone
-  Transition Area
-  Human Settlements
-  Research Station or Experimental Research Site
-  Monitoring
-  Education and Training
-  Tourism and Recreation

*Figure 2.1 Biosphere Reserve Zonation (Adapted from Bioret, Cibien, Génot, & LeCompte, 1998, p.8)*

To be a true biosphere reserve, the site must have a protected core, as well as goals for the sustainable development of the surrounding regions and goals to meet the basic needs of the surrounding population. The cultural and social characteristics of the

local population are important because, unless the local communities perceive direct benefits from the conservation measures, the protection of ecosystems and species has little future (Batisse, 1990). The original reserves had a strong emphasis on conservation (Batisse, 1986); nevertheless, from the beginning, biosphere reserves were intended to illustrate that conserving the environment and using natural resources in a sustainable manner can coexist in such a way that those people living within, or nearby, a reserve can benefit economically (Schaaf, 2003). From the beginning, the MAB Programme was also intended to complement, not replace, other types of environmental protection by involving humans in conservation (di Castri, 1976). It must be stressed that a biosphere reserve is not a protected area; instead, the biosphere reserve offers a different approach to conservation (Meeuwig, 1993); biosphere reserves contain both protected and non-protected areas, but are not in themselves protected areas (Schaaf, 2003). Biosphere reserves may also encompass other areas that are protected as National Parks, World Heritage sites, Ramsar sites for wetland protection, and others (UNESCO, 2002).

The simplest pattern of a biosphere reserve consists of three zones: a core area with the largest degree of protection, surrounded by a buffer zone, followed by a transition area (Wells & Brandon, 1992). Despite their appearance as such in Figure 1.0, the three zones are not three concentric rings. This diagram, found in numerous MAB publications, is considered to be a schematic representation of a generalized biosphere reserve, and not necessarily a true representation of all reserves. Biosphere reserves may have more than one core area, and in some situations zones are not contiguous (UNESCO, 2002). For instance, buffer zones need not necessarily surround the core area. The shape and location of each zone will depend on the local situation (Batisse, 1997).

Cluster biosphere reserves were introduced as an alternative for those regions where “it is not feasible to designate a contiguous region to fulfill all the functions of a biosphere reserve” (Sian, 2000, p.30). Cluster biosphere reserves consist of multiple sites each serving a biosphere reserve purpose and the coordination of the various sites (Francis & Munro, 1994). Examples can be found in South Africa, Colombia, and Mongolia (Sian, 2000).

The goal of the core area, the zone with the least disturbed ecosystems (von Droste & Gregg, 1985), is to conserve biological diversity. Human activities that use natural resources are controlled in the core area by using one of the conservation statutes available in the local or national jurisdiction. Permitted activities include scientific activities such as monitoring and ecological management (Bioret, et al, 1998). Buffer zone(s) provide a link between the core area(s), which are protected areas, and the surrounding society, in an attempt to diminish conflicts with local people (Kaus, 1992). Whereas, the core often requires the exclusion of a wide range of human activities, the buffer zone requires the inclusion of certain kinds of human activities to diminish the potential for conflict (Kaus, 1992). The goal of the buffer zone is to protect the core area and to promote the sustainable use of natural resources, and to encourage appropriate activities and development thereby minimizing negative impacts, while balancing conservation with economic and social interests (Bioret et al, 1998; Sian, 2000). The activities that can take place in the buffer zone must be compatible with the core area; they consist largely of research, education, training, simple enjoyment of nature and tourism activities.

The transition area, also known as the 'zone of influence', is meant to be the zone where local communities conduct economic and social activities (Kaus, 1992; Wells & Brandon, 1992). It is the place of "active co-operation amongst research workers, managers and local people and actors where pilot activities on resource use and on daily management issues (waste, water purification, transport, etc) are carried out" (Bioret et al, 1998, p.34). Nelson and co-workers (2003) consider that it is imperative that conservation occurs both within and outside protected areas. By having buffer zones and transition areas, the amount of land involved in a conservation program is increased, and therefore the core area has a greater degree of protection (Kaus, 1992). The biosphere reserve concept is inherently flexible; zonation can be adapted to various geographical, ecological, or cultural situations (Batisse, 1982).

Boundaries for biosphere reserves are generally only set once the nomination process begins. Unfortunately, this can lead to further complications (Sian, 2000). With the exception of the core area, there are no physical markers of the boundaries of a biosphere reserve (Kaus, 1992), and numerous criteria exist on which to base the outer boundary. For instance in the case of the Clayoquot Sound and Charlevoix Biosphere Reserves, topography such as watersheds was the consideration; at the Niagara Escarpment Biosphere Reserve, land use plans determined the outer zone; in South West Nova, the ocean shore forms the boundary, and in the case of Waterton and Long Point Biosphere Reserves, there are no outer boundaries (Sian, 2000).

There are many objectives that biosphere reserves can strive to achieve, including creating 'refuges for fauna and flora', providing permanent research sites, and

‘investigating and encouraging alternative methods of natural resource use’ (di Castri et al., 1980, 1981). These objectives are intended to realize the three functions of biosphere reserves: conservation, development, and logistic (UNESCO, 1996). The conservation function is that biosphere reserves contribute to the conservation of landscapes, ecosystems, species, and genetic variations. The development function is that biosphere reserves foster economic and human development that is socioculturally and ecologically sustainable. The logistic function is that biosphere reserves provide support for research, monitoring, education, and information exchange related to local, national, and global issues of conservation and development.

#### **2.2.4 Biosphere Reserve Designation**

It is up to the national MAB committee and the local people in an area to nominate, establish and manage the biosphere reserve. Every country designates biosphere reserves in a different manner; in some nations specific biosphere reserve legislation exists, in others laws exist only for designating core areas and buffer zones as protected areas. French biosphere reserves are designed around areas already protected by law such as national parks and reserves, and generally fall under the authority of a public administrative structure with no real legal powers (Bioret et al., 1998). Details on Canada’s biosphere reserve designation process can be found in Section 2.2.5. Within the World Network of Biosphere Reserves, a ‘preordained, standardized approach to developing a reserve’ does not exist and each reserve and each country is free to determine its own approach to designation (UNESCO, 2002). Potential participants in biosphere reserve designation include the following (Sian, 2000, p.89):

- Federal departments and agencies responsible for parks and protected areas, sustainable development, fisheries, agriculture, etc;
- Provincial departments and agencies responsible for economic development, natural resources, energy and parks;
- Regional districts;
- Municipal governments;
- Non-governmental organizations (local, regional, or national);
- Companies;
- Universities, colleges and research institutes;
- Land owners;
- Lease holders;
- Area residents;
- Aboriginal Peoples.

Approval must be granted from those responsible for the core area of a biosphere reserve and a strong candidate has stakeholder and community support. Although not essential, it is beneficial to the success of the nomination process to receive endorsements from municipalities, private landowners and First Nations, with jurisdiction over adjacent lands (Sian, 2000). Proposals, which do not have sufficient local consultation or clearly have local opposition, will be returned by UNESCO to the proponents emphasizing the need for greater local support (Yeager, 1999). According to UNESCO (2002) within biosphere reserves, “Preference should be given to relatively small-scale projects with a long-term, holistic view, and the building up local and national capacity for land and water management and sustainable development”.

### **2.2.5 Biosphere Reserve Designation in Canada**

Recognition as a biosphere reserve illustrates a commitment for long-term international conservation and sustainable development. In Canada, MAB Canada will consider a site for biosphere designation if it falls under at least one of three categories: *Natural Areas* – of representative biogeographical regions with little human disturbance; *Harmonious Landscapes* – which are ecosystems of national importance that illustrate a harmonious balance of land-use patterns; or *Degraded Ecosystems* – which would be designated for the purpose of monitoring and rehabilitation (UNESCO Canada/MAB, 2004). A copy of the submission application that proponents must submit to MAB Canada for biosphere reserve designation is included in Appendix E. A member of the UBoFBI board suggested the review of the application for biosphere reserve status is most extensive at the national level rather than the UNESCO level (R17). The steps involved in the designating process in Canada from the nation level through to designation by the Director-General of UNESCO are outlined below (Sian, 2000; UNESCO Canada, 2004):

1. The secretariat of MAB Canada receives the nomination document, and passes it to Canada's Biosphere Reserve Panel;
2. The Biosphere Reserve Panel advises MAB Canada if the site should be designated as a biosphere reserve;
3. The National MAB Committee forwards the biosphere reserve application to the UNESCO/MAB Secretariat;
4. The information received is reviewed at a meeting of the Bureau of Council. The Canada MAB Committee is contacted for any missing information;

5. Once all the information has been received, the Advisory Committee on Biosphere Reserves reviews the nomination. The Advisory Committee consists of experts from countries around the world. Their recommendations are passed to the MAB Bureau of Council to make the final decision to reject or accept the proposal;
6. The MAB Bureau meets to decide if the proposed site should be part of the international biosphere reserve network;
7. The Director-General of the UNESCO International Coordinating Council (ICC) notifies the National MAB Committee of the relevant country if the application has been successful or unsuccessful;
8. Successful applications receive a certificate signed by the Director-General certifying that the area is a recognized biosphere reserve.

Designation as a biosphere reserve does not in itself carry funding to support the objectives of the reserve's creation. Raising funds for meeting the objectives of a biosphere reserve rests on the shoulders of the communities living or working in the individual reserve, often with some limited aid from the national level (Sian, 2000). UNESCO has limited financial resources and designation as a biosphere reserve does not bring funding or an annual budget (Mullins & Neuhauser, 1991). UNESCO recommends in its Guiding Principles for Projects on Biosphere Reserves that “Countries and biosphere reserves are therefore encouraged to seek funding in the form of projects and/or endowment funds from appropriate donor countries, multilateral funding sources (such as UNDP, GEF), regional development banks or agencies and, in certain cases, the private sector” (2002).

### **2.2.6 Biosphere Reserve Design and Community Involvement**

There is a wealth of published literature concerning public receptivity and the designation of protected areas that can be consulted by biosphere reserve proponents (see reviews by Kaus, 1992; Salm & Price, 1995). According to Brody (1998), the public should be included in the process of establishing a protected area (or biosphere reserve). This includes all those affected by the designation: those living next to the potential protected area, those dependent on the resources, and all interested parties (Brody, 1998). Writing about protected areas, Caldecott (1992) concluded that it is often true that use of resources by local people is important, but not always so, but it is always so for biosphere reserves. Caldecott (1992) is of the opinion that from an early stage protected area projects should identify which communities are close to and/or dependent on the resources within the proposed protected area because the actions of residents will influence the protected area's future. In fact, understanding the local community and other interested stakeholders should be one of the first steps in the designation process of protected areas, according to Kelleher (1999). It can be concluded that the choice of the location of a biosphere reserve should provide a balance between the ecological benefits and the needs of the local people who are dependent upon the natural resources of the biosphere region for their livelihoods.

Social acceptance is an important criterion in site selection, and in establishing a biosphere reserve efforts will therefore be made to encourage local support. According to Salm and Price those areas that have been traditionally protected by a community should receive a higher rating in site selection (1995). Most biosphere reserves do not have full participation by the community at the onset. One solution has been to set up an

organization of 'Friends of the Biosphere Reserve' to increase the partnerships between researchers and the community. Such was the case in the Virgin Islands Biosphere Reserve (Wells & White, 1995).

One of the most important lessons in biosphere reserve designation process is touched upon in the opening quote of this chapter; it is important to recognize when to walk away. Furthermore, the public might not be receptive to the biosphere reserve idea and acceptance cannot generally be achieved over a short period of time. In the subsequent literature review chapter on public participation, more discussion is presented about working with communities.

### **2.2.7 Biosphere Reserves in Canada**

In Canada, there is a total of twelve biosphere reserves in seven Canadian provinces (see Table 2.1 for a list of the reserves). The focus of the Canadian biosphere reserves as is normal in the UNESCO MAB Programme is conservation, sustainable development and capacity building (Canada MAB, 2004): "all Canadian Biosphere Reserves share one common aim – to be living examples of cooperative land management for environmental sustainability and community well-being" (CBRA, 2002, p.1). According to information on the UNESCO Canada website, a Canadian biosphere reserve is an area large enough for effective management that is either a terrestrial, coastal or near-shore environment requiring "long-term management and planning for its protection and conservation or use as an education, research or monitoring centre" (UNESCO Canada, 2004a).

**Table 2.1 Biosphere Reserves in Canada**

<b>Name of Biosphere Reserve</b>	<b>Province</b>	<b>Year of Designation</b>	<b>Surface Area</b>
Mont Saint-Hilaire	Québec	1978	1100 hectares
Waterton	Alberta	1979	52,597 hectares
Riding Mountain	Manitoba	1986	1,331,800 hectares
Long Point World	Ontario	1986	40,600 hectares
Réserve Mondiale de la Biosphere Charlevoix	Québec	1988	457,000 hectares
Niagara Escarpment	Ontario	1990	190,270 hectares
Clayoquot Sound	British Columbia	2000	349,947 hectares
Redberry Lake	Saskatchewan	2000	112,200 hectares
Réserve de la Biosphere Lac Saint-Pierre	Québec	2000	48,000 hectares
Mount Arrowsmith	British Columbia	2000	118,592 hectares
Southwest Nova	Nova Scotia	2001	1,546,374 hectares
Thousand Islands Frontenac Arch	Ontario	2002	150,000 hectares

The activities, management, and funding of individual reserves are the responsibility of community-based organizations or committees, and the Canadian Biosphere Reserve Association (CBRA) provides national coordination between the Canadian biosphere reserves (Canada MAB, 2004). Potential sites in Canada fall under federal, provincial, municipal, or private jurisdictions. No change in jurisdiction for a site would be taken into consideration, however appropriate legal protection for a site will be considered when granting designation (UNESCO Canada/MAB, 2004).

Unfortunately the resources do not exist for CBRA to implement extensive consultations for biosphere reserves. In fact, the inclusion of the public in biosphere reserve designations is a departure from the manner in which National Parks were established in Canada at one time; in which case some of the land was simply expropriated to create the parks. This practice ended in 1979 following conflicts in New Brunswick over Kouchibouguac National Park and Gros Morne National Park in Newfoundland (Sian, 2000).

In the twenty-three years since the first reserve was designated in Canada, several trends have arisen amongst Canadian biosphere reserves (Ravindra, 2003b):

1. The time span for developing new biosphere reserves has been increasing;
2. The amount of time spent on community involvement has increased;
3. Municipal governments have had a greater involvement in biosphere reserve proposals and activities;
4. “There has been an increasing trend towards ensuring that prospective areas are *functioning* as biosphere reserve (activities developed and underway; *and* plans for the biosphere reserve in place) before submission of documents” (p.8).

Biosphere reserves sometimes have demonstration projects illustrating human impact and activities compatible with the reserves’ objectives (Sian, 2000). A variety of activities take place in Canadian biosphere reserves; projects within an individual biosphere are meant to address local concerns, with results shared nationally and internationally (CBRA, 2004). For instance, in Clayoquot Sound there is a joint venture with Aboriginal groups and International Forest Products (Interfor) that has been

endorsed by local environmental groups, and at Lac Saint Pierre the manufacturing industries along the St. Lawrence River within this biosphere reserve are part of a project to recycle their wastewater to protect the river (CBRA, 2002).

The Southwest Nova biosphere reserve (SWNBR) in the area of Kejimikujik National Park and the Tobeatic Wilderness Area, was the first, and remains the only, biosphere reserve in Nova Scotia and Atlantic Canada as a whole. It was designated in 2002 after more than 15 years of effort and three other proposals to have a biosphere reserve in the area (Miller, Ravindra, & Willison, 1999; Ravindra, 1998; Francis & Munro, 1994; Agardy & Broadus, 1989). In writing about the then proposed Southwest Nova biosphere reserve in her Master of Environmental Studies thesis, Ravindra (1998) stated that “It could be developed into a leading model for community-based, coastal conservation and management, and the failures and successes of Scotian Coastal Plain Initiative can be shared with other coastal areas in Canada and around the world” (p. 164). The area in south-western Nova Scotia was selected as a potential biosphere reserve because it was “representative of the region as a whole, contains outstanding natural and cultural values, is dependent upon the exploitation of natural resources from land and the sea, lacks a large urban center, and contains a relatively high concentration of terrestrial and marine protected areas” (Miller et al., 1999, p.183). An advantage to the proposal for the reserve, according to Miller et al. (1999) was the location of the town of Lunenburg, a UNESCO World Heritage Site. This biosphere reserve when it was being proposed was seen as having many advantages to the community, including bringing visitors, researchers, and media to the area, but it was recognized that support of cooperating agencies, and community involvement would be necessary, and “Efforts

should be undertaken immediately to encourage local residents to participate in the development of this biosphere reserve proposal” (Miller et al., 1999, p.187).

### **2.2.7 Sovereignty Issues with Biosphere Reserves**

Countries are sovereign. Neither the UN, nor UNESCO, has power over the reserves; they simply recognize the special nature of the biosphere reserve (Ravindra, 1998). Biosphere reserves fall strictly under the sovereignty and jurisdiction of the nation where they are located (Bioret et al., 1998). Biosphere reserves are voluntary commitments by land managers and others “to emphasize conservation, science and education as they seek solutions to issues of conservation and development in cooperation with local residents, governments, and other parties in their region” (Yeager, 1999, p.290-291), and national sovereignty is not at risk by participating in the Biosphere Reserve Network. Biosphere reserves remain under the jurisdiction of their locality, be it federal, provincial, municipal, or private property and are subject to the relevant laws. The UN does not have any power over these lands, nor do they “gain any authority to dictate land-management decisions in any country or at any level” (Yeager, 1999, p.288).

In a statement before the United States House Committee on Resources concerning H.R. 883, The American Land Sovereignty Protection Act in March of 1999, Brooks B. Yeager, the Deputy Assistant Secretary for Policy and International Affairs, for the Department of the Interior argued that the United States benefits from international recognition of biosphere reserves and World Heritage Sites, and from being part of a larger worldwide network “for cooperation in science, education, and technical assistance” (Yeager, 1999, p.290). Yeager further stresses that:

Recognition does not pose a threat to the sovereignty of American lands, it does not impose new management requirements on public lands, and it does not impose new land-use or regulatory restrictions on private property owners. In addition, designation does not imply any intent on the part of the federal government to acquire property in the surrounding area. (Yeager, 1999, p.290)

Biosphere reserves do not have their own legal status and the “main part of a biosphere reserve has no protection other than through the agreement of its stakeholders” (Bioret et al, 1998, p.21). The voluntary, non-legally binding nature of biosphere reserves is both their greatest strength and their greatest weakness.

### **2.2.8 Weaknesses of Biosphere Reserves**

Biosphere reserves have many intangible values, which can be vague and difficult to both explain and achieve (Dyer & Holland, 1991). Another reason for the public to be confused about biosphere reserves and protected areas is that managers and administrators often use terms inconsistently, furthering a lack of understanding of the concept; and thus Kellert (1989) thinks that a simplification and standardization of terms may be necessary. Kellert (1986) also recommends that an awareness campaign designed to increase public appreciation for the concept in both developed and developing nations may be beneficial to continue to progress and to achieve adequate support for this program. The public “may even misunderstand the multiple zones of the biosphere reserve as an attempt to expand the boundaries of the protected area and expropriate more private land” (Vines, 1994, p.117).

One reason for confusion results from the numerous forms of protected areas already in existence; biosphere reserves add one more level of protection and potential confusion to the arena. Roots (1990) has reported that problems often arise within countries that already have advanced conservation programs. The strong reliance on pre-existing protected areas to form the basis of a biosphere reserve may also be a weakness. An example of a biosphere reserve that was created from scratch and not from existing protected areas is the Mapimí Biosphere Reserve in Mexico, which was designated in 1977 (UNESCO, 2002).

In a review of the last twenty years of the Waterton Biosphere Reserve in Alberta, it was found that a difficult issue with biosphere reserves is their reliance on the protected area concepts: “The current model of a Biosphere Reserve (i.e. protected core, buffer zone and transition zone) does not promote an ecosystem based approach. Rather the model is often built on the concept of protected areas which ultimately leads to an insular approach to natural ecosystems” (Dolan & Frith, 2003).

The biosphere reserve concept has not always kept pace with changing political and scientific ideas, “even though the biosphere-reserve design was originally well ahead of its time, the program has failed to keep abreast of important issues in ecological sciences, especially the spatial and temporal-scale problems now addressed by ecosystem and landscape sciences” (Dyer & Holland, 1991, p.319-320). Furthermore, the original goals of turning biosphere reserves into regional management plans have not been realized in all cases (Dyer & Holland, 1991).

It has been argued by Batisse (1986) that many existing biosphere reserves do not fully meet all three roles of biosphere reserves, development, conservation, and logistic. The term 'biosphere' tends to be understood in the ecological sense, and the development angle, linking humans and nature, can often be lost in people's understanding of the concept (Kellert, 1986). On the other hand biosphere reserves have not always adequately met their conservation role because in some cases biosphere reserves have simply included already protected land, without adding new land, regulations, or functions (Batisse, 1990).

Adequate funding for biosphere reserves is another major weakness, particularly in North America. Biosphere reserves in North America have generally lacked adequate funding for conducting research when compared with those in Eurasian nations (Dyer & Holland, 1991). In the Canadian context, Parks Canada provides a limited amount of funding for the program. In 2000 Parks Canada provided roughly \$20,000 a year for CBRA, 3 biosphere reserves in Canada, and to cover the cost of a half-time Executive Secretary for CBRA (Sian, 2000). This makes it difficult for biosphere reserves to meet their objectives. As a result, in some cases biosphere reserves are not fully functioning and exist in name only. UNESCO has limited funds, but "In certain circumstances, UNESCO can grant seed funds to aid countries and groups of countries in elaborating projects and/or securing appropriate counterpart contributions" (UNESCO, 2002).

### **2.2.9 Opposition to Biosphere Reserves and to the United Nations**

The original opposition to biosphere reserves began during the 1980s when support for the MAB Program decreased, and the United Kingdom and the United States

withdrew from UNESCO and stopped contributing to the program financially (Sian, 2000). Today much of the opposition to biosphere reserves still arises from the United States. A wealth of information and opinions are provided on the World Wide Web, and unfortunately, as is the case with much information on the web, the reliability of some of the arguments can come into question. Certain information is grounded in fact and evidence; nevertheless, much of it is personal opinion. Without a lot of knowledge, it can be difficult for a reader to distinguish between the two. A strong anti-UN sentiment is present among a segment of the population in the United States. Sian (2000) has reported that the originators of this opposition appear to be associated with the private property rights movement, as in the case of the American Land Rights Association, which sees biosphere reserves as a means to stop resource development (Sian, 2000).

During the designation process for the Clayoquot Biosphere Reserve, some members of the public in consultation meetings held in 1998 and 1999 raised concerns about the UN “taking over”. To relieve such fears, the proponents invited a farmer from an existing Canadian biosphere reserve to describe his experience living and working in one: “Fortunately, a farmer, representing Waterton Biosphere Reserve was in attendance to provide his insights. He noted that there had been no change to what he can and cannot do on his land. His voice, not affiliated with any federal or provincial management authority, carried a great deal of weight with local residents” (Sian, 2000, p.92). In an attempt to designate a Lake Superior Biosphere Reserve that would include both an American and Canadian portion with residents from both sides of the border, the initial meetings created so much fear about a United Nations invasion that the proposal was terminated. Instead “local protected area managers decided that it would be safer and

easier to just adopt biosphere reserve principles in their management practices...There are times when it is best to walk away” (Sian, 2000, p.92). Knowing when to continue a project or walk away can be a fine line; and this is a subject that will repeat itself during the course of this thesis.

## **CHAPTER 3: LITERATURE REVIEW ON PUBLIC PARTICIPATION**

### **3.1 Introduction**

If biosphere reserve proponents are to involve the public in designation and management, an understanding of public involvement theory would be beneficial. In this chapter I present a brief overview of public participation theory, including a discussion of public participation methods, models of public participation, and lessons to be gained from public involvement.

### **3.2 Public Participation**

Public involvement theory is a pertinent topic for proponents of biosphere reserves that are going through the designation process. The terms public involvement, public consultation, and public participation are often used interchangeably, but in fact they hold different meanings. Public involvement is the process of involving the public in decision-making (Cocklin, Crow, & McAuley, 1998). Public consultation and public participation are the methods through which public involvement is achieved: consultation includes information sharing and education, and participation is the direct involvement of the public in decision-making (Marshall & Roberts, 1997; Wells & Brandon, 1992). Local participation can be defined as the empowerment of people “to mobilize their own capacities, be social actors rather than passive subjects, manage the resources, make decisions, and control the activities that affect their lives” (Wells & Brandon, 1992, p.42).

Public involvement can be a lengthy process, but the public is increasingly being included in decision-making exercises to avoid conflict and to gain public support

(Marshall & Roberts, 1997). The purpose of public involvement is to improve decision-making and learning, and to build acceptance of the project or program (Howard, Baker, & Forest, 1994). Cocklin et al. (1998) argue that without public acceptance of a project or program, compliance by the public with a decision may not occur. By working with the public, concerns can be identified and addressed before problems arise; it creates open, two-way communication. Ideally the public should be involved in all steps of the decision-making process (Roberts, 1995). According to Cocklin et al. (1998) “It is widely recognized that successful establishment and management of conservation measures are facilitated by consultation between resource managers and the public, which acknowledges existing uses and prevailing values” (Cocklin et al., 1998, p.217). Public interest in a project tends to increase as the proximity of the project to their residence narrows (Marshall & Roberts, 1997).

An understanding of the power relations within the local community, and between the proponents of the project and the community, according to Cocklin et al. (1998) and Goodwin (1998), is required for effective public participation. Dilemmas can exist between increasing the level of community involvement in decision-making with the experience and views of conservation professionals (Goodwin, 1998). Brody (1998) suggests using the following guidelines for public participation during the process of establishing a marine protected area (MPA):

All stakeholders should have representation;

Participation by the public should occur early in the process;

The public should be actively involved through public hearings and given opportunities to comment on proposals. The goal is participation not consultation;

Local knowledge should be incorporated into the process;

The lines of communication between the community and the proponents need to be established early in the process;

A leader who is trusted and well known in the community should be involved, they can help reduce potential conflicts.

### **3.3.1 Methods of Public Involvement**

There are numerous methods to promote public involvement, including open houses, workbooks, questionnaires, on-line surveys/questionnaires, exhibits and displays, and community fora (Roberts & Marshall, 1996). In Canada, the open house is a typical form of public consultation. The public is invited to comment on draft management plans and speak with those who drafted the plan. The open house is not necessarily the best method, but it satisfies the requirements of public involvement (Roberts & Marshall, 1996). It has been used by government agencies at the Federal and provincial levels when conducting management reviews of National and Provincial Parks. In Nova Scotia, the McNabs & Lawlor Islands Provincial Park Advisory Committee, and Cape Breton Highlands National Park authority both used open houses in recent years. A Nova Scotia example of the use of workbooks can be found in the Joint Action Group (JAG) for Sydney Tar Ponds and Coke Ovens Cleanup. Workbooks were just one approach used by JAG (Joint Action Group, 2002).

Each of the above method has its strengths and weaknesses. The traditional methods such as open houses, public meetings, and town hall meetings tend to foster participation by those interest groups that are well organized, and tend to exclude the general public (Moote, McClaren, & Chickering, 1997; Roberts & Marshall, 1996). The public is also generally less engaged by attraction methods such as posting advertisements

in newspapers, and sending out flyers (Roberts & Marshall, 1996). It has been reported that public hearings, in particular, tend to create an “us” versus “them” mentality, and often generate little dialogue or constructive debate (Moote et al., 1997; Roberts & Marshall, 1996). The public may also be able to provide additional information and creative solutions. By working with the public, concerns can be identified and addressed before problems arise; it creates open, two-way communication. Ideally the public should be involved in all steps of the decision-making process (Roberts, 1995). According to Cocklin et al. (1998), there is greater motivation for the public to be involved if they oppose a proposal than if they support it. On-going, informal contact or advisory committees tend to be more successful than public meetings and hearings; however, public meetings and hearings are relatively easy methods to organize at low-cost (Roberts & Marshall, 1996). Young (1995) advises that several methods of public participation be used to integrate local people with conservation and development projects. Jiggins and Shute (1994) conclude that for participation to be successful, local leadership and expertise are critical for public trust and acceptance.

### **3.3.2 Degree of Public Involvement**

Participation creates a change in the balance of power between the ‘elite’ and the ‘ordinary’ people in a community (Goodwin, 1998). There are many models of public involvement. The traditional view of public involvement is based on the Arnstein (1969) ladder of participation, which consists of eight rungs representing different degrees of citizen control. The first three rungs, citizen control, delegated power, and partnership, represent citizen power. The following three, placation, consultation, and informing, represent tokenism. And the final two rungs therapy and manipulation are examples of

non-participation. There are varying degrees of involvement from basic information sharing to citizen control over decision-making (Parenteau, 1988).

In reality, there is a continuum of participation from information sharing, which allows people to know something is happening, but the public does not have any power over decision-making, through persuasion, consultation, and cooperation. At the opposite extreme is citizen control or self-determination, where citizens make all the decisions (Marshall & Roberts, 1997; Tanz & Howard, 1991; Parenteau, 1988). Marshall and Roberts (1977) summarize this as follows:

- Information sharing: organizations distribute information regarding the organization's position, with the intent of receiving and considering public comments on the stated position.
- Persuasion: the use of techniques to change public attitudes without raising expectations of involvement.
- Consultation: two-way communication between an organization and the public based on established, mutually accepted objectives.
- Education: the distribution of information to the public to create awareness about an organization's project and/or issues.
- Joint planning or shared decision-making: public representation in the decision-making process through voting and decision-making authority (Marshall & Roberts, 1997).
- Delegated authority: the transfer to the public of responsibilities normally associated with the organization.

- Self-determination: the undertaking of a process initiated by the public, with the organization accepting the outcome.

True participation involves power sharing and must go beyond educating the local people in order to facilitate the realization of a proponent's plans. West and Brechin, (1991) stated that there is a mistaken notion in public participation methods of confusing 'communication to, for communication with'. According to Endter-Wada, Blahna, Krannich, and Brunson (1998):

In its least useful forms, public involvement provides little more than an indication of public reactions and position statements, i.e., whether those who participate in a particular process support or oppose specific management activities or proposals. However, processes that facilitate input extending beyond the simple expression of support/opposition can yield important insights into the ways in which participants relate to certain resources or resource areas, as well as their more general values, beliefs, and preferences regarding resource use and management. As such, public involvement data may help to identify the extent to which, and more importantly the reasons why, various management strategies are likely to be considered either acceptable or unacceptable, at least among those individuals and groups who become engaged in the public involvement process. (p.895)

To permit effective participation, proponents should have the ability to respond to new concerns and interests as they arise. Goodwin (1998) considers that for trust to exist between the community and the proponents there must be a perceived response to local concerns. Participation in decision-making continues once biosphere reserve designation has occurred as well. Mullins and Neuhauser (1991) express this as follows: "biosphere-reserve communities have a far greater managerial role and responsibility than do communities near most parks and preserves" (p.326).

### **3.3.3 Selecting a Public Involvement Method**

The key to success may involve not only selecting an appropriate method but also customizing the process to the given project and its stakeholders. Marshall and Roberts (1996) recommend that when making decisions, each public, stakeholder, or interest group be consulted about how they want to be involved. It is usually impossible to involve every individual; therefore, proponents usually need to target their process to ensure that all relevant groups are offered an opportunity to participate (Marshall & Roberts, 1996).

The public is not a homogenous, stable population. Marshall & Roberts (1997) consider that there is no single public, rather a number of publics. They contend that throughout a public involvement process different ‘publics’ will be involved, and the composition of the public will change. Beanlands (1994) warns, furthermore, that the views of one group or individual in a community might not be representative of the entire community. Although public participation can rely heavily on stakeholder involvement, Marshall & Roberts (1996) consider that it is important that everyone, whether or not they are regarded as a stakeholder, be given the opportunity to participate. That is, the general public may not be well represented by stakeholder interest groups. Marshall and Roberts (1996) further contend that a case may arise in which the public involvement process simply represents the most vocal groups in a community rather than the majority of opinions in a community. A more effective process will combine stakeholder consultation with other public involvement methods involving a broader representation of the community (Marshall & Roberts, 1996). In biosphere reserves, stakeholders “are those people or groups who have a vested interest in the well-being of the designated site

or the biogeocultural area in which the site is located” (Mullins & Neuhauser, 1991, p.330).

### **3.3.4 Developing a Public Involvement Action Plan**

Organizations tend to develop public involvement programs on an *ad hoc* basis, rather than in a coordinated cooperative fashion. Howard et al. (1994, p.102) recommend that organizations develop coordinated programs to create greater openness with the public:

Participation itself is not intrinsically valuable; public involvement must be effectively planned and implemented or it can lead to disappointment and even backlashes. For instance, people who have strong vested interests in maintaining the status quo, and who do not have strong community interests are not likely to support and might even try to sabotage efforts at public involvement. Also, involvement can increase expectations of change and as slow as changes sometimes occur, this can lead to discouragement and lack of future support.

A public involvement action plan is a complete set of guidelines for process, including details of past processes. Despite the common misconception that it is a one-time activity, public involvement is an ongoing activity with several recommended stages (Roberts, 1995). A useful technique is to allow the public to have input on the development of the public consultation process itself. Once the draft plan has been written the goal setting stage has already been completed, and if the public is not involved at the beginning, input from the public on a critical stage of the process has been lost (Kaus, 1992).

The following sections 3.3.4.1 to 3.3.4.5 present the various stages of consultation as adapted from Roberts (1995), the president of Praxis, Inc., a public participation consulting firm.

#### **3.3.4.1 Stage I: Early Consultation**

- Consult informally
- Identify major issues
- Estimate level of public interest
- Identify key people and organizations

This is the ‘scoping’ stage. Key people and organizations are identified and consulted with informally to identify major issues and other relevant parties. It provides an estimate of the level of public interest.

#### **3.3.4.2 Stage II: Initial Planning**

- Chart decision-making process
- Identify publics
- Identify situation characteristics
- Establish public involvement objectives
- Determine information exchange requirements

The process that will be implemented is identified at this stage. Decision-making steps are identified as well as how the publics will be involved. Goals are set for the process and what information will be exchanged is decided.

#### **3.3.4.3 Stage III: Develop Public Involvement Action Plan**

- Choose methods
- Establish internal communications
- Commit resources
- Schedule and assign work
- Identify evaluation method

The most important part of this stage is choosing the consultation or participation methods that will be used. It is suggested that several techniques be used, as there is no one best technique. In this way the needs of a diversity of groups will be met.

#### **3.3.4.4 Stage IV: Implement the Plan and Evaluate**

- Implement
- Monitor the public involvement action
- Evaluate results

Not only is the involvement process implemented, the process is also monitored and results evaluated and adjusted accordingly. The process will not occur in a linear fashion. Surprises will occur; therefore flexibility should be built into the process. It should be decided early on who will conduct the evaluation and what reports will be generated.

#### **3.3.4.5 Stage V: Post Decision Follow-Up Plan**

- Develop post Decision Requirements
- Implement as required

Very few public involvement programs consider what to do when the process is over, leading to a lack of continuity in the process. A plan for the post-decision phase should be developed. Because the public will have put in many hours of unpaid time and energy, if there is no follow-up they can be left feeling frustrated and uncertain about the future application of their efforts. They may also feel unfairly treated and cease to respect the organization and its future projects. For conservation work, this can put in jeopardy

all future plans in an area by the same organization and by organizations doing similar work.

### **3.3.5 Lessons on Public Participation**

Marshall and Roberts (1996; 1997), and Roberts (1995) argue that successful public consultation processes are flexible, involve a variety of techniques, and require a commitment of both time and resources. Thus, the public should have input at all stages of the decision-making process, including planning and management. If not, it can lead to public mistrust of the process and government itself. The consultation process should empower the public (Praxis, 1988). According to Moote, McClaren and Chickering (1997) representation and access are key in public participation, in order to obtain broad participation. An important lesson to be learned is that involving the public, and taking into consideration their concerns means going beyond asking questions. Answers should be listened to and then translated into action (Kaus, 1992).

In light of the preceding, it is clear that public participation is an important component of biosphere reserve designation. Roberts (1995) argues that proponents in any venture involving public participation need to be more proactive than reactive with involving the public in decision-making. Local communities need be involved to a greater degree in both planning and management of protected areas, and their involvement should include clear benefits (Kelleher, 1999; Wells & White, 1995; Gubbay, 1993). Specifically with regard to biosphere reserve decision-making, Batisse (1997) wrote that “Where the local population has not been included in the decision-making process of establishing a protected area, that community can easily become hostile” (p.9).



## **CHAPTER 4: RESEARCH METHODS**

### **4.1 Introduction**

In this chapter I outline the research methods used in this study. The case study approach, methods of data collection, and analysis of results are explained.

### **4.2 Study Area**

In this research local people (“locals”) were defined as those who live in a community, rather than those who come and go. The specific study area, the Apple River– Joggins, and Advocate – Economy shorelines (see Figure 5.1) in Nova Scotia’s Cumberland and Colchester Counties, was chosen for interviews because it was the area where there was the greatest opposition to the biosphere reserve initiative. More information on the study area can be found in Chapter 5.

### **4.3 Qualitative Research: The Case Study**

Qualitative research techniques were employed in conducting this study. Qualitative research attempts to address areas in social life, such as ‘backgrounds, interests and social perspectives’, which cannot be addressed by quantitative research (Holliday, 2002). With qualitative research methods, issues may be studied in depth thereby focusing on a small number of people and situations with the result that there is an increased level of understanding of a case. Unfortunately this can also decrease the ability to generalize from the data (Patton, 2002). Qualitative research methods are used because the results of qualitative research are more detailed and the open-ended nature allows the researcher to “understand the world as seen by the respondents” (Patton, 2002, p.21).

The research approach used during the study was that of a case study. This qualitative research technique provides “a detailed descriptive account of a phenomenon, such as a person’s life, an organization or an event” (Sullivan, 2001, p.332). According to Berg (2004), the case study involves “systematically gathering enough information about a particular person, setting, event, or group to permit the researcher to effectively understand how the subject operates or functions” (p.251). In this particular case, the research sought to explore the influence of a local community on a conservation initiative by examining the UBoFBI in Nova Scotia in depth. The case study was used to gain insights in order to make recommendations for future conservation projects of this nature, and to offer insights into the best practices to be used when working with communities in the Maritimes on initiatives for conservation or regional sustainable development. Berg (2004) explains that in the research design of a project of this sort, the research question determines the breadth of the situation being investigated, while the case study approach helps to focus the research in a practical and relevant manner.

#### **4.4 Interviews**

Interviewing “is a basic mode of inquiry. Recounting narratives of experience has been the major way throughout recorded history that humans have made sense of their experience” (Seidman, 1998, p.2). Interviews are conducted to understand the experience of other people and to provide a context for people’s behaviour (Seidman, 1998). Seventeen interviews lasting approximately ninety minutes were conducted in the research area. Several visits were made to the research area beginning in February of 2004 and continued through the summer of 2004 to complete the necessary interviews.

Three interviews also took place in New Brunswick with members of the planning committee from that province, one interview was held in Halifax, and another in Truro. The majority of the interviews were one-on-one with only the principal investigator and the person being interviewed present.

In one case, a group interview was conducted with six individuals and the researcher. This happened after a couple had been contacted for an interview and they expressed their desire to invite two other couples to take part in the interview at the same time. The researcher agreed to use this approach and in this situation, a group interview was held rather than a one-on-one interview. The group interview was conducted in a similar manner to the one-on-one interviews. The group interview proved to be highly informative and a wealth of information and opinions were discovered. The individuals knew one another and it was my impression that the individuals were more comfortable voicing their opinions in the group setting than they may have been participating in a one-on-one interview.

In seeking interview participants a balance was sought between those supporting and those opposed to the biosphere reserves. Balance was also sought between members of the planning committee and individuals from the communities who were not involved with the planning committee. Lastly, people were sought from a variety of communities. The interviewees ranged in age from their early thirties to their seventies. Nine men and eight women were interviewed. Six interview subjects were members of the planning committee and eleven were not. Seven participants were against the initiative, seven were for the initiative, and three individuals categorized themselves as neutral, supporting

some aspects of the initiative, but did not know enough about it to be fully supportive or opposed. The majority of interviews took place in the homes of the interviewees, two interviews occurred in the place of work of an interviewee, and two interviews took place in public locations, namely a restaurant and a coffee shop.

The interviews were semi-structured and involved asking open-ended questions (Sullivan, 2001). Attempts were made to tailor the interviews to individual backgrounds and/or expertise. Prior to each interview, certain questions were determined to be key questions that needed to be asked of that interviewee. Key questions were determined for each interviewee in order to ask about a person's particular role in the initiative or expertise on a given subject. This meant that each interview was different, and not all questions were asked of each interviewee; however, the main areas of concern were addressed during each interview. The interviews included questions that sought the individual's view of the environment, protected areas and biosphere reserves, community development, and the UBoFBI. Appropriate interviewees were also asked about their involvement with the planning committee, the history of the initiative, and questions regarding the community meetings held by the initiative proponents. Examples of questions asked of respondents may be found in Appendix B.

#### **4.5 Selection of Participants**

Respondents were eligible to participate if they were part of the planning committee for the UBoFBI, and/or if they worked or lived in the research area. The goal was to reach a group of interview subjects with a wide range of opinions. Community members present at community information meetings held by the planning committee

were particularly targeted to participate in interviews. A few key names were known prior to commencing the research, and a snowballing technique was used to determine other potential interviewees. Snowballing is a technique used where one interview leads to another, which in turn can lead to still more interview subjects. From the key names already known, these people were asked if they were aware of other individuals who should be interviewed, who in turn could provide still more names as potential interviewees (Seidman, 1998). The criteria for knowing when there are enough participants in a research study is a) there is sufficient information to represent a variety of participants and situations that comprise the population, b) the interviewer ceases to learn new information from new interviews (Seidman, 1998). In this study, interview participants represented a variety of backgrounds and opinions, and the information learned from the later interviews reinforced what was already known, and new information ceased to be acquired.

#### **4.5.1 Participant Recruitment**

The participants were recruited by the principal investigator personally and asked to participate in the study. They were contacted initially by means of a personalized letter of introduction that was sent by post and/or by email. An example of a letter of introduction can be found in Appendix A. A copy of the standard consent form was also included with the letter (Appendix A). A telephone number and email address for the researcher were provided, along with a stamped addressed reply envelope, which contained paper for them to indicate if they were willing or unwilling to participate in an interview. They were then re-contacted to set up an interview time and location. If a consent form had not been signed prior to the interview, this was accomplished at the

beginning of the interview, with one copy kept by the researcher and another copy remained with the interviewee.

#### **4.5.2 Interview Data Collection**

Seidman (1998) suggests that tape-recording interviews allows interviewers to not only capture original data, but also allows them to improve upon interviewing techniques. Furthermore, it minimizes the distraction interviewees might encounter when watching the interviewer make notes and attempt to write down complete statements (Sullivan, 2001). It is not believed that tape-recording inhibits interviewees, as they tend to forget the equipment is present (Seidman, 1998). Taking account of these observations, a hand-held mini-cassette recorder was normally used to record data. In a few cases, consent was not granted to tape record the interview and notes were taken instead. During the group interview, detailed records of individual opinions were kept because consent to tape the interview was not granted by all individuals in the group. Five other interviews were not taped because the participants did not grant consent. Audiotapes of the interviews were used to retrieve data and to ease the strain of note taking during the sessions. The audio recordings were transcribed by the researcher following the interviews.

#### **4.5.3 Document and Archival Research**

Archival research on the cultural, economic, and social histories of the area was conducted to gain a greater understanding of the communities. Information such as population numbers and labour force were gathered from a variety of sources including books written by local historians. In addition, information published in the local and

provincial newspapers on the UBoFBI were also collected. Newsletters and other publications of the Initiative's planning committee were also amassed.

#### **4.6 Ethical Considerations**

The principal investigator submitted and received ethics approval from the Dalhousie University Social Sciences and Humanities Human Research Ethics Board for this study. Only the principal investigator and her thesis committee members have access to original data. All information obtained will remain confidential and will remain in the possession of the researcher. The data will be stored for 5 years, post publication, as required by Dalhousie University's Policy on Research Integrity. Participation in this study was strictly voluntary and information provided by the subjects has been, and will be, kept confidential. Consent was requested for the use of direct quotes and for the use of real names. Anonymity has been, and will be, ensured in all written reports and oral presentations of the research where consent was not granted. Given the small population size of the research area, every effort has been made to disguise details that would make the individuals identifiable.

The identity of interview participants will remain anonymous throughout the text. To protect the identity of those individuals wishing to remain anonymous, individual interview participants have been assigned code numbers. The numbers indicate that opinions expressed are from different individuals. Where necessary, respondents are identified as a member of the planning committee because it was relevant in that context to differentiate between planning committee members and community members.

#### 4.7 Data Analysis and Assessment

During the analysis of results, the data collected during interviews were examined to determine whether patterns were present revealing similarities and accordance, and to develop a classification system. Qualitative analysis requires “making sense of massive amounts of data. This involves reducing the volume of raw information, sifting trivia from significance, identifying significant patterns, and constructing a framework for communicating the essence of what the data reveal” (Patton, 2002, p.432). The case study itself can be thought of as an analytical approach: “The case study approach to qualitative analysis constitutes a specific way of collecting, organizing, and analyzing data; in that sense it represents an analysis *process*. The purpose is to gather comprehensive, systematic, and in-depth information about each case of interest. The analysis process results in a *product*: a case study. Thus, the term *case study* can refer to either the process of analysis or the product of analysis, or both” (Patton, 2002, p.447).

The interview transcripts and interview notes were first reviewed to gain an overall impression of the data (Creswell, 2003). The data was then organized according to the questions asked during the interviews. Major themes or categories were subsequently identified, and the information was then grouped according to the themes; when possible, categories were broken into smaller themes. Themes included public participation, weaknesses of the initiative, and the Nova Scotia context. Once data had been sorted it was interpreted for patterns and discrepancies (Berg, 2004). Within each theme, extraneous information was removed and the key points were determined.

#### **4.8 Limitations Encountered**

During the course of the research several limitations were encountered. A significant cause of these limitations was that the proposed project was perceived to be very contentious. The original goal had been to interview twenty individuals; the greatest limitation to meeting this goal was the difficulty in locating twenty individuals willing to be interviewed. A few highly involved individuals had moved from the area and could no longer be contacted, health concerns with one individual prevented an interview, and certain people felt they did not have any opinions to offer. A number of people ignored the request for an interview completely, which could indicate either a lack of interest or discomfort with the research topic. This was a sensitive and controversial issue. Many people had a strong dislike for the biosphere reserve. One extremely angry reply was returned anonymously. This potential interviewee had wrongly assumed that the researcher had been among the original group of proponents. Analysis of misinformation of this sort became an unexpected and challenging aspect of the research and the original research design proved to be somewhat imperfect in handling this. Given the limitations of the research project, and with a small number of potential and willing interviewees, it was not possible to redesign the research approach.

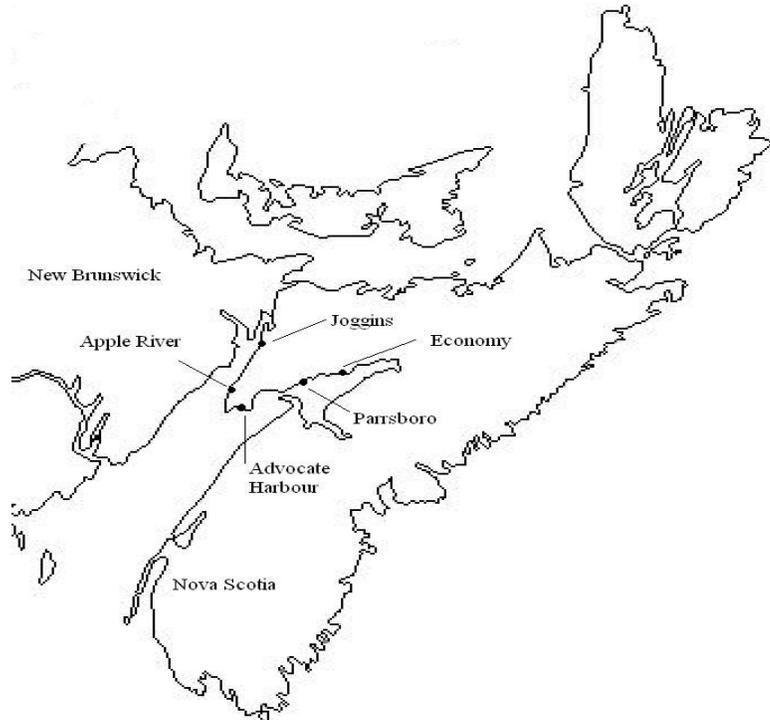
The choice of the study area, chosen due to the level of perceived opposition to the initiative, may be a limitation to the research. By focussing interview recruitment on a specific study area, as a researcher I was unable to capture the viewpoints of individuals living in New Brunswick or in other Nova Scotian communities such as Wolfville, Truro, or Amherst. The interviews with members of the planning committee, who were supportive of the initiative, balanced the views of those opposed to the initiative in the

study area. Furthermore, the majority of those people involved with the initiative lived in communities within the proposed inter-provincial biosphere reserve and are therefore community members themselves.

## CHAPTER 5: THE UPPER BAY OF FUNDY REGION

### 5.1 Introduction

In this chapter I provide a brief look at the rich natural and human history of the research area in the larger context of the Upper Bay of Fundy region. Figure 5.1 below illustrates the research area.



*Figure 5.1: Research Area Map*

### 5.2 Natural History

It is the rich natural and human history that the proponents of the biosphere reserve sought to promote and preserve (R15). Much of the history of the funnel-shaped Bay of Fundy depends on the tides, ‘the largest of the world’; when the bay was first

being settled and roads did not exist, the bay was the highway (Spicer, 1984). On average there is a 12-meter difference between high and low tide in the upper Bay of Fundy (Nova Scotia Department of Agriculture and Marketing, 1987). The importance of these tides is well described by Dr. Eaton in 1893 in a quote from Popular Science Monthly (as quoted by Spicer, 1969):

Among the many littoral indentations of the western Atlantic no other possesses so many unique and interesting features as the Bay of Fundy... The Bay of Fundy is remarkable not simply for the grandeur of its tidal phenomena, but equally so for the exquisitely picturesque sculpturing of its coast line, and the diversity, range, and richness of the geological evidence thereby revealed; for the unique character of the extensive alluvial tracts that skirt its head-waters; and for the wealth of legend, tradition, and romantic incident embodied in the early history of the people that dwell about it. (p.22)

Furthermore the coastlines of the Bay of Fundy are not static in nature rather they are constantly changing:

In the upper bay the coastline features high cliffs and rocky shores punctuated by small coves and harbours which empty at low tide. In the basins and bays which form Fundy's waters, the rocks and gravel give way to long mud flats over which the tides move at a speed which can endanger the unwary. This soil is formed by materials coming down from the uplands in fresh water floods and by the salt water bringing along minute particles of sediment from the sides and bottom of the bay. As the tides recede they leave layers of this sediment which over long periods of time have built up layer upon layer. (Spicer, 1993, p.17)

The soils of the marshlands around the Bay of Fundy are composed of silt, sand, clay and water known as Acadian soils. The tides carry with them rich sediments that deposit on the land (Nova Scotia Department of Agriculture and Marketing, 1987).

### **5.3 Human History**

This is a region that has been inhabited by various people over time from the Mi'kmaq and the Acadians, the British and the Loyalists to the present day population

who for generations have relied on the land and the sea. It is in this area that the Mi'kmaq important spiritual being Glooscap was said to live, he made his home at Cape Blomidon, Spencer's Island was his kettle and his herb garden could be found in what is now Advocate Harbour. The first person to record in writing their explorations of the Bay was Samuel de Champlain (Spicer, 1984).

Nova Scotia as a whole has a small population, and Cumberland County has a lower population density than several other counties in the province. According to the Minas Basin Watershed Profile (2002), of the counties in the Minas Basin watershed "Cumberland has the lowest population" (Willcocks-Musselman et al., 2003, p.9). According to the 1996 census Cumberland County had a population of 33, 804 people, and a population density of 19.9 persons per km<sup>2</sup> and Colchester County had a population density of 7.9 persons per km<sup>2</sup> with a population of 49, 262 people. The largest town in the research area, Parrsboro, had a population of 1,617 people and a population density of 118.0 per km<sup>2</sup> in the 1996 census (Statistics Canada, 1999).

In the past the primary industries in the area were lumbering, shipbuilding and shipowning (Spicer, 1993; Spicer, 1984). Today much of the labour force in Cumberland and Colchester counties work in the service sector, manufacturing and resource industries (Source NS Department of Finance, statistics division, 2002). Towns like Parrsboro, Port Greville, and Apple River, which today have a declining population, were once thriving communities with active wharves, mills and activity:

go back to those years when wooden sailing vessels were built in every hamlet along the the shore, when in one year 1646 vessels entered and cleared the port of Parrsboro, and Port Greville was crowded with large schooners on the stocks and in

the harbour. This was the era when two dozen deep-water vessels at a time would seek anchorage at Spencer's Island, and over a hundred vessels would be built in Advocate. Then Eatonville was a thriving lumbering and shipbuilding centre. Apple River was building vessels, and thousands of acres were being lumbered in the vicinity. (Spicer, 1984, p.14)

The research area was rural in nature and according to the 2001 census, 56.5% and 49.5% of the population in Colchester and Cumberland counties respectively were rural (Nova Scotia Department of Finance, Statistics Division, 2002). Among the places of interest in the research area are Cape Chignecto Provincial Park located in Advocate Harbour, Five Islands Provincial Park in Five Islands, and the town of Joggins, where the eroding fossil-rich cliffs were included in March 2004 on Canada's "Tentative List of World Heritage Sites" for nomination to UNESCO to be recognized under the World Heritage Convention (Parks Canada). Other points of interest include the Ships Company Theatre and the Fundy Geological Museum in Parrsboro and the Age of Sail Museum in Port Greville.

## **CHAPTER 6: OVERVIEW OF THE UPPER BAY of FUNDY BIOSPHERE INITIATIVE**

### **6.1 Introduction**

In this chapter I provide an overview of the UBoFBI. I describe the different phases of the project, starting with an overview of previous initiatives for protected areas, followed by a consideration of the evolution of the process for the UBoFBI. Key turning points in the development of the project are highlighted, including meetings in Nappan and Advocate in Nova Scotia, which indicated increasing community opposition in Nova Scotia. Last I look at the decision by the proponents to continue the project only in New Brunswick. A chronology of key events in the history of the UBoFBI can be found in Table 6.1.

### **6.2 Context of Protected Areas In Nova Scotia: Five Islands and Cape Chignecto Provincial Parks**

Two provincial parks, Five Islands Provincial Park and Cape Chignecto Provincial Park, existed in the area prior to the UBoFBI. There were also several wilderness areas, designated beaches and other natural areas, including the Economy River Wilderness Area, Advocate Beach, Port Greville Beach and Partridge Island Beach. Cape Chignecto Provincial Park, received designation on July 25, 1998. Nova Scotia Department of Lands and Forests purchased private land for Five Islands Provincial Park, which officially opened on July 17, 1965 (The Women's Institute, 1969). The establishment of Cape Chignecto Provincial Park provides important background for understanding the UBoFBI process.

**Table 6.1: Chronology of the UBoFBI**

Year	Key Events
1998	- BoFTP discusses a biosphere reserve for the Upper Bay of Fundy.
1999	- Work by the BoFTP towards biosphere reserve designation begins. - Proponents focus on the tourism benefits of a biosphere reserve.
2000	May - Preliminary consultations with stakeholder groups begin. - First of 30 community meetings over a two-year period in New Brunswick and Nova Scotia are held.
2001	April - Two regional planning committees are formed for New Brunswick and Nova Scotia.
	Sept. - Committee members' travel to Quebec biosphere reserves to learn from the experiences of those involved with the reserves.
	Oct. - The two regional committees merge to form a joint planning committee.
	Nov. to Dec. - Incorporation as the UBoFBI occurs. - A meeting is held at Mount Allison University with habitat managers and people in the tourism industry from both provinces. Meeting encourages dialogue between groups and counterparts between the two provinces.
2002	Jan. to March - Meetings are held with provincial and federal managers of conservation areas.
	Spring - A meeting intended for large landowners is held in Nappan, NS. - Perceived opposition to the UBoFBI appears to grow in Nova Scotia.
	May - A meeting is held in Advocate Harbour, NS, majority of those in attendance seen to be opposed to the project.
	Summer - Nova Scotia regional economic development agencies redirect their attention and resources away from the biosphere reserve.
	Fall - Proponents decide to restructure initiative as a smaller New Brunswick-based initiative.

The site of the 4,200 hectare, Cape Chignecto Provincial Park was formerly owned and logged by Scott Paper Timberlands. According to Rierden (2001) “The idea to transform Cape Chignecto into a park was conceived nearly 20 years ago by a handful of residents intent on stopping the decline the local logging and fishing industries and the resulting exodus of its young people” (The Gulf of Maine Times, Winter 2001). Residents living along the Parrsboro Shore began looking in the early 1980s for ways to attract tourists to the area and saw “the property owned by Scott, the region’s largest employer, as the community’s possible salvation” (Rierden, 2001). Two former municipal councillors in Cumberland County, the late Walton Rector, and Ruth Allen (who subsequently served as a past Management Board Chair for the park) were instrumental “in convincing the province to acquire the land for the Park in 1991” (Robinson, 2002). The Nova Scotia Department of Natural Resources (DNR) ultimately agreed to help with planning for the provincial park, but not with funding:

“In 1991, the Nova Scotia government acquired 15,000 acres from Scott and assigned an advisory board to come up with a plan to turn 10,000 acres into a park. But by 1994, economic times had changed and provincial budget cuts severed the funds for Cape Chignecto.” (Rierden, 2001).

The park today is a provincial park in name only. It receives no financial assistance from the province, and is managed and operated by the Cumberland Regional Economic Development Agency (CREDA) and a volunteer Park Management Board. The Board and DNR signed a ten-year agreement in 1996 regarding the management and operation of the park. The Cape Chignecto Park Management Board is made up of community groups, business operators, volunteers and CREDA (Rierden, 2001; Robinson, 2002).

The provincial park was controversial. Allen, quoted in Rierden (2001), stated: “Once the park opened, there was a backlash and some people realized there were restrictions and things were going to change”. Although the management board tried to keep the community informed about the park through a newsletter, open houses and public meetings, some local people apparently were concerned that the designation placed restrictions on hunting and access to roads for ATVs (Rierden, 2001). These community sentiments towards Cape Chignecto Provincial Park may have persisted, and would influence on the evolution of the UBoFBI.

### **6.3 Early Phases of the Upper Bay of Fundy Biosphere Initiative**

The Bay of Fundy Product Club (BoFPC), renamed in 2002 as the Bay of Fundy Tourism Partnership (BoFTP)<sup>1</sup>, was a partnership between industry and government to promote sustainable tourism in the Bay of Fundy region and was supported by the Canadian Tourism Commission (CTC). It began to discuss ways to attract attention to the Bay of Fundy region in the late nineteen nineties. The partnership was looking for a project that would draw both local and international attention to the special nature of the Bay of Fundy. In the fall of 1998, a representative of the CTC gave a presentation on biosphere reserves to BoFTP and suggested that the Bay of Fundy would be a good candidate for a reserve (R8). The BoFTP then decided that a biosphere reserve was a project worth pursuing for the upper Bay of Fundy; the potential for a strong community component to the project was also appealing. According to a planning committee

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<sup>1</sup> The BoFPC and the BoFTP are the same organization, but different names were used in documents depending on the year of operation. The organization will be referred to as BoFTP throughout the thesis to decrease confusion between these similar acronyms. I reference two reports on the UBoFBI by Ravindra from 2003, which refer to the organization as the BoFTP throughout the reports.

member, they had a vision of: “a Biosphere Reserve with local community ownership” (R8).

In these early days of the initiative, BoFTP focussed its efforts on the “potential of a Biosphere Reserve for attracting tourists to the region. However, it soon became apparent that it has much broader social, economic and environmental implications than just tourism” (Fundy Issues, 2001, p.11). In 1999 BoFTP began working towards biosphere reserve designation. It launched a media campaign with radio and newspaper coverage that extended into the next two years (Ravindra, 2003b). During this early period, the issue of the area of focus was frequently raised. BoFTP discussed whether it would be better to concentrate on one province or attempt to form a biosphere reserve on both sides of the Bay of Fundy. The proponents recognized that Nova Scotia and New Brunswick shared natural and human history on both sides of the Bay of Fundy. However, they feared that an inter-provincial initiative was beyond their capacity due to the added difficulties of working between two provinces and might be too large an area. They decided to look at the Upper Bay of Fundy as a whole using a watershed approach to biosphere reserve planning and not to divide the area along political lines.

The BoFTP served as secretariat of the biosphere reserve during the initial stages of the proposal (Young, 2001). This umbrella organization of tourism groups from New Brunswick and Nova Scotia (BoFEP, 2001) did background research, and helped finance an information brochure. Resource Management Associates, a consulting firm located in Parrsboro, Nova Scotia, managed BoFTP during this time. Their research included the preparation of background materials to examine the feasibility of a Bay of Fundy

Biosphere Reserve (Ravindra, 2003b). BoFTP's work also "focused on understanding the biosphere reserve program and determining whether the Bay of Fundy would qualify"(Young, 2001). They concluded that "Indeed it has potential to be an excellent model if there is interest and participation at the community level" (Young, 2001).

BoFTP held preliminary consultations with various stakeholder groups in the summer of 2000 and conducted a review of "marine and coastal issues in biosphere reserves and community involvement in coastal biosphere reserves" (Ravindra, 2003a, p.5). In the initial stages,

"The Canadian Biosphere Reserve Association was happy that industry was pushing the idea. However, this was a disadvantage when working with conservation groups" (R8).

During the initial investigative stage of the initiative, the proponents held discussions with key individuals and groups such as CBRA, BoFEP, and the Fundy Fisheries Association (Ravindra, 2003b). BoFEP ended up acting in an advisory capacity to the biosphere reserve proponents (Young, 2001).

The original proponents of the biosphere reserve initiative sought early on to gain positive support for the biosphere reserve from conservation organizations in New Brunswick and Nova Scotia. Initially some conservation groups and authorities, such as Parks Canada, the Canadian Wildlife Service, and the Nature Conservancy, were quite concerned that the biosphere reserve proposal seemed to be promoted primarily as an economic development project, they worried about the involvement of tourism groups. Some believed that the project's focus could be a detriment to the conservation work

already being promoted in the upper Bay of Fundy, and it was feared the project was being initiated solely for tourism development in the area. According to two respondents:

“In the very early stage, our interpretation, right or wrong, the biosphere reserves issues was being promoted as an economic development handle to drive development and merely in the guise of doing good things” (R16).

“CWS was hesitant to be involved due to money from tourism. The tourism group did not initially make it clear that they were not just volunteers. There was lingering suspicion that tourism was pushing the initiative” (R15).

#### **6.4 The Initiative Proceeds: Organizing the Initiative Planning Committee and Community Meetings**

From the initial work in 1999, the biosphere reserve idea continued to develop over the next two years. The proponents held over thirty community consultation meetings between St. Martins, NB, and Wolfville, NS (Ravindra, 2003b). As a result of the community meetings, two Area Advisory Committees were formed with participants coming from communities, agencies, institutions, and individuals from around the upper basins of the Bay of Fundy, as well as representatives from federal, provincial and municipal governments (UBoFBI, 2002a). These two regional planning committees were formed in April 2001 and met on a monthly basis for six months. Public information sessions continued to be held by the proponents during this time (Ravindra, 2003b). The proponents tried to learn from the experience of other biosphere reserves in Canada. In September 2001, seven representatives of the two committees travelled to Quebec for a four-day tour of the three biosphere reserves in that province (Ravindra, 2003a). The purpose of the trip was to visit these reserves and meet with key people at each one to learn how to proceed for a successful designation process (UBoFBI, 2002a).

In October 2001 the two advisory groups decided to merge into a planning committee, which would be tasked with promoting the biosphere reserve idea and with preparing the nomination under UNESCO's MAB Program (UBoFBI, 2002a). In December 2001, the planning committee was incorporated as the Upper Bay of Fundy Biosphere Initiative (UBoFBI): "Under this new leadership, a planning process was launched, and community meetings and workshops continued around the Upper Bay of Fundy" (Ravindra, 2003a, p.9). Upon incorporation under Nova Scotia's **Societies Act**, according to a member of the planning committee:

"the board became autonomous from the Partnership. They still wanted funding, but wanted to administer it themselves. The Partnership agreed because they wanted the Biosphere Reserve to go ahead in the region" (R8).

The make-up of the thirteen-member planning committee can be found in Appendix C. Most people on the planning committee were volunteers with a few paid individuals. The committee included individuals from a variety of interests, regional development associations, non-governmental organizations, academic institutions, and government agencies. In 2002, the planning committee submitted a grant proposal to Human Resource Development Canada and received funding to employ a coordinator for the community consultation process. The coordinator was hired in February 2002 directly by the planning committee, independent of the tourism partnership (Ravindra, 2003b).

### **6.5 Steps Towards Biosphere Reserve Designation**

By the spring of 2002, the proponents had prepared a draft biosphere-planning document and had begun to assemble the information required for nomination. Table 6.2 describes the contents of these documents. At this stage, the majority of the technical

requirements needed for a biosphere reserve nomination were achieved in New Brunswick. These requirements can be found in Table 6.3.

**Table 6.2: Information Required in a Biosphere Reserve Nomination Document**

- Description of the parameters and geography of the area including size and jurisdiction of three zones: conservation area, buffer zone and transition area,
- History of land-use,
- Human characteristics,
- Physical characteristics (topography, climate, geology, etc.),
- Biological characteristics (habitat types),
- Conservation functions,
- Development functions (such as tourism),
- Sustainability functions,
- Organization and administrative mechanisms,
- Proposed plan for sustainable management (From Ravindra, 2003b, p.2)

**Table 6.3: Technical Requirements for Designation Achieved by the UBoFBI**

- A letter from the minister of the NB Department of Natural Resources that provided formal endorsement of the project and a commitment to include all provincial wilderness and ecological areas within the watershed of the upper Bay of Fundy to the project,
- Formal participation of Fundy National Park, (participation as core areas),
- Informal agreements for participation as buffer areas from the Canadian Wildlife Service and the Nature Conservancy of Canada,
- Letters of participation by Mount Allison University and University of Moncton,
- Letters of support from the Town of Sackville, Dorchester, Riverside-Albert, and Alma,
- Expressions of interest from Dieppe, Memramcook and St. Martins,
- Participation by the Fort Folly First Nation reserve (From Ravindra, 2003b, p.2)

Beginning in December 2000 the proponents held public meetings and consultations within the proposed area for the biosphere reserve, and gave presentations to municipal councils, from St. Martins, New Brunswick, to Wolfville, Nova Scotia (UBoFBI, 2002b). The community meetings addressed issues such as “conserving the natural heritage of the region, the distinctive cultural identity and traditional economic sustainability of its coastal communities as well” (UBoFBI, 2002a). Between January and March 2002 the group had several meetings with provincial and federal managers of conservation areas in order to inquire about commitments to participate in the biosphere reserve (Ravindra, 2003b). During the consultation process, the proponents spoke with key people, from industry representatives to conservation organizations. According to a member of the planning committee:

“Industries, municipalities, government agencies, tourism, etcetera were targeted to get support. They had a huge stack of support letters. They wanted to get word into smaller associations, small towns, woodlot associations, farmers, etcetera.”  
(R15)

Most of the meetings consisted of a presentation from a representative of the planning committee on the history of the project, an information session on biosphere reserves and a planning session. The meetings were intended to be informative, providing information on ‘what a biosphere reserve can and cannot do’, explanations of the different components of a biosphere reserve and a discussion of the initiative itself. At the meetings, the public was encouraged to contribute ideas regarding the initiative’s goals and objectives and potential biosphere reserve projects. A thorough record of meetings held in 2000 and 2001 were kept and a table listing the various meetings is included as Appendix F.

### **6.5.1 Meeting Between Habitat Managers and the Tourism Industry**

A meeting was held at Mount Allison University in the fall of 2001 with about thirty-five people in attendance from both New Brunswick and Nova Scotia. The meeting brought together primarily individuals who were either habitat managers or worked in the tourism industry. It was an important meeting for several reasons. Many of the individuals involved with tourism industries met their counterparts from the other province for the first time and the two major groups, conservation and tourism, were exposed to the others' point of view. This was seen as a successful meeting in terms of achieving one of the roles of biosphere reserves to facilitate discussion between people with different backgrounds. According to a member of the planning committee:

“The tourism people had a better understanding afterward of what CWS had to lose. They could be shown the sensitive spots where tourism shouldn't go. The habitat people realized what tourism was up against. It was positive to get people together. Part of the role of biosphere reserves is that it gets community talking to government, talking to private interest, etc. It brings people together” (R15).

### **6.6 Turning Points: Meetings in Nappan and Advocate, Nova Scotia**

In 2002 several meetings were held; two of which became key turning points in the dissolution of the project as an inter-provincial initiative. The two meetings were in Nappan and in Advocate Harbour, both in Nova Scotia. Following the meeting in Nappan, there were three more community meetings, including the one in Advocate Harbour.

#### **6.6.1 Nappan**

The meeting in Nappan in the winter/spring of 2002 was designed to introduce local large landowners to the concept of biosphere reserves. It was not intended to be a public meeting; but instead the planning committee hoped to bring together large

landowners such as forestry companies and large agriculturalists. The committee wanted to obtain their support early on to avoid some of the problems the Southwest Nova biosphere reserve had faced with the forestry companies in that area (R1). The committee thought local people with individual farms should also be invited and drew up an invitation list. The proponents wished to have this meeting to talk about the buffer zone idea and diminish any fears and misconceptions. The goal was to inquire whether anyone was interested in having their land included in what might be the buffer zone. One respondent described the plan this way,

“So there was an effort to get them on board early on thinking that if they were on board then some of the locals with individual farms and stuff might say oh hey this is a cool honor I might want to be involved” (R1).

The meeting in Nappan did not go as planned. Some individuals from the community who were not large landowners appeared uninvited. This group was opposed to a biosphere reserve in their community. This opposition surprised the proponents and they were not well prepared for it (R1, R8, R15). Two respondents thought that one very vocal opponent was unhappy with Cape Chignecto Provincial Park and the limits it placed on certain activities on parklands. It was indicated that opponents had misinterpreted the concept of buffer zones in particular (R1). The board was not prepared at Nappan for a meeting of this nature with community members.

Prior to the meeting some opponents of the biosphere reserve who were part of the group from the community who attended the meeting discovered information on biosphere reserves using the internet and concluded that the MAB program is very

secretive. They learned about the Nappan meeting by accident and were disturbed that they were not invited to the meeting. In their view:

“I am totally against the biosphere reserve. I asked what can the biosphere reserve do for me; no one could say how it would help me. What people were doing was suspect” (R6).

“We didn’t know about the Nappan meeting. We crashed it. There was a Mount A professor who presented. There were academics, and interest groups there, forest groups, tourism people, but no local people. Those with a vested interest or financial gain were all there. Explained the core and buffer zones, Advocate would be part of the buffer zone. We don’t need to be controlled by the UN or academics” (R5).

After the Nappan meeting, the opponents were perceived as spreading ideas about what would happen if a biosphere reserve were in their community (R1, R15, R17).

Some committee members believed that misguided and inflammatory statements were made, for example that the biosphere reserve would destroy the local fishery.

The Nappan meeting was a key turning point in the initiative’s history. It indicated that community opposition was growing in this region of Nova Scotia at this time. Some community members and proponents indicated that the anti-biosphere reserve opposition became more organized around this time; they apparently obtained a lot of information from the internet, particularly from websites from the United States property rights movement (R1, R11, R15). It was felt that the source of the local concern was the information obtained from the internet:

“They thought there would be a UN take-over and wondered why they would want to come to North West Nova Scotia” (R15).

### 6.6.2 Advocate Harbour Meeting

It appears that in Advocate in the spring of 2002 rumours were circulating and community members in Advocate were asking questions about the UBoFBI. The Advocate Council asked the proponents to provide a plan for the project. The planning committee organized the community meeting in Advocate. The proponents knew a community meeting was needed in Advocate, but by all accounts the meeting in Advocate in the summer of 2002 did not go as the proponents had planned. It is possible that the project derailed directly after this meeting. The planning committee intended the meeting in Advocate to clarify the project for the community. When the committee arrived at the Advocate meeting, a group opposing the UBoFBI was already present with a table, posters and printouts explaining their opposition to the biosphere reserve (R1). As one observer stated:

“It was pre-empted. So although we were invited to present, the group kind of hijacked that meeting. They already had it under control...had we known that we could have arrived 3 hours earlier and been the first ones setting up and that would have changed the whole dynamic of the day, but you can't predict that” (R1).

From the beginning, members of the public appeared to doubt the information provided by the proponents (R10). The organisers attempted to hold a question and answer period, however, this proved difficult. Committee members reported receiving apologies for rude behaviour after the meeting (R1, R15). Before the meeting in Advocate, the BoFTP were worried the future of the biosphere reserve was in doubt and changed the plan of the meeting. The board invited a landowner from Alberta who was a rancher and a hunter living in a biosphere reserve to attend the meeting in Advocate. They wanted to give a perspective from someone other than an environmentalist or an academic, and the rancher was there to answer questions about what it was like to be

living in a biosphere reserve. The proponents of the Waterton Biosphere Reserve used a similar approach. The meeting was very unsettled. It was reported in the Chronicle-Herald following the meeting in Advocate that:

“Local residents made it clear Monday night they don’t want a proposed United Nations biosphere project in their backyard. With a show of hands, the vast majority of the 150 people attending an occasionally heated meeting voted to oppose the project... Several upset residents forced the unscheduled vote. They complained vigorously that the UN biosphere designation would erode their rights” (McCoag, 2002, p.A5).

Opponents reported the meeting in Advocate needed to occur to illustrate to organizers the level of opposition present in the community.

That night, after the meeting, community members approached committee members stating that the meeting had brought up issues they had never thought about, and they thought these were important matters. There are various theories regarding the opposition present in Advocate Harbour. One was that:

“In Advocate some of the opposition came from people who were at the meetings because there were provincial representatives present and they were angry due to Cape Chignecto” (R15).

It is possible that many in the audience were in reality not opposed to the biosphere reserve:

“especially the women in the audience came up afterwards and said we are so sorry, we can’t believe people are this rude and they’ve obviously totally misunderstood, and they’ve been fed lies by whoever. So obviously Advocate was not a united front. I would say that probably more than 50% of that audience was not against the Biosphere Reserves” (R1).

The planned approach of inviting a resident of a biosphere reserve elsewhere in Canada did not work. Proponents thought that he could give a local perspective and allay

community apprehensions, but people in attendance at the meeting did not give him a warm welcome. According to a planning committee member, the speaker had been invited:

“To give the local person perspective and they lambasted him. They were like who are you here telling us how to run our land and unbelievably rude in fact I was really embarrassed to be Nova Scotian. It was one of those moments where it was like I cannot believe this. It was actually really sad because a great many people apologized after the meeting” (R1).

On the other hand, however, opponents thought the Albertan had come to tell them how to run their land. Some of the opponents interviewed thought the rancher meant well, but he spent twenty minutes talking about himself and they did not see how this was relevant to them. His talk appeared to contribute to community members’ frustration with the meeting (R4, R7).

### **6.7 Opposition to the Project Grows in Nova Scotia**

In Nova Scotia, it was around the time of the meeting in Nappan that opposition and confusion concerning the biosphere reserve began to grow. The meeting at Nappan in the spring of 2002 appears to have been a turning point. The level of hostility amongst some community members upset many committee members and their concern lingered. Many of those involved with the initiative were volunteers, and it was difficult for them to have neighbours oppose their work (R1, R10).

Opponents of the biosphere reserve felt strongly about preventing the designation of a biosphere reserve in their community, and on Wednesday November 13, 2002 a petition was presented before the Nova Scotia Legislature opposing the biosphere reserve. The honorable member for Colchester North, Mr. William Langille tabled a petition of:

337 citizens of Economy, Bass River, Five Islands, Upper and Lower Economy. The operative clause reads, "We the residents of . . .", the places I mentioned, ". . . oppose being included in an UNESCO biosphere reserve. We ask our elected representatives, of all levels of government, to oppose having a biosphere in our part of the country. We, the residents, demand that . . .", the mentioned communities, ". . . be excluded from the proposed UNESCO biosphere reserve." (Nova Scotia Legislature Debates and Proceedings, 2002).

Ironically, around the same time the opposition to the initiative was occurring in Nova Scotia, support for the UBoFBI appeared to be growing in New Brunswick (R1, R8). In the spring of 2002, the New Brunswick Department of Natural Resources gave their unqualified approval for the project. The proponents were told that conservation areas in New Brunswick could be used as either core areas or buffer zones (R8). Mount Allison University and other universities in New Brunswick had also offered their full support.

### **6.8 Progress of the Upper Bay of Fundy Biosphere Reserve Initiative in New Brunswick**

In 2002, much of the paperwork for an application to achieve designation as a biosphere reserve in the upper Bay of Fundy had been completed and it appeared that CBRA was willing to receive the initiative's application for designation. Table 6.4 illustrates the achievements made towards meeting UNESCO designation requirements (adapted from Ravindra, 2003, p.11).

**Table 6.4: UBoFBI Success in Meeting UNESCO Designation Requirements**

<b>UNESCO requirement</b>	<b>Achievements through BoFTP</b>	<b>Additional Work Required</b>
Local support for the idea (through community dialogue/ participation)	<ul style="list-style-type: none"> <li>• Initiation of productive dialogue with Fort Folly First Nation.</li> <li>• Primary consultation with a broad range of stakeholders in New Brunswick.</li> <li>• Launched community-based planning process.</li> </ul>	<ul style="list-style-type: none"> <li>• Work needs to be continued to garner community support.</li> <li>• Communications activities (including web-site) need to be renewed.</li> </ul>
Endorsements: <ul style="list-style-type: none"> <li>❑ core area managers</li> <li>❑ managers of buffer areas</li> <li>❑ national or provincial administrations in charge of core &amp; buffer areas</li> <li>❑ representatives of cooperating communities</li> </ul>	<ul style="list-style-type: none"> <li>• Province of New Brunswick formal letter of endorsement.</li> <li>• Letter of commitment from Fundy National Park.</li> <li>• Letters of endorsement from municipal units (Sackville, Dorchester, Riverside-Albert, Alma).</li> <li>• Verbal commitments from Memramcook and Dieppe.</li> <li>• Letter of commitment from Fundy Model Forest.</li> <li>• Formal commitments from Université de Moncton, Mount Allison University.</li> </ul>	<ul style="list-style-type: none"> <li>• Need official endorsements from all core area managers.</li> <li>• Need to identify buffer areas and secure official endorsements.</li> </ul>
Establishment of a committee to plan or steer the early direction of the biosphere reserve	<ul style="list-style-type: none"> <li>• Upper Bay of Fundy Biosphere Initiative incorporated 2001.</li> </ul>	

Initiate biosphere reserve activities and projects	<ul style="list-style-type: none"> <li>• Tourism and Habitat Conservation workshop (Fall 2001).</li> <li>• Salmon Recovery communications project (2003).</li> </ul>	<ul style="list-style-type: none"> <li>• Projects reflecting community need to be developed and implemented.</li> </ul>
Development of a Cooperation Plan	<ul style="list-style-type: none"> <li>• Initiated community-planning process with workshops held during Winter 2002.</li> <li>• Formulated model Cooperation Plan.</li> <li>• Draft Plan circulated April 12, 2002.</li> </ul>	
Completion of UNESCO Nomination Form	<ul style="list-style-type: none"> <li>• Created framework for document.</li> <li>• Assembled technical information.</li> <li>• Identified key sources of knowledge and information &amp; secured technical support.</li> </ul>	

### **6.9 Decision: Project Continues in New Brunswick and Ends in Nova Scotia**

The experience in Advocate was so difficult that volunteer members of the committee were hesitant to continue work in Nova Scotia. The proponents decided after the meeting in Advocate not to proceed toward biosphere reserve designation in Nova Scotia, and they decided to restructure the initiative. Following the community meeting in Advocate, committee members met and discussed how and if the UBoFBI should proceed. Everyone appeared exhausted from their involvement with the initiative. People had been volunteering their time for two years for the initiative; some people did not want to proceed if they were not welcome (R1, R15). Thus, after the negative

response in Advocate the committee decided to withdraw their involvement with the project in Nova Scotia, although with some reluctance. One planning committee member described the situation this way:

“One of the problems was that the committee had a lot of people who had put in a lot of time and energy into this and they didn’t want to stop, they were reluctant to stop. The hostility in Advocate really originated with a few people. But, the project still had to end” (R8).

The planning committee decided that it would be best to inform the public that the initiative would not be proceeding in Nova Scotia. The final decision was made in fall 2002. It is possible that work in Nova Scotia might have continued if fatigue had not existed amongst the volunteers. This was the view held by some members of the planning committee:

“There were really only a few individuals opposed... Those people involved in organizing the biosphere in Nova Scotia figured they’d had enough. They could have survived if they’d hung in there and toughed it out for awhile, but there was volunteer burnout” (R17).

“The process was working...I see that the Biosphere Reserve process is a forum for airing community concerns and it is a forum for airing difference about your conception of a protected area and it’s a place where someone can say well I think a protected area is good because x y and z and someone else can say well it’s wrecking my livelihood because x y and z and then the two can work out a solution. It was the right conversation at the wrong time” (R1).

There was discussion of leaving out the Advocate area in Nova Scotia from the biosphere reserve initiative and continuing to work toward designation in the two provinces. It was decided that because of where Advocate is situated geographically in the middle of the proposed area, it would be difficult to proceed in this manner (R1, R15). When discussing the decision to restructure the project, it was decided that the lessons

learned from community opposition in Nova Scotia should be used to make a stronger, more focussed initiative in New Brunswick. According to Ravindra (2003) “Recognizing the difficulty in successfully engaging members of the more than thirty communities in the proposed biosphere reserve, and in order to capitalize on its successes in New Brunswick, the UBoFBI decided in the fall of 2002 to restructure as a smaller, New Brunswick-based initiative” (p.9).

#### **6.10 The New Brunswick Initiative**

The initiative in New Brunswick is smaller and more focused than was the inter-provincial proposal. Ravindra (2003a) argues that the proposal in New Brunswick could achieve designation within two or three years, “However, the new Executive director Peter Etheridge (former director of the Fundy Model Forest) supports a longer timeframe with more time for consultation, community meetings etc.” (p.5). The leadership for the New Brunswick initiative is considered to be strong (R16).

The project remains largely volunteer based, and is moving ahead slowly. The risk of exhaustion by volunteers continues with the smaller more focused biosphere reserve proposal in New Brunswick. The New Brunswick initiative has faced two major concerns. The first was a funding failure. One of the initiative’s past sources of funding, the Environmental Trust, did not continue funding. In August 2004, the proposal in New Brunswick faced a lack of financial support. It was likely that a major funding source would be needed for a core person, staff, and for meetings, travel, and promotion of projects (R15, R17). Prior to the funding problem, plans had been underway for a forty to fifty person stakeholder meeting.

A second issue for the New Brunswick biosphere reserve initiative occurred when the chair of the New Brunswick initiative, Liette Vasseur, left her position at the Université de Moncton for a new post at a university outside the Maritimes. This meant that she also left as co-chair of the initiative in New Brunswick and it was felt her presence and experience would be missed (R15).

The lead in New Brunswick, Peter Etheridge made a presentation at the CBRA Annual General Meeting in the summer of 2004 in Cornwallis, Nova Scotia. It was reported that members of CBRA suggested the proponents in New Brunswick proceed immediately with the application for official designation (R17). The proponents were also advised to submit an application illustrating concrete accomplishments rather than abstract plans about potential projects the biosphere reserve would achieve following designation. The goal in New Brunswick is to submit nomination papers that demonstrate that they have initiated biosphere related projects:

“They want to go to the international commission with a functional biosphere reserve” (R17, Planning committee member).

Community based watershed monitoring projects have begun within the proposed New Brunswick biosphere reserve area involving Fort Folly First Nation. As well, several projects with CWS and Mount Allison University have commenced (R17). The proponents have made contacts with community conservation groups and are working with tourism groups in Alma and St. Martins. They have held meetings with all councils and municipalities within the proposed biosphere reserve, and there has been considerable interest and open support. The project has not encountered the type of opposition encountered in Nova Scotia. The next goals are to take the project to the political level,

to Members of the Legislated Assembly (MLAs) and Members of Parliament, and to get support from them and from the Atlantic Canada Opportunities Agency (ACOA). The proponents of the New Brunswick initiative are working towards completing a natural resource compendium of the area, as well as an examination of the human aspects of the area including trends of resource use and expected future trends. The proponents of the New Brunswick initiative continue to be positive about achieving biosphere reserve in New Brunswick and remain cautiously optimistic about the future of the initiative in their province.

## **CHAPTER 7: Significant Issues and Research Themes**

### **7.1 Introduction**

In this chapter I present a summary of the research findings concerning significant issues and themes that influenced the outcome of the inter-provincial initiative for a biosphere reserve in the upper Bay of Fundy, namely to suspend activities in Nova Scotia. The issues include perceptions of risks and benefits, from the perspective of the community and the planning committee. In this chapter I examine environmental concerns, and considers the size of the proposal area and the effect it had on the initiative's outcome.

### **7.2 Perceived Risks**

I interviewed individuals living in the communities within the study area who identified a variety of perceived risks regarding the designation of a biosphere reserve in their community. They expressed concern about the potential restrictions biosphere reserve designation might impose on individual livelihoods and daily life (R2, R3, R4, R5, R6, R7, R9).

#### **7.2.1 Restrictions on Rights to Private Land Use**

Rumours and speculation about the potential risks of a biosphere reserve abounded in the area in the winter/spring of 2002. The two most often quoted rumours were that UNESCO would expropriate land, and that if a house burned down, they would not be able to rebuild it if the reserve was designated. One respondent stated:

“With the biosphere reserve we wouldn't be able to cut down trees, etc. The politicians knew very little and couldn't say where the money would come from.

We would have lost control of our property. It was very frightening. We didn't need more controls" (R7).

Similarly, the Chronicle-Herald (April 17 2002) reported that an individual living in Advocate Harbour, Bill Swindell, stated: "My insurance agent told me to obtain bylaw protection for my property, because if my house were to burn down after the area is designated a reserve, there's a good chance I won't be able to rebuild" (p.A7). He furthermore stated, "My insurance company won't repay me if I can't rebuild" (p.A7). The perceived risks were a frightening possibility for community members who feared the biosphere reserve would mean restrictions for generations to come: "With the biosphere reserve, we would have voted for controls for our grandkids" (R7).

### **7.2.2 Restrictions on New Industry**

Community members stressed they wanted greater honesty from the proponents about the disadvantages of biosphere reserve designation. For instance, one individual wondered if a biosphere reserve would make it difficult to start new industries (R2). Two other respondents voiced the opinion that instead of using money to start a biosphere reserve, their communities could be better served by attracting new industries and bringing more jobs to the area.

### **7.3 Perceived Benefits**

Community members often had differing views about the risks and benefits of the initiative. One community member felt strongly that lives would not be affected by the biosphere reserve. The community would benefit from greater protection of the land that would come from biosphere reserve designation (R11). The greater fear for this

respondent was that the action of others in the community, namely angry opposition to initiatives such as the biosphere reserve, would impede further protection:

“I don’t think it would have affected me at all. I wasn’t a bit worried about how it would have affected me other than it, ...possibly the biggest fear that people are going to sit back and allow a few of these people who might have another interest be involved that are going to allow this type of action to stop any further protection of our livelihood” (R11).

There was also a wariness of the biosphere reserve, and uncertainty concerning how individuals might be affected because individuals recognized they did not fully understand the biosphere reserve concept. Another response was that a biosphere reserve could have both positive and negative effects on individuals:

“It’s good, it would have affected me adversely as much as it’s going to help me. Because being a fishermen there are certain things you have to do off-shore there’s certain things you have to do...I think it’s a great idea for people to talk it over, but there’d be things I didn’t like if it ever goes through, but there are things you don’t like every day” (R12).

### **7.3.1 Balancing Conservation and Economic Development**

Biosphere reserves were seen as an opportunity to provide a balance between conservation and economic development, as well as a framework for balance between conservation and tourism development according to the responses of planning committee members. Planning committee members were drawn to the project because the biosphere reserve programme is about local sustainable economic development as well as conservation of an area. Biosphere reserves were seen as particularly beneficial because they try to keep people on the land. Furthermore, although there is no legal protection, a biosphere reserve was seen as a powerful moral obligation for communities and different levels of government to increase their conservation efforts and protect the place where they live.

In the view of proponents biosphere reserves not only influence people to better protect nature, but UNESCO designation as a biosphere reserve provides at the international level, recognition of the uniqueness of a natural area, and recognition of attempts to address sustainable development issues at the local level. Biosphere reserves become a model for elsewhere on the planet. Furthermore, initiatives such as the UBoFBI can impact a community positively by introducing them to new ideas and projects. For supporters of the UBoFBI the proposed biosphere reserve could encourage a certain type of industry to establish in the area. Furthermore, a planning committee member contended: “It would also increase tourism and bring the type of tourists who are looking at the environment in a positive way” (R10). Biosphere reserves also provide a connection between international commitments made by the federal government and what can be achieved at the local level (R15, R17).

### **7.3.2 Biosphere Reserves and Protected Areas: Complementary but Different**

One committee member believed that biosphere reserves have done a better job than many protected areas of engaging local people in the conservation process. Biosphere reserves are a means of engaging people in a process that helps them live on the earth without spoiling it, and place greater emphasis on sustainable development than protected areas. They felt protected areas can be alienating to those who live around them leading to conflict between protected areas and local people (R1). It was perceived that the biosphere reserve movement in Canada has placed strong emphasis on community development; one participant contended that Canada is probably the strongest of any other country in the world in this regard. A positive benefit of biosphere reserves has been their influence on protected areas management. Protected areas have been

influenced by the biosphere reserve movement and have become more like biosphere reserves. It was suggested in the process of the two becoming more alike, it has potentially decreased the need for biosphere reserves in many parts of the world:

“the Biosphere Reserves concept has really strongly affected protected areas thinking all around the world because of trying to bring the socioeconomic element into conservation area planning...in a way with the increasing acceptance of the need for local economic development twinned with conservation I would say that Biosphere Reserves are becoming less, the need to establish a Biosphere Reserves locally is less crucial because protected areas are becoming more like Biosphere Reserves” (R1).

Nevertheless, protected areas and biosphere reserves remain different. They are complementary, but each is different from the other.

### **7.3.3 Partnerships and Environmental Projects**

Members of the planning committee felt that the involvement of numerous partners from different interests working on a project for a common goal was an important strength of biosphere reserves. It was stated that the greater the number of partners the better, however a participant cautioned that partnerships take time and there is a trade-off between having a large group and increased effort involved in maintaining positive relations within a large group. Furthermore, demonstrating that a project already has existing partnerships is also necessary when submitting funding proposals (R16).

One committee member stressed that a biosphere reserve would only be beneficial if it met real environmental needs in the local area. The inner Bay of Fundy (iBoF) Salmon Recovery Initiative which began as a project involving the UBoFBI in 2002 “to preserve the genetically distinct iBoF salmon and to re-establish wild, self-sustaining

populations in all rivers that they are known to have inhabited” (UBoFBI, 2002b, p.3), was cited as a good example of what a biosphere reserve could do to meet a need in an area:

“it is a need that was really required, the people recognized that and jumped on that... So that might be a lesson learned from the past, they picked a project that needed to be focused and went with it, instead of jumping on a project that already had three or four people doing it” (R16).

#### **7.3.4 Increasing Environmental Awareness**

Interviewees made the point that people in rural areas need to be able to live on the land and it was perceived that biosphere reserves have the potential to expand the understanding of how conservation is needed for sustainable community development and vice versa (R1, R15). A biosphere reserve was also seen as a means of getting support for conservation and involving the community in conservation initiatives as well as increasing environmental awareness in the community. Several of the members of the planning committee who participated in interviews mentioned they became involved with the UBoFBI in large part due to the potential for the initiative to raise environmental awareness in the areas of Nova Scotia and New Brunswick encompassed in the proposed biosphere reserve.

One respondent held the view that although Nova Scotia would no longer be part of the proposed biosphere reserve, through the process of trying to designate a biosphere reserve, it had helped raise awareness of issues such as protected areas and sustainable community development: “Already I bet people in Advocate are thinking a lot more about protected areas and sustainable community development” (R1). Some of the community members also believed that the process also helped raise environmental awareness within

their communities (R11, R12). However, it was stressed that increasing environmental awareness is a slow process. One respondent reasoned that people feel threatened when new ideas come to an area because they worry that anything new will threaten their livelihood and a way of life they have become accustomed to; however, initiatives such as the proposed biosphere reserve do help (R11).

## **7.4 Conservation Issues and Protected Areas**

### **7.4.1 Conservation and Environmental Concerns within the Study Area**

All respondents were aware of environmental problems within the study area and raised concerns. Respondents identified several environmental problems within their local communities. Water issues were the most frequently mentioned environmental concerns, specifically lowering of water tables, and contamination of the Bay of Fundy. Other environmental issues of concern included sewage disposal, the spreading of human manure/biosolids on agricultural lands; forestry practices by logging companies such as clear cutting; present agricultural practices, and choosing organic foods versus reliance on foods produced with chemical inputs; fish and the decreasing salmon populations; and the impacts of ATVs.

### **7.4.2 Community Support/Opposition for Protected Areas**

Community members who were in favour or leaning towards supporting the biosphere reserve had a tendency to support more protected areas in their community. They felt that the land must be protected for future generations (R11, R12). Those respondents who opposed the initiative were not necessarily opposed to conservation, but their opinions differed on the extent to which protection of the environment should occur.

According to one individual: “I want to protect the land, but not to the point where I go hug trees” (R6). He felt that nature should be protected, but humans should be able to enjoy nature, and the environment should not be off-limits to humans. Another respondent mentioned that the land should be there for people to enjoy recreationally (R2).

#### **7.4.3 Influence of Cape Chignecto Provincial Park on Community Support for the Initiative**

Protected areas in Nova Scotia were an issue influencing the outcome of the initiative. There was anger and resentment over past projects in Northern Nova Scotia and it appears a lot of the antagonism can be traced back to the designation of Cape Chignecto Provincial Park in Advocate in the late nineties. The hostility witnessed in Advocate to the biosphere reserve was thought to have been growing since then. To a lesser extent there was also opposition to other protected areas in the region such as the Economy Wilderness area. The UBoFBI was proposed two years after the park’s designation, yet disputes concerning the park had not been fully resolved. Some individuals in the area were unhappy about not having prospecting and hunting privileges in the park. A committee member discussed the fact that some people were against anything, such as a biosphere reserve, which would have made protected areas more legitimate.

One member of the planning committee who had worked on park planning before the Provincial Park began reported having spoken with community members who seemed to be in favour. The respondent commented that one problem with Cape Chignecto

Provincial Park was the banning of ATVs from protected areas. This person said that local ATV groups wanted access to Cape Chignecto. Furthermore, the Department of Natural Resources (DNR) did not negotiate with the communities when they should have. Another respondent previously involved with park planning mentioned that Cape Chignecto Provincial Park initially began when a community group wanted to attract more tourists to the area to boost the local economy. This group began to realize that the area was being developed in a certain way, and the natural resources needed to be protected. They wished to appeal to ecotourism, and realized they had something unique in the area and wanted Cape Chignecto Park to be something that would be sustainable for generations. Prior to the designation of the provincial park, attendance at public participation events tended to be low with little opposition vocalized. After the management board approved the management plan, and the boundaries were defined, a small group of people became opposed to the park. One respondent reasoned that the opposition occurred when the group realized they would no longer be allowed to go in the park land with their ATVs, nor would they be allowed to fish. Various misunderstandings regarding expropriation of land have reportedly also occurred; these same concerns also arose with the biosphere reserve proposal.

#### **7.4.4 Community Level Criticism of Cape Chignecto Provincial Park**

The opinion was voiced that Cape Chignecto Provincial Park had become a place just for hikers and those in good shape, rather than a place for the enjoyment of everyone, as they had thought the park would be. There were further complaints that the park did not generate the job creation that was intended. Scepticism existed regarding the ability of the park to really generate tourism because of it being too far away from urban areas,

including Halifax. Some respondents felt that Cape Chignecto Provincial Park was forced upon the community by the government; people were not involved with the park, and yet in return pay for it with their taxes. It was speculated that following the park, crime had increased, and the increased number of visitors to the park had led to a decrease in moose, deer, and other animals in the area. Suggestions were made for picnic areas, and more places allowing older people to use the park in addition to those individuals in good physical shape without decreased mobility. Furthermore, there was frustration that local people had protected the land the park encompasses for years and now did not have unrestricted access to the area. There were complaints that an area such as Red Rocks in Advocate Harbour, which was once where weddings and high school dances were held, now falls beyond the entrance to the park and an entrance fee must be paid to access Red Rocks.

In the Advocate area, a group calling themselves the *Taxpayers for the Fair Use of the Cape Chignecto Peninsula* was formed because the park was taking the use of the land away from people. This group of volunteers has worked on local projects such as rebuilding the old Eatonville Road, fixing bridges, and other projects. There was frustration that there was not enough cooperation between their group and management at the provincial in terms of maintaining roads and bridges to the park. Furthermore, the land on which the park sits has a history of heavy logging, and there were complaints that the government had replanted non-native species. Several opponents to both Cape Chignecto Provincial Park and the proposed biosphere reserve felt protection of rare species was needed, but did not want preservation for the sake of preservation; they wanted the option to use the land and its resources. Some respondents advocated

selective harvesting of the trees in the park. Two individuals raised the issue that when the provincial park core areas and buffer zones were discussed, they thought that it could not be a coincidence that the biosphere reserve used the same language, and felt there was a strong possibility that it was known there would be a biosphere reserve when the Cape Chignecto Provincial park began.

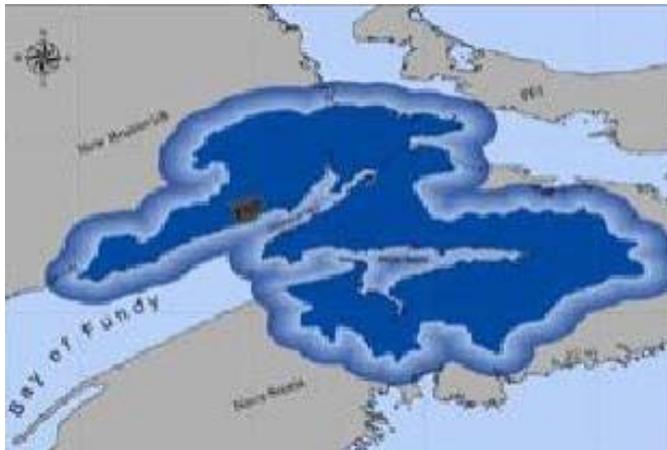
#### **7.4.5 Restricted Use of Protected Areas**

A member of the planning committee reported his perception that in March of 2002 the managers of protected areas decided to exclude ATVers from protected areas. The biosphere reserve was being promoted to the community at this time. With protected area legislation changes in Nova Scotia, it was perceived that changes had occurred for what was and was not allowed in protected areas, there had been a limited public consultation process, and the biosphere reserve came along at a time when individuals who felt they had been adversely affected by the changes needed a forum to voice their complaints. It was believed that as a result the biosphere reserve proposal was viewed as a further risk to their lifestyle. It therefore provided an opportunity for some people to voice frustrations.

This perception points to misinformation that existed in the communities regarding rights to use and access protected areas, the laws that govern protected areas, and misunderstanding of the different types of protected areas (provincial parks, national parks, wilderness areas, etc.). For example not allowing ATVs in provincial parks such as Cape Chignecto Provincial Park is a matter of law and not a management decision by the park management.

## 7.5 Proposed Boundaries of the Biosphere Reserve Initiative

Prior to the termination of the biosphere reserve project as an inter-provincial initiative, the mapping of the final boundaries and the locations of the different zones had not been completed. The meeting in Nappan was the first opportunity for a mapping discussion. Cape Chignecto Provincial Park in Nova Scotia and Fundy National Park in New Brunswick were the proposed core areas for the reserve, and land owned by the CWS was seen as a potential transition area (R1). However, those involved with the initiative stressed during their interviews that the biosphere reserve would have no authority to take land from anyone, and permission would be needed to include the CWS land or the two protected areas in the biosphere reserve.



*Figure 7.1: Upper Bay of Fundy Biosphere Initiative Zone of Influence (From UBoFBI, 2002a)*

The planning committee sought the assistance of geomatics specialists from Parks Canada and the Fundy Model Forest who were asked to determine an area that might be included in the zone of cooperation of a proposed reserve. The boundaries needed to be determined by considering both ecological and socioeconomic concerns. It was felt that:

“the land-based portion of the project could be defined by the watersheds that flow into the two upper basins. This seems logical, although the upper reaches of the two rivers, the Petitcodiac and the Shubenacadie, extend into areas that have little to do with the Bay of Fundy. Where to draw a line on the water poses another challenge. Seabed surveys have indicated that ecosystems beneath the surface of the Bay may be just as distinctive as on land. In order to get the conversation started, a preliminary map [see above] has been drafted to indicate the potential zone of influence of the Upper Bay of Fundy Biosphere Initiative. Arriving at a more precise definition of the region and its key protected areas and buffer zones will be a major preoccupation of project participants in the coming months” (UBoFBI, 2002a, p.4).

A planning committee member pointed out that at the same time this initiative was being developed, the Southwest Nova Biosphere Reserve (SWNBR) was expanding their sphere of influence and could in fact potentially overlap with that of the proposed UBoFBI (R15). Based on Figure 7.1, it does not appear the UBoFBI would overlap with the zone of cooperation of the SWNBR, as defined in the 2003 document submitted to UNESCO.

### **7.5.1 Boundary Contentions and Confusions**

There was concern amongst interview participants about the exact boundaries of the proposed reserve, and how large an area the buffer zone would encompass. Respondents worried that their communities being part of the proposed biosphere reserve and raised concerns regarding the implications of living in a buffer zone. One respondent living in the Advocate area worried that: “There would be a 50-mile corridor from here to the Lands and Forest place. To protect the buffer zone there would be an area from here all the way to Fundy National Park in New Brunswick. Advocate would be right in the middle” (R4). In this case the respondent was referring to the Chignecto Game Sanctuary in Cumberland County.

Committee members and two individuals from the community voiced the opinion that much of the concern over the size and location of the biosphere reserve seemed to stem from a misunderstanding of the biosphere reserve concept in general. This included misunderstanding of the different zones and risks associated with biosphere reserves: “The Biosphere Reserve cannot take land from anyone, permission is needed to include lands. In Canada there is no special zoning or mandatory change in land use, it is voluntary” (R8, Planning Committee Member). The co-chair of the initiative, JoAnn Fewer, was quoted in *The Chronicle-Herald* (May 8 2002) that: “designation (as a UN biosphere) does not create new legislation or take precedence over existing legislation. It does not interfere with your use of your property and does not close the area to fishing, logging, agriculture or future economic development” (p. A5).

#### **7.5.2 Proposal Area: Was it Too Large?**

The size of the proposed reserve was cited numerous times as a reason for its failure. The proposed area was very large, covering over 700 km of coastline, including 40 to 50 communities in both New Brunswick and Nova Scotia (Ravindra, 2003a). Two members of the planning committee mentioned that the size of the proposed biosphere reserve ended up being defined by the economic development associations and municipalities that expressed interest in the biosphere reserve, it “ended up being defined by where there was expressed interest. There was interest from St. Martin’s, NB to Wolfville, NS and this therefore defined the area for the Biosphere Reserve” (R8, Planning Committee Member).

When the board was wrestling with the decision to suspend activity in Nova Scotia, ultimately it was decided that they needed to work with a smaller area. The proponents could have benefited from an initiative that encompassed a smaller area. Working with such a large area meant greater effort was needed to make sure people understood the project and were involved in the initiative. The sense gained from the interview process was that people in communities such as Advocate felt they had no ownership over the project, but would nonetheless be affected by it.

## **7.6 Other Themes from Interviews**

### **7.6.1 Rural-Urban Divide**

A reoccurring theme throughout many interviews was the divide between urban and rural populations. Participants pointed out that in the past the majority of the population lived in the country, whereas today rural areas are becoming places of summer homes, not places with year-round residents. Interview participants voiced concern that the communities in the research area and in rural Nova Scotia in general have diminishing populations. Furthermore, respondents discussed their concerns about how rural communities are losing schools and jobs; the population is aging, and out-migration is common. The sentiment among several participants was these communities are becoming more like retirement communities, or simply a place where people escape to the cottage from Halifax and other urban areas. Respondents reported that it is difficult for people to stay in the rural areas. They felt that everyone moves to the city with no one remaining in rural small communities. It was acknowledged that new ideas are needed to ensure these communities survive, but some questioned whether the biosphere reserve would have been a positive addition to their community: “I’m 61 years old and I see governments and

universities moving everyone to cities with no one in small communities. I am very concerned for Canada. Controls make it hard to stay in the country” (R7). There was a sense of uneven power dynamics between rural and urban areas in terms of decision-making abilities: “People in the city don’t live in the environment, but control things” (R2).

It was suggested that not only is there a divide between people in urban and rural areas, there is too much divisiveness among the various communities encompassed in the research area. A community member stated in their opinion that communities in rural areas need to be redefined, there needs to be greater cohesiveness among rural communities. If the communities in the area are to survive, it was suggested that concrete plans and goals need to be developed, there is a need for people to work together better (R11).

### **7.6.2 Community Development and Management in Rural Areas**

Encouraging community development and health is an important aspect of biosphere reserves. Frustration was evident over the dependence on tourism as a solution for Nova Scotia; it was felt that it could not be the only solution because of the seasonality of tourism. Tourism, like the fishing industry, offers only seasonal employment. It was mentioned by two participants that tourism had provided benefits to the area attracting more businesses such as bed and breakfasts, but it was felt that there is a need to attract more small business and industry to the area. In addition there is a need to invest more into infrastructure. The state of the roads in the research area was seen as detrimental to the success of places such as Cape Chignecto Provincial Park. A

respondent considered that projects cannot be successful in the long-term if there is no follow-through to ensure adequate roads and infrastructure to continue attracting visitors (R11). One respondent stressed that resource people are needed; it is not possible in small communities to completely manage large projects. Furthermore, the individual who had been involved with Cape Chignecto Provincial Park discussed the difficulties of such a project being completely community run as follows:

“Sometimes I feel that they set you up for failure. With Cape Chignecto, it’s managed with the local community, and then over that is CREDA and they are the ones that signed the lease. You know CREDA has been very eager to get complete ownership over to the management group. Because they want to get out of it, it takes a lot of time, energy, money, for them to keep going and doing the payroll and all that. They would love, they wanted I know, they would love to do it when I was there, and I said no, the government is paying you people, we need those resource people to come down here, and I don’t think this community is ready or will ever be ready to be cut off and set out to completely sink or swim. It’s not fair to even ask them to, they are a small community, and to manage, completely manage a park like that size, no I don’t think no we’ll ever be ready. So we need the resource people to be there that are on side and willing to help us through the process” (R11).

### **7.6.3 Biosphere Reserve: Could They Be Beneficial Elsewhere?**

A surprise that arose during the group interview was the sentiment that although some participants opposed biosphere reserves for their community, they were not categorically opposed to the concept. In her thesis, Meeuwig (1993) writes that there has been a misunderstanding that biosphere reserves are only relevant to developing countries where there is a need for economic development. One interview subject, opposed to the initiative, expressed the opinion that she could see the benefit of biosphere reserves for developing countries, but did not see it as a benefit to her community. This participant expressed the opinion that a biosphere reserve would not be good for her community, but she saw the benefit of them for third world countries and for protecting certain rock cliffs.

## **7.7 Conclusions**

Several factors appear to have influenced the outcome of the UBoFBI and the perceived community opposition in Nova Scotia that led to the decision of the board to concentrate activities in New Brunswick. The combination of perceived risks and restrictions, uncertainty regarding benefits of biosphere reserves by the community, tensions over protected areas in the province of Nova Scotia were important factors. A proposed area that likely was too large for the planning committee to manage effectively with criticisms of the initiative as they arose also played a role in the outcome. The process employed by the proponents also bore influence on the outcome and shall be discussed in chapter 8.

## CHAPTER 8: The UBoFBI Process in Nova Scotia: Issues and Themes

### 8.1 Introduction

This chapter focuses on significant issues and themes arising from the research surrounding the process of proposing a biosphere reserve for the upper Bay of Fundy. The issues discussed include support and opposition to the initiative, the community consultation for the initiative, along with misconceptions of the UBoFBI present in the community.

### 8.2 Support for the Initiative

The project received considerable support prior to its termination as an inter-provincial initiative. Many organizations, municipal councils, research institutions, and provincial and federal government departments were extremely supportive of the biosphere initiative. The following table illustrates various letters of support and expression of encouragement that were received prior to the dissolution of the UBoFBI (UBoFBI, 2002b):

**Table 8.1: Support Received for the Biosphere Reserve Initiative**

<b>Letters of Support from Councils</b>	<b>Expressions of encouragement</b>
<ul style="list-style-type: none"><li>• Colchester County NS</li><li>• Hantsport NS</li><li>• Parrsboro NS</li><li>• Riverside-Albert NS</li><li>• Sackville NB</li><li>• Stewiacke NS</li><li>• Truro NS</li><li>• West Hants NS</li><li>• Windsor NS</li></ul>	<ul style="list-style-type: none"><li>• Central Nova Tourist Association</li><li>• Colchester Regional Development Association</li><li>• Fundy Model Forest</li><li>• Mount Allison University</li><li>• Parks Canada</li><li>• Société du Monument Lefebvre</li></ul>

### **8.2.1 Involvement with the Initiative Planning Committee**

The involvement of the members of the planning committee indicates support from a variety of groups. Members came from a variety of backgrounds from economic development and conservation backgrounds, government agencies and universities. The individuals became involved for a variety of reasons. The biosphere reserve was seen as a positive idea for the region. Its appeal was the combined conservation and sustainable development components of biosphere reserves (R1, R17), the involvement of several sectors (R16, R17), and the integral role of communities in biosphere reserves (R1, R10, R15).

### **8.2.2 Political Support**

Stronger provincial and federal support was an issue for the project to continue in Nova Scotia, particularly financial support. Two respondents considered that it is possible that provincial governments were not very familiar with UNESCO projects such as biosphere reserves and might have been reluctant to get involved with such proposals (R1, R17). Some community members who had spoken with their local MLAs in Nova Scotia were surprised that the MLAs apparently did not know about the biosphere reserve initiative (R3, R4). However, support at the municipal level was received in both provinces.

In the Fall of 2001, the planning committee met with the Nova Scotia Provincial Environment Minister and several Deputy Ministers of other departments. The initiative had received \$50,000 from the New Brunswick government in 2000 for two years of funding for the project. Their goal was to acquire matching funding from the Nova Scotia

government for at least one year. The funding was needed specifically for community consultation. Funding was not granted (R8).

In the spring of 2002 as community support appears to have been increasing in Nova Scotia, political support for the initiative changed. Colchester County municipal government informed the UBoFBI proponents they were rescinding their support. It is possible community opposition made some politicians nervous. In Nova Scotia, respondents reported that politicians gave much initial support to the initiative, but once it was clear there were vocal opponents to the initiative in Nova Scotia, several respondents reported that support for the initiative from politicians at various levels of government changed. These decisions may have influenced others to withdraw their support for the initiative (R15). The regional economic development agencies grew worried about political pressure and perceived community opposition, and the degree of their involvement with the initiative then changed. It is thought that CREDA may have feared the biosphere reserve proposal would detract from the attempt to obtain designation of the Joggins fossil site as a UNESCO World Heritage site in Nova Scotia (R1, R15). It also appeared that there was a lack of communication between the New Brunswick and Nova Scotia governments regarding the initiative, as well as differences in the degree of political support offered by politicians in the two provinces. The politicians in New Brunswick continue to be supportive of the project and want to see it succeed in that province (R17).

### **8.3 Opposition to the Initiative**

#### **8.3.1 Sources of Opposition**

It is difficult to determine the extent of the opposition to the initiative in Nova Scotia with precision. Some observers believed that in reality only a few individuals were opposed to the initiative; however, these individuals were very vocal and helped raise fears and suspicion in others (R1, R15). Some opponents might have lacked information about biosphere reserves; one individual contended that they were opposed because it was something different and anything new or different causes fear in some people. Furthermore, it appears that some individuals were opposed to the initiative because they believed it was a government project, even though the government was not the proponent (R15, R17). It is clear, however, that opposition to the initiative did exist. The following statements raised by opponents to the biosphere reserve illustrate the nature of the opposition to the biosphere reserve:

“they wanted too much too soon” (R9)

“there is a natural resistance to change, especially in rural areas” (R9)

”they should have asked people first” (R7)

”don’t fix what’s not broken” (R2)

#### **8.3.2 Perceived Lack of Community Ownership**

Opponents stated they were upset that people from outside the region were coming to their communities and forcing a project on them. Community members stressed that while they were not against progress *per se*, they wanted a voice, and wanted recognition that they knew what was best for themselves and their community. There was a sense of a lack of community ownership and power with the initiative:

“Why do people from elsewhere come in and tell us what to do?” (R4).

“who decided we want to be a UNESCO Biosphere Reserve?” (R9).

The proponents’ aim had not been to force the initiative on the communities encompassed in the proposed biosphere reserve; however, some community members apparently perceived the project in this manner. Community members complained that the communities in the proposed biosphere reserve were not asked to give their opinion about the reserve; they were simply told what would be best for them (R2, R4, R7). In some biosphere reserve initiatives communities may perceive the project, as only about preservation because of the involvement of those from the conservation community, however, in this case the perception that these proponents were outsiders appears to have been more significant. There was also a perception of secrecy associated with the initiative. Opponents stated that they heard about the initiative by accident and reasoned that the proponents were trying to keep them uninformed, and were trying to keep things secret and hidden from the local people:

“We heard about the biosphere reserve at the end of the process, they were trying to keep it secret and didn’t want the local people to know about it” (R3).

“I was against the biosphere reserve because they couldn’t give any useful information” (R6).

A problem with attempting to garner public support for the initiative might have been that the proposed biosphere reserve was a stewardship agreement, and the idea was not tangible enough for many people (R10). A lack of ownership could have also arisen from the public consultation process used during the initiative. Although there were volunteers and people involved with the initiative from communities across the proposed area, it appears people in communities such as Advocate Harbour and Five Islands and

elsewhere felt disconnected from the initiative, yet afraid that it would impact and change their lives. A feeling of alienation from the initiative was evident from the responses of community members.

## **8.4 Confusion over the Concept of a Biosphere Reserve**

### **8.4.1 Available Information – General Biosphere Reserve Questions**

Respondents who were not part of the initiative, whether in favour or opposed to the biosphere reserve, expressed a degree of confusion and lack of understanding concerning the concept of a biosphere reserve. One of the participants, a retiree, stressed that the process frustrated him because he did not understand the word biosphere. He was really interested in understanding biosphere reserves, but he had found it difficult to make an informed decision about offering support or not for the initiative when he did not fully understand the idea (R9). Two members of the board voiced the opinion that at the end when the inter-provincial initiative began to derail in Nova Scotia, a lack of understanding of the issues could be one reason for the derailment:

“You may think your direction is fantastic, but unless people understand where you are going, where you are coming from, you may be dead in the water. And if they get the wrong idea then you are really dead in the water” (R16).

The proponents needed to find a clear straightforward way of explaining what the UBoFBI wanted to achieve and what a biosphere reserve is. The complexity of the biosphere reserve concept is probably its greatest weakness. Unfortunately a solid understanding of the biosphere reserve concept by the general public seems to have been lacking. Potential areas of confusion are the terms themselves, questions of jurisdiction and the objectives of biosphere reserves.

#### **8.4.2 Available Information - Objectives and Goals of the Initiative**

A lack of clearly articulated objectives and goals was another issue in the UBoFBI. Two participants from the community mentioned the vagueness of the plan; specifically they were looking for a clearer and more concrete plan. Furthermore, an opponent to the initiative questioned why their community should be part of a biosphere reserve when the proponents kept telling them it would not change things. Another opponent discussed frustration; although he tried to educate himself by looking at websites, he still did not understand what the initiative was trying to do. Interestingly, he still believed: “they were trying to do something good” (R9).

Opponents indicated that they had not received enough information about the biosphere reserve and eventually decided that the issue should be decided by a plebiscite. A neighbouring community had held a plebiscite when a liquor store had been proposed for the town, and these respondents contended that a plebiscite would be the fairest way to determine how the community stood on the issue of the proposed biosphere reserve. A plebiscite was not held to determine where the community stood on the issue of biosphere reserve designation.

#### **8.4.3 Anti-Biosphere Reserve Websites and Opposition to the United Nations**

Those opposed to the biosphere reserve had been influenced by information obtained from the internet on anti-biosphere reserve and anti-UN websites (R1, R11). In the Advocate area, a group of individuals became opposed to the project when they perceived from the information they accessed that there would be no benefit to themselves or their community. As a result they formed the ‘Upper Bay of Fundy

Conservation Study Group'. When they initially heard about the proposed biosphere reserve for their area some people who wanted to be better informed turned to the internet to learn about the strengths and weaknesses of biosphere reserves. On the web they found many websites from groups, all largely from the United States, such as the Property Rights Foundation of America, opposed to biosphere reserves (ex: <http://prfamerica.org>). Appendix H contains an article from the website on the UBoFBI.

The majority of the respondents in this study mentioned the influence of the internet. Local people picked up on the negative opinion towards biosphere reserve initiatives on the web, and it was felt that some opponents who gathered their information from the internet probably got a different impression of the initiative than the proponents view. Two respondents questioned how much some individuals understood the information available on these websites or actually questioned the validity of the sites:

“People got information from the internet and were scared” (R11).

“The internet influenced things. It was thought that it would bring a new level of bureaucracy, reducing harvesting levels” (R17).

#### **8.4.4 Misconceptions About Involvement with the Initiative**

Community members were uncertain about who the proponents of the initiative were. There may have been a misconception that this was a government project, as well as misconceptions regarding the role of the UN in the biosphere reserve. The portrayal of UN controls over communities on the websites appears to have influenced opposition to the initiative: “I would not be quite as sceptical if it was Canadian and not from the UN” (R6). There was fear that the UN would have control over Canadian soil and the opponents raised the objection that officials at the UN, who are not elected, and yet it was

perceived they would exercise control. In a guest editorial still available on the Property Rights of America website Boddy (2002) writes of the UBoFBI:

“Upon examining released documents relating to the proposed Bay of Fundy Biosphere Designation, several items come to the forefront. The advocates of the Biosphere for the Bay of Fundy like to proclaim the fact that they are worldwide in scope. The fact that UNESCO is their benefactor leads me to believe that they intend to deliver our sovereignty into the hands of this alien power, even though they deny this fact”.

Some opponents of the UBoFBI wondered why the UN would want to come to their part of Nova Scotia. There was a fear that there would be increased bureaucratic controls, as well as a new world order controlled by the United Nations:

“We started the Upper Bay of Fundy Conservation Study group and gathered pro and con information from the internet. All we could see was controls in the future. Bureaucratic controls would increase in the future, with a new world order controlled by the UN” (R7).

#### **8.4.5 Language**

The complexity of biosphere reserve language used by UNESCO is a further weakness that was identified during the interviews. Some respondents stated that it was understandable why people unfamiliar with the concept were confused and that the phrasing of biosphere reserve concepts in UNESCO publications could be changed; the biosphere reserve needs to be explained in simpler manner. According to respondent R1 the language of UNESCO regarding biosphere reserves can be convoluted and is based on the work of French professors and academics that first initiated the concept. Respondent R1 found the information confusing and not very user friendly. For example in UNESCO’s **Guiding Principles For Projects on Biosphere Reserves**, while discussing the advantage of regional biosphere reserves the following statement was made:

“The regional biosphere reserve networks offer the added values of providing a framework for activities in a number of sites within similar ecological and/or cultural systems, often providing a gradient of parameters. They are tailor-made for facilitating exchanges and pooling of resources, and they can address the application of the ecosystem approach in ‘bioregions’, and building large-scale ecological corridors” (2002).

In Canada work is being done to modify the material and make it more accessible; however, the work done in Canada will not necessarily be accessible to people living in Africa and the information needs to be applicable around the world (R1).

### **8.5 Staffing Issues**

In retrospect it was felt by the proponent that there were insufficient staff to deal effectively with the problem of opposition or misconceptions about biosphere reserves present in communities (R1). Internal structures in the board and planning and management of the initiative could have been improved. A member of the planning committee expressed the opinion that one of the problems with the UBoFBI was that they did not have a collective approach that was well put together for the community meetings. In 2002, the planning committee had not been in existence for long and the biosphere reserve concept was a new idea for some members of the committee. There was a steep learning curve as these individuals not only needed to familiarize themselves with the concept, as members of the board they needed to be comfortable explaining the idea to the public and responding to the community’s concerns (R1).

When the project ended in Nova Scotia, underlying tensions existed among the people involved with the initiative (R1). The volunteer board of the UBoFBI had the support of only a few paid staff members. The membership composition of the planning

committee differed between the two provinces. There were people on the Nova Scotia side being paid, including the project coordinator, and the two representatives from the regional economic development associations who were involved as part of their jobs and needed to represent these other interests as well as the initiative. On the New Brunswick side, the individuals had paid employment, but were involved with the initiative on a volunteer basis (R15). Although it is the case with many community development projects that there are only a small number of staff or in some cases no staff, and projects are successful. In this case staff appears to have been an issue because the biosphere reserve concept appears to have been a relatively new concept to many board members.

## **8.6 The UBoFBI and Community Involvement**

### **8.6.1 Consulting with the Community**

Planning committee members endeavoured to build trust within communities, but unfortunately there was mistrust and suspicion among some individuals in the community who did not think the proponents were being honest about what the project was intended to do. It takes time to build trust and respect, and Hales (1991) contends that in order to create positive working relationships between proponents and communities, it is important to be honest about both the positive and negative impacts of a protected area in a community. The original aim of the proponents of the UBoFBI was to complete a large portion of the paperwork necessary for designation prior to consulting with the public. Comments by three respondents suggest that proponents needed to work on garnering community support for the project earlier on (R1, R8, R12). They suggested that proponents of initiatives such as this should not wait until an agenda is perfected before seeking the support of the community:

“They needed to be out there in the beginning stages informing people. Telling them was the design means. Discussing anything people might feel threatened about. Such as the taking over of properties, which would not be the case... They needed to get a lot more information out there early on. They needed to change their strategy. Give information to communities and then improve the designation plan” (R12).

The process might have proceeded with fewer difficulties and less community opposition may have arisen if the proponents had attempted to garner support from the beginning. The overall designation process needed improvements and more information needed to be provided to the community early on in the process. In the early stages of the initiative, the proponents needed to be in the communities informing people about the initiative and biosphere reserves, and discussing anything the public viewed as a threat. Proponents needed to consult on a more personal level with individuals who voiced opposition, and work more directly with communities. Respondents who opposed the initiative stressed that they hoped the proponents had learned that there needs to be greater grassroots planning with communities involved in projects. In the public consultation process more rounds of consultation were needed, and proponents could have held sessions explaining their motives and asking the public for their opinions on the biosphere reserve (R7, R9, R11).

Two board members revealed that around the time of the meeting in Advocate, they received pleas from some community members in Nova Scotia not to move the project out of the province (R1, R15). A respondent suggested that when working with communities for development and stewardship, capacity building takes time; he referred to retailing by saying that: “it takes a lifetime to develop the prestige that you need to sell, and it only takes one year of a bad product to kill it” (R16).

One community member gave the opinion that proponents need to improve the way projects such as biosphere reserve initiatives are presented to local communities (R11). Furthermore, public participation needs to be done on a more personal level and in a way that diminishes the perception of a threat for communities. Projects such as biosphere reserve initiatives are long-term endeavours, and the proponents of the UBoFBI may not have been able to receive community support in the short term. If the possibility of expanding the New Brunswick initiative in the future to include Nova Scotia arises, or if other biosphere reserves are proposed, changes will need to be made to the consultation process.

### **8.6.2 Degree of Community Consultation**

The community consultation process could have benefited from restructuring. Consultation could have occurred on a smaller scale as well. Respondents observed that it only takes a single person to derail a process; consultation sometimes needs to occur on an individual basis. Proponents could have targeted key people who are well respected and addressed smaller groups in the community, who may already have an understanding of the project (R11, R17). It was suggested that proponents should consult with the key individuals or groups, and then gradually expand to bring more people on side. After approaching these individuals or groups, support for the project could be sought from the larger community: “For communities to feel involved they need to work directly with them. And then they should try to get adjacent groups on board” (R8). It was believed that this could help avoid creating a public who feel threatened by the proposal and fearful of potential change. The specific groups and individuals mentioned were municipal leaders, community leaders, local economic development committees in small

towns, and particular groups who have concerns such as the ATV groups and fisheries associations (R8, R11, R17).

Respondents explained that many problems stemmed from the public consultation process. Public consultation needed to start earlier in the biosphere reserve designation process, and needed to increase in scope. More community meetings could have been held, and there should have been increased work at the micro level, talking one-on-one with individuals, especially with those individuals who were the most vocally hostile to the initiative.

One member of the planning committee discussed the observation that some individuals involved with the UBOFBI wanted to push for UNESCO designation and then deal with any community opposition because they reasoned it would be easier to promote the biosphere once there was designation. The respondent contended that the UNESCO process is set up such that biosphere reserve designation can be achieved with only a small degree of community involvement, but argued that biosphere reserves must be designated with a greater degree of public involvement:

“because once you have it then you can do more public marketing because there is something to market. It’s hard to market the potential of something it gets confusing, now I personally really pushed not doing it that way, like I really pushed getting as much grassroots involvement as possible and if that means that it crashes and burns then it’s oh well because you’ve engaged people in a process” (R1).

Two members of the planning committee discussed their opinion that although community consultation is essential for biosphere reserve designation, it is impossible to make every individual in the proposed biosphere reserve aware of the project.

Furthermore, not everyone in the area needs to, or will want to, be involved: “They need to have a core group, they can’t get every nurse, school kid aware of the biosphere reserve” (R17).

### **8.6.3 Finding a Role in the Community**

One complaint was that the initiative did not do an adequate job, as a new group in a community, of determining what other groups were doing, where the need was, and how the initiative could find their niche in the multitude of conservation, tourism, and economic development groups. The proposed biosphere reserve could be seen as another hierarchy or umbrella group, with many different groups already in existence within the proposed biosphere reserve area. One respondent felt that it is unrealistic to try and be an umbrella group from the beginning as the UBoFBI did. It takes years of effort and working together and making contacts before a group of people can serve the function of an umbrella group. The respondent voiced the concern that the proponents of the initiative did not have the mandate to serve as the umbrella group of other groups; furthermore, the proponents were not elected officials and could not speak for the population at large. It was perceived that the proponents also had difficulty showing the public that they were not just another conservation group, and that they were promoting sustainable economics as well.

This opinion is reflected in the viewpoint of several respondents who did not see the biosphere reserve as a need for their community, nor was it perceived that it would bring benefits to the communities. It was felt that interest groups, universities, scholars and those being paid by the initiative would benefit from designation. Respondents

mentioned that their communities had real needs to be met; they needed help with roads and infrastructure, rebuilding barns, and starting food banks. Other projects deemed beneficial to their community were an education centre, and projects designed to keep the youth in rural communities.

#### **8.6.4 Choosing a Spokesperson**

The 'champion' or spokesperson of the project is important to its success according to several members of the planning committee and individuals from the community. This person needs to be well known and respected by the community. Two respondents stated that some people have better skills working with the public and greater communication skills than those leading the project. In this case, during several of the interviews with non-committee members it was mentioned during the interviews that they had a negative impression of the spokesperson in this case. Members of the planning committee also recognized there were weaknesses with the leadership of the initiative.

Community leadership is another important lesson learned concerning working with local communities, it is important to determine and work with community leaders when initiating a project. There was a perception amongst several interview participants that outsiders were coming into their communities telling them how to run their lives. There may have been less hostility if a local champion who was well respected by the community had been involved.

## 8.7 Strengths of the Community Meetings

Community meetings are an approach used by many organizations. The benefits of community meetings according to four respondents are that they are a way to not only involve the public in project planning, but also to encourage dialogue between the proponents and the public, and engage the public in the process of establishing a biosphere reserve. Planning committee members felt that community meetings were a good approach to public participation, allowing for greater involvement in decision-making than newsletters and other similar approaches that provide the community with little more than information:

“the community forums we had everywhere except for in Advocate went really well, that doesn’t mean they were always positive. I mean hard questions got asked, but generally I think they accomplished what they set out to accomplish which was that people got informed about what this was, that they found out how they could participate, that there was an opportunity for them to get their ideas up on a blackboard and articulated in our report. So generally I think that’s a good approach” (R1).

The community response to the community meetings held by the UBoFBI was not entirely negative. There was positive response after community meetings in Nova Scotia as well as in New Brunswick. Several committee members acknowledged that after community meetings they were approached by community members who said that they were glad they had decided to attend the meetings. One individual who was part of the planning committee felt that the UBoFBI had helped encourage a more democratic situation in the communities; he wanted to move away from a situation where only the most vocal individuals voice their opinions:

“With the meetings they did accomplish that others got to see who their neighbors were, who the spokespersons in communities were [those who talked at meetings]

and they could ask ‘Do they speak for me’? They thought they could handle the community as openly as possible” (R15).

## **8.8 Weaknesses of Community Meetings**

### **8.8.1 Available Information at the Community Meetings**

Community members had several complaints regarding the meetings. A common complaint of the various meetings was that people left the meetings without knowing or understanding more about the initiative than when they had arrived. Respondents felt that their questions were never answered; the proponents relied too heavily on acronyms and abbreviations, making it difficult for those people who had never heard of biosphere reserves before to understand the initiative, and at the meetings proponents needed to explain the *pros* and *cons* of a biosphere reserve, examples of where a biosphere reserve was beneficial, and how the community could benefit from this particular project.

Participants mentioned that when they left meetings feeling that their questions had not been answered. They felt frustrated and sensed that information was being kept hidden. One opponent felt that the approach used by the proponents was one of a *fait accomplis*. This opponent felt that everything had been decided and the proponents had come to the community to inform them of this decision rather than to get the community’s opinion on the project. Community members contended that the planning committee did not adequately dispel rumors and incorrect information circulating amongst the public. Misconceptions occurred about what the UBoFBI was trying to do and the planning committee allowed these misconceptions to fester and grow in the community. The committee needed to address these issues as they appeared.

### **8.8.2 Voicing Opinions at the Community Meetings**

Interview responses indicated that there was a sense of fear in the community regarding the voicing of opinions. People did not want to oppose their neighbours and some individuals were afraid to voice their opinions at the community meetings. Some individuals did not feel comfortable speaking at the meetings, they did not want to oppose what others in their community were saying: “Those who knew differently and wanted to learn at the meetings were too scared to speak up” (R11). Furthermore, it was the opinion of one community member that many of the people whose opinions were in the middle of the spectrum of opposition and support were not heard. Individuals who were not in agreement with the opposition, and wanted to learn from the meetings, were too frightened to speak up against their vocal neighbours (R12). From the interview responses it appears that this was largely a problem at the Advocate meeting, however, not wanting to speak against neighbours was an issue not strictly limited to Advocate.

It was the opinion of one community member that in some cases meetings should be held in specific communities and only be open to individuals in those communities. This might result in an increased comfort level for people to voice opinions. With the UBoFBI, this individual contended that a group of people opposed to the biosphere reserve had attended all of the meetings, gathering more opponents in between meetings, ultimately making it difficult for anyone else in attendance to express their thoughts during these meetings. Meetings could have been held specifically for individuals living in Five Islands or Economy, and another meeting for those living in the Advocate Harbour or Apple River area. In this case, this approach could have been beneficial, but

it may also have increased the perception of secrecy some members of the community associated with the project because they were not allowed to attend all meetings.

### **8.8.3 Weaknesses with the Advocate Harbour Meeting**

One of the weaknesses of the community meetings and public consultation process was that the proponents took a long time organizing meetings such as the one in Advocate and were not proactive about dealing with opposition as it arose: “It took two months to organize the Advocate meeting, it should have been held sooner” (R8).

Financial support was also cited as a problem limiting the initiative’s work, especially in Nova Scotia:

“They knew for a year that they needed to go to Advocate, they needed to talk to the fishing people, but they had no funds. They were able to do this in New Brunswick; they had the framework for consultation. In Nova Scotia, they went to talk to a community or council when people invited them. They never set up structured meetings in Nova Scotia” (R8).

Unfortunately, in Advocate a mistake regarding support for the initiative in Nova Scotia was made during the course of the meeting, “At the Advocate Community meeting someone made a mistake and said that Cumberland County supported the Biosphere Reserve. This was wrong, it was Colchester County. They had to later retract the statement” (R8). Mistakes of this sort did not help the committee gain a sense of trust with the opponents, which would have been difficult under any circumstances.

### **8.8.4 Facilitation of Meetings**

The general consensus amongst those interviewed was that improvements could have been made to the manner in which the meetings were facilitated. A number of people mentioned that there were logistical problems with the meetings, and felt there

should have been rules about how the meetings were going to be run. At some of the meetings people were not listening, making it difficult for those in charge to get their points across.

Good communication skills are imperative when working with the public. It was felt that the committee did not always choose the best people to make presentations and facilitate the community meetings. It appeared to some participants that instead of seeing these meetings as a means to get public input, certain people saw it as a way for government or outsiders to take away their land and make decisions for them. The facilitators of the meetings did not or could not dispel these misconceptions.

Fisher and Brown (1988) suggest that there are three barriers to effective communication: assuming there is a need to talk, communicating in one direction or ‘telling’ people what they need to know, and sending mixed messages. Communication means listening as well as talking, and also being consistent with the messages that are being conveyed. However, one respondent expressed the opinion that a public meeting should not be intended to change opinion; the speakers are there to provide information and to answer questions (R16).

### **8.9 Confusion with the Minas Basin Working Group Community Forums**

The Minas Basin Working Group (MBWG) of the Bay of Fundy Ecosystem Partnership (BoFEP) conducted Community Forums in Wolfville, Truro, and Parrsboro in the winter and spring of 2002. The goal of these forums was “to initiate actions toward sustainable management of the natural and human resources of the Minas Basin and its

watershed. They were designed to build on past initiatives by government and non-government organizations, which focused on identifying issues of concern to residents living in the Minas Basin watershed” (Willcocks-Musselman, Orser, Brylinsky, & Hinch, 2003, p.A2). The BOFEP Minas Basin group came along at a similar time as the UBoFBI. At the Minas Basin Community Forums, issues were identified and prioritized and actions plans were developed together with the communities. There were two components: 1) An open house gave participants the opportunity to network and increase public awareness of community groups and other activities in the watershed. 2) The open house was followed by focus groups comprised of small groups discussing issues, together with action planning (Willcocks-Musselman, 2002).

At about the same time that community opposition to the biosphere reserve proposal appeared to be increasing in Nova Scotia, the MBWG held a meeting in Parrsboro that was misunderstood by some to be a Biosphere Reserve meeting. The MBWG had started to endorse the Biosphere Reserve, but there was a lack of coordination between the MBWG and the UBoFBI groups. The two groups became confused in the minds of many individuals. There was some discussion at a certain point to combine the two groups, but it never fully materialized. It was felt by two individuals on the planning committee that in Nova Scotia the MBWG was doing what biosphere reserves propose to do, community watershed management. Their work was seen as a good example of what biosphere reserve could accomplish in the upper Bay of Fundy according to some members of the planning committee.

### **8.10 Community Involvement in the Canadian Biosphere Reserve Context**

Biosphere reserves are taking longer to reach designation in Canada. The initiative for a biosphere reserve for the upper Bay of Fundy is not the first biosphere reserve in Canada to undergo changes, to be cancelled, or be postponed. According to a planning committee member, proposals for new biosphere reserves emerge and disappear and in her estimation at any given time there are ten different proposals for new biosphere reserves in Canada. Furthermore it was felt that eventually the proposal for a reserve in the Upper Bay of Fundy would proceed because of the strength of the proposal. Some respondents saw holding community meetings as an achievement for the biosphere reserve designation process regardless of the outcome:

“the fact that there were community meetings was already quite an accomplishment. The way the Biosphere Reserves develop around the country varies extraordinarily from place to place and sometimes they just get established because a bunch of partners sort of agree. Major stakeholders as it were can kind of agree it will be good to get this UNESCO designation. Let’s go for it and worry about the community involvement later down the line” (R1).

According to two planning committee members, even the most functional of Canadian biosphere reserves, namely Lac Saint Pierre, Charlevoix, Mont St-Hilaire, Niagara, and Thousand Islands, never worked with the communities to the same extent the UBoFBI proponents did. The same is also true of South West Nova Biosphere Reserve, according to a member of the planning committee:

“I actually think that the Fundy Initiative has had and continues to have the potential to really lead, to really be a real leader in Canada for that kind of example of community involvement. Because it was a lot more grassroots than any of the other Biosphere Reserves initiatives in Atlantic Canada a lot more grassroots than South West Nova for example” (R1).

## **8.11 Conclusions**

The initiative for a biosphere reserve in the upper Bay of Fundy earned community and political level support, however it also garnered opposition. The opposition seen in the communities in Northern Nova Scotia likely arose due to several reasons. A perceived lack of community ownership and a sense that people from outside the region were forcing a project on the community, misconceptions regarding the role of government and of the UN in the project, and the influence of information obtained from anti-biosphere reserve websites are among the factors that influenced the opposition. Based on the research, it appears that the initiative could have benefited from a restructured community consultation process that began earlier in the designation process and extended beyond community meetings to include one-on-one discussions with community members, particularly with those individuals who were known to be the most vocally hostile to the initiative. An overview of the research findings from the thesis are presented in Table 8.2 and key conclusions from the study are discussed in Chapter 9.

**Table 8.2: Overview of Research Findings**

<p><u>UBoFBI: Setting, Process, and Outcome:</u></p> <ul style="list-style-type: none"> <li>▪ 30 communities in proposed area (St. Martin's, NB to Wolfville, NS);</li> <li>▪ Community forums, workshops and meetings held in NB &amp; NS;</li> <li>▪ Support received from municipalities, agencies and organizations;</li> <li>▪ Summer 2002 hostile community meeting held in Advocate, NS (Decision to proceed only in NB);</li> <li>▪ Support in NB more institutional, support in NS more grassroots.</li> </ul>
<p><u>IMPORTANT FACTORS IN NOVA SCOTIA:</u></p> <ul style="list-style-type: none"> <li>▪ Antagonism over Cape Chignecto Provincial Park;</li> <li>▪ Minas Basin Project held community forums at a similar time, led to confusion within community.</li> </ul>
<p><u>STRENGTHS OF INITIATIVE:</u></p> <ul style="list-style-type: none"> <li>▪ Investigated Potential for Inter-provincial Biosphere Reserve;</li> <li>▪ Helped build positive relationship between the tourism industry and wildlife/conservation managers;</li> <li>▪ Positive response from CBRA, project was seen as a strong candidate for designation.</li> </ul>
<p><u>WEAKNESSES OF INITIATIVE/LESSONS LEARNED:</u></p> <ul style="list-style-type: none"> <li>▪ Work with a smaller area;</li> <li>▪ Know the history of an area;</li> <li>▪ Increase public consultation;</li> <li>▪ Start consultation earlier in the designation process;</li> <li>▪ Determine and work with community leaders;</li> <li>▪ Improve available information;</li> <li>▪ Make sure people understand project and feel involved, but recognize that understanding will not always lead to support.</li> </ul>

## **CHAPTER 9: Final Discussion and Conclusions**

### **9.1 Introduction**

In this chapter I provide an overview of key conclusions from the study beginning with recommendations for best practices to be used when working with communities to propose new conservation areas or biosphere reserves. Findings regarding why the UBoFBI was not successful in Nova Scotia are summarized. I specifically discuss why the decision needed to be made to consolidate the project in New Brunswick. Finally, suggestions for future research are given.

### **9.2 Working with Communities to Propose New Conservation Areas: Best Practices**

One of the objectives of the research was to use the insights gained from the communities to make recommendations for future conservation projects, particularly biosphere reserves, and to offer insight into the best practices to be used when working with communities to propose new conservation areas. Dolan and Frith (2003) offer the following list of key principles for establishing positive working relationships with communities. Based on my findings, these are relevant for initiatives such as the UBoFBI:

1. Focus efforts on common goals (agree to disagree);
2. Involve those with common interests but different values;
3. Clearly link goals and objectives to common interests and concerns;
4. Start small, grow big, create results;
5. Involve others in your project first before expecting the same courtesy;
6. Understand your communities;
7. Collaborative management should involve all levels in an organization;
8. Ensure the investment has benefits;
9. Minimize doing business within your organization, focus externally.

Proponents can at times aim beyond their capacities, therefore, it appears they should begin working with a small area in the initial stages of a project and then expand once successes have been reached and there is a level of support and comfort for the project in the communities involved.

### **9.2.1 Know Your Community**

In particular it is important to both understand the communities in the area where the biosphere reserve or conservation project is being proposed, and to have a knowledge of the history of an area. A community member stressed that when working with communities one should, “Know where people are coming from” (R14). Another questioned whether the proponents had a solid understanding of the communities when planning for community meetings:

“It was just somebody saying, we’ll have these meetings and get the public input, but that didn’t mean diddlysquat to those people other than here’s somebody here’s coming in to take our land, you know we want to sell it, we want to leave it to our ancestors, the governments going to come in” (R11).

Before initiatives to designate biosphere reserves begin, proponents need to understand the history and culture of the given community, as well as the challenges that may be encountered when trying to gain public support for the idea. Fisher and Ury (1981) of the Harvard Negotiation Project suggest looking at the situation from the other side’s perspective and trying to understand their perceptions of the project, “The ability to see the situation as the other side sees it, as difficult as it may be, is one of the most important skills a negotiator can possess” (p.24). Fisher and Brown (1988) further propose that to build good relationships we need to understand the other side’s interests and perceptions.

### **9.2.2 Community Understanding of a Project**

When working with communities, proponents need to be aware of the level of understanding and involvement the public has with a project or proposal. Understanding will not automatically lead to support. In this case a lack of understanding of the UBoFBI had the result that those leaning towards opposition were frustrated because they did not understand the initiative and would have liked to have been provided with more information on a variety of aspects to do with the initiative itself as well as biosphere reserves in general. This lack of understanding of the initiative influenced the decision of some individuals to oppose the initiative. It became evident from the interviews that the use of language in the communication of the biosphere reserve message sometimes detracted from the public's understanding of the project. Suggestions for communicating a clearer message to the public, based on my research findings, are listed below:

- Use plain language;
- Communicate to the intended audience;
- Be aware of different levels of literacy;
- Use acronyms sparingly;
- Make information readily available and easy to locate.

### **9.3 Exploring Why the Initiative Was Not Successful in Nova Scotia**

The general goal of this study was to explore the reasons why the UBoFBI was not successful in Nova Scotia, and specifically why the decision was made to consolidate the project in New Brunswick. The process of achieving biosphere reserve designation can be difficult, as seen by the hostile response the project proponents encountered in some of the communities in Nova Scotia. When proposing new biosphere reserves, the

biggest lesson to be learned may be to know when to continue and when to walk away. In this particular situation it appears that the proponents eventually made the best decision possible. The community in Nova Scotia was not entirely ready for the biosphere reserve initiative, too much anger over Cape Chignecto Provincial Park existed, and the decision of consulting with the community while also preparing the nomination paperwork backfired. Financial and human resources were stretched thin trying to work with a large area, and many of those involved with the initiative were new to the biosphere reserve concept themselves, and this was apparent at times when consulting with the public.

It was found during the study that the proponents could have done a better job of anticipating opposition; Fisher and Brown (1988) argue “To get good results in a relationship, we need to focus both on the results themselves and on the kind of process that will yield those results” (p.17). At times, it appears it was difficult for the proponents to deal with opposition to the project in a timely fashion with clear arguments and well managed social processes.

### **9.3.1 Why New Brunswick Did Not Experience the Same Degree of Community Opposition?**

As to why the opposition seen in Nova Scotia, had not occurred in New Brunswick, it is possible that the proponents in New Brunswick benefited from places like Fundy National Park, where there has been a good track record of working with communities. There appeared to be more support in New Brunswick (R15). Fundy National Park is also a much older protected area than Cape Chignecto Provincial Park in

Nova Scotia and has greater time to work with the surrounding community and develop relationships.

### **9.3.2 South West Nova Biosphere Reserve**

The issue of Nova Scotia's existing biosphere reserve, the SWNBR, arose during several interviews. Several interesting comparisons can be made between the SWNBR during its proposal stages and the UBoFBI. One comparison to be made between the SWNBR and the UBoFBI is that the proposal for a biosphere reserve in the Southwestern portion of Nova Scotia was initiated several years before activities for biosphere reserve designation began. The initial activity for SWNBR began slowly and cautiously, and academic studies preceded any attempts to approach and consult communities. When community consultation began, it was done initially in a small scale and in a tentative manner. As seen with the UBoFBI, there can be benefits and weaknesses to such an approach. In the case of the UBoFBI, some respondents were suspicious that work on biosphere reserve designation had begun several years before more extensive consultation with communities began, which led in some instances to a sense the proponents were not honest regarding their intentions. On the other hand it was the opinion of certain respondents involved with the initiative that it is necessary to complete a certain degree of the necessary preliminary work to provide the community with more than a vague plan of action.

Once the local SWNBR committee was created it was comprised of individuals with broad interests and representation, including municipal representatives. The composition of the UBoFBI planning committee also consisted of individuals from varied

backgrounds. Cape Chignecto Provincial Park, noted as one of the proposed core areas for the UBoFBI, had a short history of existence when the initiative began. As discussed earlier in the chapter, this was potentially one of the reasons for community opposition to the UBoFBI in Nova Scotia. The biosphere reserve proposal for Southwest Nova Scotia had a National Park as a core area. This may have contributed to the relative receptivity of the local communities to the proposal.

#### **9.4 Public Misunderstandings and Misinformation of Biosphere Reserves**

The idea of a biosphere reserve can be difficult for the general public to fully understand. Biosphere reserves are voluntary in nature. The UN provides international recognition only, but has no authority over the reserve, and does not provide financial support. Each biosphere reserve is different, and yet they all strive to achieve an overarching set of goals and objectives. To understand the concept of a biosphere reserve, the public may need to have a grasp of basic protected areas theory, sustainable development, and realize that the United Nations is made up of nations from around the world making essentially voluntary international agreements. In reality, the United Nations has more limited powers than many people may realize.

Information obtained from the internet influenced the decisions of some individuals to support or oppose the biosphere reserve proposal. This raises the question of why some people chose to accept only the negative information on biosphere reserves, when information is available on other websites that is reputable, accurate, and positive towards biosphere reserves and the UN. Furthermore, it is interesting that some of the community members opposed to the UBoFBI were advocates for education centres and

projects designed to keep youth in rural communities. Two aspects of biosphere reserves are education and keeping people on the land. This suggests they may have misunderstood the biosphere reserve concept, and indicates that the planning committee may have experienced difficulties presenting the concept to the community. The biosphere reserve concept is foreign to many people and a board that was themselves unfamiliar with the concept may have confounded problems explaining it to the general public. It could be advisable to offer a training session on biosphere reserves for those individuals wishing to become involved in the initiative. Proponents of biosphere reserves may also wish to extend this training to members of the communities within proposed biosphere reserves.

#### **9.5 Should the proponents have walked away from the project at an earlier date?**

In this case many factors made it necessary to concentrate efforts in New Brunswick. These factors included community opposition in Nova Scotia and exhaustion amongst volunteers. The proponents might perhaps have spent more time studying the communities in the proposed biosphere reserve areas to determine if they would be amenable to the project. Given that Cape Chignecto Provincial Park had only recently been designated when this initiative began, and it was clear community anger over the Park existed, they should have considered that this opposition would be redirected to the biosphere reserve initiative. At least one individual who was part of the UBoFBI had also been part of park planning discussions suggesting that the members of the board should have been aware that community opposition to the biosphere reserve initiative might arise. With the inter-provincial initiative, the group likely walked away when they should have, momentum existed in New Brunswick to continue the initiative, and the momentum

of those opposed to the project in Nova Scotia appears to have been rising. The research suggests that the proponents could have benefited from concentrating the efforts to designate a biosphere reserve on a smaller area from the beginning.

#### **9.5.1 Strengths of the UBoFBI**

To be commended are the strengths of the initiative. The planning committee worked hard and accomplished much during the UBoFBI's existence. The positive response from CBRA regarding the initiative's strength as a candidate for designation is evidence of the planning committee's efforts. One of the greatest achievements of the planning committee was having a greater community consultation effort than any previous biosphere reserve in Canada. In the past biosphere reserves in Canada were formed with little community consultation.

The initiative also helped build a positive relationship between the tourism industry and wildlife/conservation managers. The meeting held by the UBoFBI in 2001 at Mount Allison University helped facilitate discussion between individuals from these two backgrounds from both New Brunswick and Nova Scotia. Furthermore, the initiative explored the potential of an inter-provincial biosphere reserve in Canada. Working with two provinces has its complications, for instance, the committee found that individuals working on similar projects were often unaware of the efforts of their counterparts in the other province. However, the potential exists for an inter-provincial biosphere reserve in this country.

### **9.5.2 Could the Proponents Have Continued Longer?**

In many ways, the opponents and proponents of the biosphere reserve initiative were not going to come together in the near future and agree on the project. Furthermore, not all communities in Nova Scotia within the proposed area were ready to be part of a UNESCO biosphere reserve. Biosphere reserves are a concept foreign to many people, in rural and urban Canada alike, and unfamiliarity with the concept can lead to uneasiness about initiatives such as the UBoFBI. A biosphere reserve has many potential benefits to an area because they are intended to advocate not only conservation, but also local economic development. Nevertheless, in my opinion what is most important is community support and involvement in work towards conservation and economic development. If other groups such as the MBWG are doing similar work as a biosphere reserve and can garner community support and involvement with their work, then perhaps a biosphere reserve is unnecessary. While the UNESCO name does bring international recognition to an area, and potential visitors, if conservation at the local level is advanced by not being part of a biosphere reserve, then that should be our priority. In the future being part of a biosphere reserve may be possible in Northern Nova Scotia, but at the moment the communities may not be ready for a biosphere reserve, and they may never be ready. Nevertheless, protection of the land and rural communities by some other means remains a desirable goal.

### **9.6 Future Research**

This study suggests several areas of research that could be examined in the future. Of immediate interest would be a comparison of community opposition and support for the UBoFBI between Nova Scotia and New Brunswick. Community support for the

restructured initiative in New Brunswick provides a potential case for studying successful promotion of the biosphere reserve concept.

A study on the role of a leader and leadership in biosphere reserve initiatives would be useful. From both this research, and the literature, it is clear that local champions can be beneficial to the successful outcome of an initiative. In this case there were difficulties with negative community impressions regarding leadership within the UBoFBI.

This study revealed that the existence of Cape Chignecto Provincial Park was influential in the failure of the UBoFBI. As previously discussed, it is a provincial park managed by CREDA and a volunteer Park Management Board. In future research the process used to establish the community management of the Cape Chignecto Provincial Park might be examined. Successes and failures of this structure, and the applicability of this model for other provincial parks in Nova Scotia are important to understand in the context of community stewardship of protected areas.

Research into the context of establishing biosphere reserves should be conducted. In section 9.4, I raised the point that information obtained from the internet influenced the decisions of some individuals to support or oppose the biosphere reserve proposal and that some people chose to accept only the negative information on biosphere reserves. This is a reoccurring problem in the process of establishing biosphere reserve and research into this area would be welcome information for those looking new establish new reserves.

I would particularly like to see a consolidation of material in Canada on the initiatives for designating biosphere reserves across the country and the processes used. During the investigative stage of this study, I quickly discovered that information on initiatives that have not proceeded to designation, and the designation experiences of existing biosphere reserves, is not readily available in Canada. It would be useful to have a database of this information to aid future groups wishing to explore opportunities for their own biosphere reserve. This database could also prove to be meaningful for new staff and volunteers working at biosphere reserves who wish to learn about the issues and concerns raised by communities during the designation process. Individuals involved with Canadian biosphere reserves could take advantage of knowing about success stories and failed attempts to designate biosphere reserves across the country. Students and researchers could benefit from having a well-organized compendium of information available.

## REFERENCES

- Agardy, T. & Broadus, J.M. (1989). Coastal and Marine Biosphere Reserve Nominations in the Acadian Boreal Region: Results of a Cooperative Effort Between the U.S. and Canada. In Gregg, W.P. Jr., Krugman, S.L., & Wood, J.D. Jr. (Eds). Proceedings of the Symposium on Biosphere Reserves, Fourth World Wilderness Congress, September 14-17, 1987, YMCA at the Rockies, Estes Park, Colorado USA. U.S. Department of the Interior, National Park Service: Atlanta, Georgia. Pp.98-105.
- Amlalo, D.S., Atsiatorme, L.D., & Fiati, C. (1998). Biodiversity Conservation: Traditional Knowledge and Modern Concepts. Proceedings of the Third UNESCO MAB Regional Seminar on Biosphere Reserves for Biodiversity Conservation and Sustainable Development in Anglophone Africa (BRAAF). EPA: Cape Coast.
- Anonymous. (2000 December 23). Bay of Fundy biosphere. The Citizen, p.7.
- Arnstein, S.R. (1969). A Ladder of Citizen Participation. Journal of the American Institute of Planners, 35: 216-224.
- Batisse, M. (1982). The Biosphere Reserve: A Tool for Environmental Conservation and Management. Environmental Conservation, 9(2): 101-111.
- Batisse, M. (1986). Developing and focusing the biosphere reserve concept. Nature and Resources, XXII (3): 2-11.
- Batisse, M. (1990). Development and Implementation of the Biosphere Reserve Concept and Its Applicability to Coastal Regions. Environmental Conservation, 17(2): 111-116.
- Batisse, M. (1997). Biosphere Reserves: A Challenge for Biodiversity Conservaton & Regional Development. Environment, 39(5): 6-18.
- Bay of Fundy Ecosystem Partnership. (2001). Fundy's Minas Basin. Fundy Issues, 19: 12 pp.
- Beanlands, K.M. (1994). Linking Parks, Reserves and People: Opportunities for Community Partnerships and Public Consultations at the Provincial Level. St. John's, NF: Parks Division, Department of Tourism, Culture and Recreation, Government of Newfoundland and Labrador.
- Bioret, F, Cibien, C, Génot, J.C., & Lecompte, J. (1998). A Guide to Biosphere Reserve Management: a Methodology Applied to French Biosphere Reserves. MAB Digest, 19. UNESCO, Paris.

- Boddy, D. Bias Fear or Biosphere: The Proposed Bay of Fundy Biosphere Reserve. <prfamerica.org/BiasFear.html> (cited 12 January 2004)
- Brody, S.D. (1998). An Evaluation of the Establishment Processes for Marine Protected Areas in the Gulf of Maine: Understanding the Role of Community Involvement and Public Participation. A Gulf of Maine Marine Protected Areas Project, Report #3.
- CBRA. (2002). Canadian Biosphere Reserves. Les réserves de la biosphère du Canada. Pp.4.
- Caldecott, J. (1992). Enhancing Cooperation Between Local People and Protected Area Projects: Principles and Practices. Honolulu, Hawaii: Environment and Policy Institute.
- Cocklin, C., Craw, M., & McAuley, I. (1998). Marine Reserves in New Zealand: Use Rights, Public Attitudes, and Social Impacts. Coastal Management, 26: 213-231.
- Crespo de Nogueira, E., & Flores, C.M. (2003). Aesthetic Values and Protected Areas: A Story of Symbol Preservation. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.115-128). Lanham: Rowman & Littlefield Publishers, Inc.
- DeLong, J. (2002, June). The Upper Bay of Fundy Initiative: A visionary approach to protecting what's unique. <<http://www.theatlanticco-operator.coop/web/article-index/regional/region-june02f.htm>> (cited 6 July 2004).
- Dyer, M.I., & Holland, M.M. The Biosphere Reserve Concept: Needs for a Network Design. Bioscience, 41(5): 319-325.
- Dzoboku, E.P.K. (1998). Biosphere Reservation – Experiences and Lessons from Latin America and Europe. In Amlalo, D.S., Atsiatorme, L.D., & Fiati, C. (Eds). Biodiversity Conservation: Traditional Knowledge and Modern Concepts. Proceedings of the Third UNESCO MAB Regional Seminar on Biosphere Reserves for Biodiversity Conservation and Sustainable Development in Anglophone Africa (BRAAF). EPA: Cape Coast.
- Eagles, P.F.J., McLean, D., & Stabler, M.J. (2000). Estimating the Tourism Volume and Value in Parks and Protected Areas in Canada and the USA. The George Wright Forum, 17(3): 63-76.
- Endter-Wada, J., Blahna, D., Krannich, R., & Brunson, M. (1998). A Framework for Understanding Social Science Contributions to Ecosystem Management. Ecological Applications, 8(3): 891-904.

- English, A.J., & Lee, E. (2003). Managing the Intangible. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.43-55). Lanham: Rowman & Littlefield Publishers, Inc.
- Francis, G. & Munro, N. (1994). A Biosphere Reserve for Atlantic Coastal Plain Flora, South- Western Nova Scotia. Biological Conservation, 68: 275-279.
- Goodwin, P. (1998). 'Hired Hands' or 'Local Voice': Understandings and Experience of Local Participation in Conservation. Transactions of the Institute of British Geographers, 23(4): 481-499.
- Gregg, W.P., Jr. (1991). MAB Biosphere Reserves and Conservation of Traditional Land Use Systems. In M.L. Oldfield, & J.B. Alcorn (Eds), Biodiversity: Culture, Conservation, and Ecodevelopment. Boulder, Colorado: Westview Press.
- Gubbay, S., & Welton, S. (1995). The voluntary approach to conservation to marine areas. In S. Gubbay (Ed.), Marine Protected Areas: Principles and Techniques for Management (pp.199 - 227). London: Chapman & Hall.
- Hales, D.F. (1991). The Pinelands National Reserve: An Approach to Cooperative Conservation. In P.C. West, & S.R. Brechin (Eds), Resident Peoples and National Parks: Social Dilemmas and Strategies in International Conservation. Tucson, Arizona: The University of Arizona Press.
- Harmon, D. (2003). The Source and Significance of Values in Protected Areas. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.13-26). Lanham: Rowman & Littlefield Publishers, Inc.
- Holliday, A. (2002). Doing and Writing Qualitative Research. London: SAGE Publications.
- Joint Action Group. (2002). Public Participation Plan: Involving the community in cleanup options for the Tar Ponds and Coke Ovens. (Unpublished document prepared by the author).
- Halifax Regional Municipality. (2002). Healthy Growth for HRM: "A Regional Plan for the next 25 years of growth". (Unpublished document prepared by the author).
- Kaus, A. (1992). Common Ground: Ranchers and Researchers in the Mapimí Biosphere Reserve. Doctor of Philosophy in Anthropology thesis, University of California, Riverside.
- Kelleher, G. (1999). Guidelines for Marine Protected Areas. Best Practice Protected Area Guidelines Series No. 3. Gland, Switzerland, IUCN.
- Kellert, S.R. (1986). Public Understanding and Appreciation of the Biosphere Reserve Concept. Environmental Conservation, 13(2): 101-105.

- Kelsey, E., Nightingale, J., & Solin, M. (1995). The Role of Partnerships in Implementing a New Marine Protected Area: A Case Study of Whytecliff Park. In N.L. Shackell and J.H.M. Willison (Eds.), Marine Protected Areas and Sustainable Fisheries (pp. 235-239). Wolfville, NS, Canada: Science and Management of Protected Areas Association.
- Lasserre, P., & Hadley, M. (1997). Biosphere Reserves: A Network for Biodiversity [Man & the Biosphere Taskforce & the Seville Strategy]. Ecodecision, 23: p.34.
- Macgregor, J. (2002 April 17). Neighbours cry foul over bid to protect Fundy. The Chronicle-Herald, p.A7
- McCoag, T. (2002 May 8). Majority oppose plan to protect Fundy area. The Chronicle-Herald, p.A5
- Marshall, N., & Roberts, R. (1997). Praxis Papers: Theory into Action; That Thing Called Public Involvement. Plan Canada the Journal of the Canadian Institute of Planners 37(3): 1-5.
- McCoag, T. (2000 December 17). Bay of Fundy: Biosphere reserve?; UNESCO designation would preserve balance of marine environment, group says. The Sunday Herald, p. A4.
- Miller, C.A., Ravindra, M.M., & Willison, J.H.M. (1999). Towards a Scotian Coastal Plain Biosphere Reserve for Southwestern Nova Scotia. Proceedings of the 1997 Conference of the Canadian Council on Ecological Areas. Fredericton, NB.
- Meeuwig, J.J. (1993). The Role of Coastal Provincial Parks in Facilitating Coastal Zone Management in Nova Scotia. Masters of Environmental Studies, SRES, Dalhousie University. Halifax, NS.
- Moote, A.M., McClaren, M.P., & Chickering, D.K. (1997). Theory in Practice: Applying Participatory Democracy Theory to Public Land Planning. Environmental Management, 21(6): 877-889.
- Parenteau, R. (1988). Public Participation in Environmental Decision-Making. Federal Environmental Assessment Review Office. Minister of Supply and Services Canada. 71pp.
- Parks Canada. Tentative List of World Heritage Sites. <[http://www.pc.gc.ca/progs/spm-whs/itm3-/page4\\_e.asp](http://www.pc.gc.ca/progs/spm-whs/itm3-/page4_e.asp)> (Cited April 19, 2005).
- Pathak, N., & Kothari, A. (2003). Community-Conserved Biodiverse Areas: Lessons from South Asia. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.211-226). Lanham: Rowman & Littlefield Publishers, Inc.

- Praxis Canada website. <[www.praxis.ca](http://www.praxis.ca)> (accessed 26 April 2003).
- Praxis. (1988). Manual on Public Involvement in Environmental Assessment: Planning and Implementing Programs. Hull, Quebec: Federal Environmental Assessment Office.
- Putney, A.D. (2003). Introduction: Perspectives on the Values of Protected Areas. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.3-12). Lanham: Rowman & Littlefield Publishers, Inc.
- Putney, A.D., & Harmon, D. (2003). Intangible Values and Protected Areas: Toward a More Holistic Approach to Management. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible. Lanham: Rowman & Littlefield Publishers, Inc.
- Ravindra, M. (1998). It Could Work! Applying the UNESCO Biosphere Reserve Concept in Southwestern Nova Scotia: A Preliminary Feasibility Assessment. Masters of Environmental Studies thesis, York University, North York.
- Ravindra, M. (2003a). Building the Bay of Fundy Biosphere Reserve: Comparative Analysis. Unpublished document, Report prepared for BOFTP report to the Atlantic Canada Opportunities Agency (ACOA)
- Ravindra, M. (2003b). Bay of Fundy Biosphere Reserve Initiative: Annex to Biosphere Reserve Report. Unpublished document.
- Rierden, A. (2001). A Community's Gift to the Gulf of Maine. The Gulf of Maine Times, 5(4).
- Roberts, R. (1999). Kananaskis Country Recreation Development Policy Review: A Consultation for All Albertans. <[www.praxis.ca](http://www.praxis.ca)> (cited 26 April 2003).
- Roberts, R. Public Involvement in Environmental Impact Assessment: Moving to a "new think". <[www.praxis.ca](http://www.praxis.ca)> (cited 26 April 2003).
- Roberts, R. Public Involvement: From Consultation to Participation. <[www.praxis.ca](http://www.praxis.ca)> (cited 26 April 2003).
- Roberts, R., & Marshall, N. (1996). Stakeholder Consultation: Only One Component of Public Involvement. <[www.praxis.ca](http://www.praxis.ca)> (cited 26 April 2003).
- Robinson, R. (2002). Humans, Hiking, Heritage, and History. Coastal Communities News Magazine, 7(5). <[www.coastalcommunities.ns.ca/v7\\_is5.html](http://www.coastalcommunities.ns.ca/v7_is5.html)> (cited 6 May 2004).

- Rolston III, H. (2003). Life and the Nature of Life – in Parks. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.103-114). Lanham: Rowman & Littlefield Publishers, Inc.
- Ross, S., & Deveau, A. (1992). The Acadians of Nova Scotia Past and Present. Halifax, NS: Nimbus Publishing.
- Salm, R., & Price, A. (1995). Selection of marine protected areas. In S. Gubbay (Ed.), Marine Protected Areas: Principles and Techniques for Management (pp. 15- 31). London: Chapman & Hall.
- Schaaf, T. (2003). Biosphere Reserves: Tangible and Intangible Values. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.185-196). Lanham: Rowman & Littlefield Publishers, Inc.
- Seidman, I. (1998). Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences, 2<sup>nd</sup> Edition. New York, New York: Teachers College Press, Columbia University.
- Sian, S. (2000). The Quest for Functional Sustainability in Canadian Biosphere Reserves: A Process Companion. Masters of Environmental Design thesis, University of Calgary, Calgary.
- Smith, P.D., & McDonough, M.H. (2000). Beyond Public Participation: Fairness in Natural Resource Decision Making. Society and Natural Resources, 14: 239-249.
- Spicer, S.T. (1984). Sails of Fundy: The Schooners and Square-riggers of the Parrsboro Shore. Hantsport, NS: Lancelot Press.
- Spicer, S.T. (1993). Maritimers Ashore & Afloat: Interesting People, Places and Events Related to the Bay of Fundy and its Rivers, Volume 1. Hantsport, NS: Lancelot Press.
- Sinclair, A.J., Diduck, A., Morris-Oswald, T., & Olczyk, M. (2003). Public Involvement in Flood Management in the Red River Basin: An Assessment of a Recent Initiative. Canadian Water Resources Journal, 28(3): 461-480.
- Statistics Canada. (1999). Profile of Census Divisions and Subdivision in Nova Scotia. Ottawa: Minister of Industry.
- Sullivan, T. (2001). Methods of Social Research. Florida: Harcourt.
- Tanz, J.S., & Howard, A.F. (1991). Meaningful public participation in the planning and management of publicly owned forests. The Forestry Chronicle, 67(2), 125-130.

- Tranel, M.J., & Hall, A. (2003). Parks as Battlegrounds: Managing Conflicting Values. In D. Harmon, & A.D. Putney (Eds), The Full Value of Parks: From Economics to the Intangible (pp.253-267). Lanham: Rowman & Littlefield Publishers, Inc.
- Wells, M., & Brandon, K. (1992). People and Parks: Linking Protected Area Management with Local Communities. Washington, D.C.: The World Bank, The World Wildlife Fund, and the U.S. Agency for International Development.
- Wells, S., & White, A.T. (1995). Involving the community. In S. Gubbay (Ed.), Marine Protected Areas: Principles and Techniques for Management (pp. 61- 84). London: Chapman & Hall.
- West, P.C., & Brechin, S.R. (1991). National Parks, Protected Areas, and Resident Peoples: A Comparative Assessment and Integration. In P.C. West, & S.R. Brechin (Eds), Resident Peoples and National Parks: Social Dilemmas and Strategies in International Conservation. Tucson, Arizona: The University of Arizona Press.
- Willcocks-Musselman, R. (2002). Planning Environmental Action in the Minas Basin and its Watershed: A Summary of the Minas Basin Community Forums Wolfville, Truro and Parrsboro, NS, 2002. (Unpublished document prepared for the Minas Basin Working Group of the Bay of Fundy Ecosystem Partnership).
- Willcocks-Musselman, R., Orser, J., Brylinsky, M., & Hinch, P.R. (2003). Planning for Action in the Minas Basin Watershed. Bay of Fundy Ecosystem Partnership Technical Report #1. Wolfville, NS: Bay of Fundy Ecosystem Partnership, Acadia University. Pp. 116.
- Willcocks-Musselman, R., Orser, J., Brylinsky, M., & Hinch, P.R. (2003). Planning for Action in the Minas Basin Watershed. Bay of Fundy Ecosystem Partnership Technical Report #2. Wolfville, NS: Bay of Fundy Ecosystem Partnership, Acadia University. Pp. 160.
- Women's Institute. (1969). The Story of Five Islands, Colchester County, Nova Scotia. Sackville, NB: The Tribune Press Limited.
- UNESCO CANADA/MAP. Submission Procedures for Candidate Biosphere Reserves in Canada. <[http://www.eman-rese.ca/partners/mab/reports/report\\_10.html](http://www.eman-rese.ca/partners/mab/reports/report_10.html)> (cited 14 June 2004).
- UNESCO/MAB. (2002). Guiding Principles for Projects on Biosphere Reserves. <<http://www.unesco.org/mab/publications/document.htm>> (cited 14 June 2004).
- Upper Bay of Fundy Biosphere Initiative Newsletter. (2002a). 4pp.
- Upper Bay of Fundy Biosphere Initiative Newsletter. (2002b). 4pp.

## APPENDIX A: Research Instruments

### Letter of Introduction

[On School for Resource and Environmental Studies Letterhead]

Date

Dear Community Member,

My name is Caroline Canning, a graduate student at the School for Resource and Environmental Studies at Dalhousie University in Halifax. I am conducting research for my master thesis on conservation and local communities. I would like to invite you to participate in my research study.

The general goal of this study is to learn more about the now terminated Upper Bay of Fundy Biosphere Reserve Initiative in Nova Scotia and why this initiative was not successful. The study also explores means of building relationships and methods of better including local communities in conservation projects and proposals. This is an independent study, not funded by government.

I am looking for individuals to participate in interviews for my research. I came across your name on a list of participants in the Fundy Biosphere Initiative focus group at the Minas Basin Community Forum that took place in Parrsboro in April of 2002. I am hoping to interview individuals with a variety of viewpoints on the Biosphere Reserve Initiative, and I am hoping you will agree to be interviewed. The interviews will be approximately one hour in length and can take place at a location and time that is most convenient for you. I will also ask for your permission to audio-tape the interviews. I have included a copy of my consent form that further explains the focus of my research and outlines what you will be asked to do during the interview. I will be making several visits to Cumberland County throughout the next couple months, and I hope that you will be willing to participate in one of the interviews.

Should you have any questions, or if you agree to participate in an interview, I can be reached by email at [canningc@dal.ca](mailto:canningc@dal.ca). If you prefer to contact me by mail, I have included a return envelope for you to mail back to me indicating you would agree to be interviewed. All comments and questions will be welcome as your participation in this study is greatly valued. Thank you very much!

Caroline Canning  
Masters of Environmental Studies Candidate

## **Consent Form**

[On School for Resource and Environmental Studies Letterhead]

**Title** – Conservation and Local Communities:  
Exploring the Upper Bay of Fundy Biosphere Reserve Initiative in Nova Scotia

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### **Introduction -**

Hello, my name is Caroline Canning. I would like to invite you to take part in a research study that I am conducting as part of my Masters thesis at Dalhousie University. Taking part in this study is voluntary and you may decide to withdraw from the study at any time. I have explained the purpose and objectives of the study below. This description tells you about what you will be asked to do, and any risk, inconvenience, or discomfort which you might experience. Participating in the study might not benefit you, but we might learn things that will benefit others. Please discuss any questions you have about this study with me.

### **Purpose of the Study –**

The general goal of this study is to explore the reasons why the Upper Bay of Fundy Biosphere Initiative was not successful in Nova Scotia. Further I would like to explore means of building relationships and methods of better including local communities in conservation projects and proposals.

### **Study Design –**

The thesis will be based on a literature review and fieldwork, which includes focused interviews and archival research.

### **Who can Participate in the Study –**

You may participate in this study if you are 18 years and over and

- a) were part of the planning committee for the Upper Bay of Fundy Biosphere Initiative, or;
- b) live in the area of the Apple River – Joggins, or Advocate – Economy shorelines in Nova Scotia’s Cumberland County, or;
- c) work in the above mentioned areas.

### **Who will be Conducting the Research –**

The principal investigator in this research will myself, Caroline Canning, a Masters student in the School for Resource and Environmental Studies at Dalhousie University in Halifax, Nova Scotia.

### **What you will be asked to do –**

You will be asked to participate in a face-to-face interview with the principal investigator, Caroline Canning, which should take approximately 40 –60 minutes to complete. You may also be asked to participate in a follow-up interview.

### **Possible Risks and Discomforts –**

There should not be any adverse risks or discomforts as a result of your participation in this study. It may be an inconvenience for you because it will require time to complete the interview. Uncomfortable or unpleasant memories about the Biosphere Reserve Initiative may also be brought up in the interviews.

**Possible Benefits** –

Participating in the study might not benefit you, but we might learn things that will benefit others. Your participation in this study may contribute to knowledge, and might help other communities take part in a more useful participation process.

**Confidentiality** –

Your participation in this study is voluntary. You are free to refuse to answer any question at any time. Fictitious names will be used in all written reports and oral presentations of this research. All information I obtain from you will remain confidential unless you agree to waive confidentiality and will remain in my possession. Dalhousie University policy requires that data be stored secularly by the University for 5 years post publication. All data will be stored in a locked box at my home. The only people with access to the data will be myself and the members of my thesis committee.

**New Information** –

If any new information, which may affect your decision to participate, becomes available, you will be provided with this new information.

**Problems or Concerns** –

In the event that you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact Human Research Ethics/Integrity Coordinator at Dalhousie University's Office of Human Research Ethics and Integrity for assistance: ph. (902) 494-1462, email: [patricia.lindley@dal.ca](mailto:patricia.lindley@dal.ca)

**Signature**

*I have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I hereby consent to take part in this study. However I realize that my participation is voluntary and that I am free to withdraw from the study at any time.*

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher Signature

\_\_\_\_\_  
Date

*I agree to waive confidentiality and agree to be identified in the body of the report:*

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher Signature

\_\_\_\_\_  
Date

*I agree that direct quotes may be used in the final report, in other words quotes may be attributed to a specific individual rather than a pseudonym (Person A, Person B, etc.):*

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher Signature

\_\_\_\_\_  
Date

*I agree that the audio-recording may be used during the interview:*

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher Signature

\_\_\_\_\_  
Date

*I agree that I may be re-contacted for future participation in this or other research:*

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher Signature

\_\_\_\_\_  
Date

## **APPENDIX B: Sample Interview Questions**

### **Background Information on Participants**

Residency: In which community do you live and how long have you lived there?

Occupation: What is your principal occupation and how many years have you worked in this occupation?

Education: What is your highest level of education?

Age: What is your date of birth? (Or approximate age)

### **Biosphere Reserve Questions: Overview**

Could you describe your involvement with the biosphere reserve proposal?

How do you feel about a proposal for a biosphere reserve in the upper Bay of Fundy?

How do you think a Biosphere Reserve would affect you/your occupation?

Do you believe a biosphere reserve could help raise environmental awareness in these rural areas of Nova Scotia and New Brunswick?

What do you see as the major environmental problems or concerns within your community?

What are some of the socio-economic, and environmental issues you would like to see better addressed by conservation areas such as Biosphere Reserves?

What do you personally see as the strengths and weaknesses of Biosphere Reserves?

What do you see as the biggest obstacles to community development in this area of Nova Scotia?

Do you believe a Biosphere Reserve would have positive or negative impacts for local community development?

How would you feel about the establishment of additional protected areas in your vicinity?

Would you be in favour of an expanded conservation area or protected area in your vicinity if it did not fall under a UN program?

### **Public Participation and Community Meetings**

If you attended any of the community meetings for the biosphere reserve, please explain your impressions of the meeting(s), particularly how they were run, the answering of questions, available information?

What were your overall impressions of the community meetings and were they able to achieve in general what you hoped they would? Do you think improvements could have been made to the meetings?

What do you see as the role for local people in the management and planning process for Biosphere Reserves?

Do you believe community forums are the best method of engaging the public in the process of establishing a Biosphere Reserve? What are the best mechanisms for facilitating the involvement of local people?

Looking back is there anything you think could have done differently in terms of dealing with the communities?

**Is there anything else you believe I should know?**

## APPENDIX C: The UBoFBI Planning Committee

### Co-chairs:

Paul Bogaard (Tantramar Heritage Foundation; Cape Jourimain Nature Centre)

Jo Ann Fewer (Colchester Regional Development Agency)

### Members:

Bertholet Charron (Société du Monument Lefebvre)

Peter Etheridge (Fundy Model Forest)

Karen Kittilsen-Grant (Hants Regional Development Association)

Colin Mackinnon (Canadian Wildlife Service)

Anita MacLellan (West Colchester Development Association)

Ron Robinson (Cumberland Regional Development Association)

Brad Walters (Mount Allison University)

Renee Wissink (Parks Canada)

### Resource Team:

Tom Young (Project Coordinator)

Munju Ravindra (Nomination Coordinator)

Sandy Burnett (Communications Advisor)

**APPENDIX D: Submission Procedures for Candidate Biosphere Reserves in  
Canada**

[From UNESCO/MAB (2002)]

**APPLICATION FOR RECOGNITION OF A CANADIAN BIOSPHERE  
RESERVE WITHIN THE UNESCO PROGRAM ON MAN AND THE  
BIOSPHERE**

NAME:

GEOGRAPHICAL LOCATION: (giving coordinates of latitude and longitude;  
description of location in relation to major towns, rivers mountain ranges, boundaries of  
administrative units, a map).

ALTITUDE: (range in meters above sea level).

AREA: (in hectares).

CATEGORY: (natural area, harmonious landscapes, degraded ecosystem, combination).

LEGAL PROTECTION: (including activities allowed or prohibited by (law).

LAND TENURE: (ownership by central government, local government, private, etc.)

PHYSICAL FEATURES: (brief description, including representative and /or unique  
features).

VEGETATION: (brief description, including representative and/or unique features).

NOTEWORTHY FAUNA: (brief description, including representative and/or unique  
features).

ZONING: (delimitation of core areas, buffer areas, or other zoning).

MODIFICATION BY MAN: (major alterations of ecosystems from a “natural” condition: human population; man-made structures, tourism, and other impacts).

PRESENT LAND USE: (reserve, agriculture, forestry, etc. compatibility or conflict with purpose of site).

SCIENTIFIC RESEARCH POTENTIAL: (brief description of past, present or proposed research in the area, special problems which require information from research, potential role of the area in an international research programme).

FACILITIES: (laboratories, library, living quarters, major equipment located on the site or nearby, other facilities which might aid logistics or research; ease of access to the area).

PRINCIPAL REFERENCE MATERIAL: (most useful literature of scientific and general nature).

PURPOSE: (objectives for the site, procedures to reach objectives, master plan).

STAFF: (personnel assigned to protection, maintenance, education, research, etc.).

BUDGET: (funds available each year for protection, maintenance, research, etc.).

ADDRESS OF LOCAL ADMINISTRATION:

**APPENDIX E: UBoFBI Community Meetings Held in 2000 and 2001**

[Adapted from Ravindra, 2003]

<b>Month and Year of Meeting</b>	<b>Meeting and Description</b>
May 2000	<ul style="list-style-type: none"> <li>• Preliminary consultation with stakeholder groups and agencies.</li> </ul>
January 2001	<ul style="list-style-type: none"> <li>• Presentation to the annual general meeting of the Central Nova Tourism Association (CNTA).</li> <li>• Association makes formal motion of support.</li> </ul>
February 2001	<ul style="list-style-type: none"> <li>• Albert County Public Meeting in Riverside Albert, NB.</li> <li>• Attended by 30-40 people from Alma, Riverside Albert, Hopewell, and Hillsborough.</li> <li>• Mixed views, generally supportive.</li> </ul>
March 2001	<ul style="list-style-type: none"> <li>• Kings County tourism committee</li> </ul>
April 2001	<ul style="list-style-type: none"> <li>• Information session with the Joggins World Heritage (JWH) Site Committee, Joggins, NS.</li> </ul>
April 2001	<ul style="list-style-type: none"> <li>• Meeting with Mount Allison University (Geography Department), Sackville, NB, to talk about potential partnerships and endorsement possibilities.</li> </ul>
April 2001	<ul style="list-style-type: none"> <li>• Advocate and Area Development Association, Advocate Harbour, NS.</li> <li>• Discussions included benefits of the biosphere reserve and possible restrictions on land-use.</li> </ul>
April 2001	<ul style="list-style-type: none"> <li>• Colchester County Regional</li> </ul>

	Development Association board meeting, Truro, NS.
April 2001	<ul style="list-style-type: none"> <li>• Information session with the Parrsboro Board of Trade, Parrsboro, NS.</li> </ul>
May 2001	<ul style="list-style-type: none"> <li>• Meeting with the CWS and the BOFTP in Sackville, NS.</li> <li>• Discussed issues and conflicts between the two interests.</li> </ul>
May 2001	<ul style="list-style-type: none"> <li>• Dorchester Municipal Council, Dorchester, NB.</li> <li>• Support and interest expressed by the council.</li> </ul>
May 2001	<ul style="list-style-type: none"> <li>• Sackville Town Council, Sackville, NB</li> <li>• Letter of support received from council.</li> </ul>
May 2001	<ul style="list-style-type: none"> <li>• Meeting with representatives from Windsor, Hantsport, and West Hants County, in Windsor, NS.</li> <li>• Interest and support expressed by those in attendance.</li> </ul>
May 2001	<ul style="list-style-type: none"> <li>• Minas Basin regional meeting, Stewiack, NS.</li> <li>• Regional coordinating group formed as a result of this meeting.</li> </ul>
May 2001	<ul style="list-style-type: none"> <li>• Chignecto Bay regional meeting, Memramcook, NB.</li> </ul>
May 2001	<ul style="list-style-type: none"> <li>• CWS meeting, Sackville, NB</li> <li>• Discussed potential tourism/habitat workshop.</li> </ul>
June 2001	<ul style="list-style-type: none"> <li>• Nova Scotia Federation of Naturalists AGM, Lunenburg, NS.</li> </ul>

June 2001	<ul style="list-style-type: none"> <li>• Minas Basin Coordinating Committee, Windsor, NS.</li> <li>• Follow-up to information session.</li> </ul>
June 2001	<ul style="list-style-type: none"> <li>• Chignecto Bay regional meeting, Sackville, NB.</li> <li>• Follow-up to information session.</li> </ul>
July 2001	<ul style="list-style-type: none"> <li>• Chignecto Bay meeting, Sackville, NB.</li> <li>• Third meeting with group.</li> </ul>
July 2001	<ul style="list-style-type: none"> <li>• Minas Basin coordinating committee, Truro, NS.</li> <li>• Suggested local coordinator be hired under</li> </ul>
August 2001	<ul style="list-style-type: none"> <li>• Joint Planning Session, Mount Allison University, Sackville, NB.</li> <li>• “Full day vision workshop with representatives of both regional discussion/coordinating groups (Minas Basin and Chignecto Bay)” (p.8).</li> </ul>
September 2001	<ul style="list-style-type: none"> <li>• Meeting at the Rural and Small Towns Institute of Mount Allison University, Sackville, NB, to discuss potential partnership with the biosphere reserve.</li> </ul>
October 2001	<ul style="list-style-type: none"> <li>• Meeting with the executive of the Minas Basin Pulp and Power, Hantsport, NS.</li> <li>• Discussed possible partnership.</li> </ul>
October 2001	<ul style="list-style-type: none"> <li>• Wildlife/tourism workshop, Mount Allison University, Sackville, NB.</li> </ul>
October 2001	<ul style="list-style-type: none"> <li>• Meeting with Alma Council, Alma, NB</li> </ul>
October 2001	<ul style="list-style-type: none"> <li>• Meeting with mayor of Riverside/Albert, NB and chair of local</li> </ul>

	soil and crop association.
November 2001	<ul style="list-style-type: none"> <li>• Minister of Natural Resources and staff in Halifax, NS.</li> <li>• Discussions included possibility of provincial parks being core areas.</li> </ul>
November 2001	<ul style="list-style-type: none"> <li>• Meeting with BoFEP Minas Basin Working Group, Wolfville, NS to discuss cooperation with group.</li> </ul>
November 2001	<ul style="list-style-type: none"> <li>• Meeting with St. Martins Village Council, St. Martins, NB.</li> <li>• Council agreed to provide letter of support.</li> </ul>
December 2001	<ul style="list-style-type: none"> <li>• Presentation made to the management committee of the Fundy Model Forest, Sussex, NB.</li> <li>• Agreement to provide letter of support.</li> </ul>
December 2001	<ul style="list-style-type: none"> <li>• Presentation and discussion with the Dieppe Council/health community, Dieppe, NB.</li> </ul>
December 2001	<ul style="list-style-type: none"> <li>• Parrsboro Public Meeting, Parrsboro, NS.</li> <li>• Information session for residents and municipal representatives.</li> </ul>
December 2001	<ul style="list-style-type: none"> <li>• BoFEP Minas Basin Working Group meeting, Wolfville, NS.</li> <li>• “Meeting between representatives (6) of the planning committee and the Minas Basin group – discussion on the relationship between the BoFEP Minas Basin project and the Biosphere</li> </ul>

	Reserve. General agreement that the Minas Basin project is the biosphere reserve in action. Two groups will work cooperatively” (p.11).
December 2001	<ul style="list-style-type: none"> <li>• CORDA public meeting, Truro, NS.</li> </ul>
December 2001	<ul style="list-style-type: none"> <li>• Alma public meeting, Alma recreation centre, Alma, NB.</li> <li>• Eight to ten people in attendance</li> </ul>
December 2001	<ul style="list-style-type: none"> <li>• Presentation to ecological integrity workshop, Alma, NB.</li> <li>• Information session for park staff and residents of Alma area.</li> <li>• Twenty to thirty people in attendance.</li> </ul>
December 2001	<ul style="list-style-type: none"> <li>• BoFEP meeting, Wolfville, NS.</li> <li>• Agreement by BoFEP to endorse project and have planning committee as a partner.</li> </ul>

## **APPENDIX F: Articles And Opinion Pieces on the UBoFBI**

McCoag, T. (2000 December 17). Bay of Fundy: Biosphere reserve?; UNESCO designation would preserve balance of marine environment, group says. The Sunday Herald, p. A4.

Parrsboro – The Bay of Fundy is widely known for its high tide, scenic coastal views and the natural resources that have sustained generations of Maritimers.

Now the Bay of Fundy Ecosystem Partnership and the Bay of Fundy Product Club want to spread its fame further by having the United Nations Educational, Scientific and Cultural Organization declare it a biosphere reserve.

It would be the first reserve of its kind in Atlantic Canada, the first to span two provinces and the first to focus on the marine environment.

“Biosphere reserves are areas that promote and demonstrate a healthy, balanced relationship between humans and nature,” project co-ordinator Tom Young of Parrsboro said.

“They are areas in which communities, resource users, businesses, ecologists, government and others work together to foster economic sustainability, conservation of nature and integrated management of natural resources.”

He said UNESCO recognition would designate the area “a special place on the globe” and attract respect form scholars, travelers, conservationists, investors and economic developers from around the world.

The partnership involves science-based organizations including Environment Canada, Fisheries and Oceans Canada, the New Brunswick and Nova Scotia natural resources departments and area universities.

The product club provides marketing support to Nova Scotia and New Brunswick tourism operators in partnership with the provinces’ tourism departments and the Atlantic Canada Opportunities Agency.

They have been working on the project for more than a year.

To be recognized by UNESCO, an application must show the area has significant natural areas that are protected by law and natural resources suitable for sustainable economic activity.

It must also demonstrate strong community support and that there are institutions capable of monitoring the region’s biodiversity and health.

Mr. Young said the region contains several protected sites, Fundy National Park in New Brunswick and Cape Chignecto Provincial Park in Nova Scotia.

The area depends largely on the fishery, forestry, agriculture and tourism and has several universities, government agencies and industry associations capable of monitoring the area.

The groups are now drumming up support. Mr. Young believes communities should embrace the project because of the benefits the UNESCO designation would bring to the area.

“The designation would increase the probability that our traditional communities and our resource-based industries will remain sustainable for the long term,” he said.

Jim Birtch, executive secretary of the Canadian Biosphere Reserves Association, stressed community support is key to a successful application.

Mr. Young said he hopes an application can be filed sometime next year.

Anonymous. (2000 December 23). Bay of Fundy biosphere. The Citizen, p.7.

Parrsboro – Two organizations want to have the Bay of Fundy declared a biosphere reserve by the United Nations Educational, Scientific and Cultural Organization.

It would be the first reserve of its kind in Atlantic Canada, the first to span two provinces and the first to focus on the marine environment.

“Biosphere reserves are areas that promote and demonstrate a healthy balanced relationship between humans and nature,” project coordinator Tom Young of Parrsboro said.

He said UNESCO recognition would designate the area “a special place on the globe” and attract respect from scholars, travelers, conservationists, investors and economic developers from around the world.

The groups sponsoring the idea are the Bay of Fundy Ecosystem Partnership and the Bay of Fundy Product Club.

The partnership includes scientists from Environment Canada, the federal Fisheries Department, the New Brunswick and Nova Scotia natural resources departments and area universities.

The product club provides marketing support to Nova Scotia and New Brunswick tourism operators in partnership with the provinces’ tourism departments and the Atlantic Canada Opportunities Agency.

The two groups have been working on the project for more than a year.

Young said he hopes an application can be filed some time in the next year.

Macgregor, J. (2002 April 17). Neighbours cry foul over bid to protect Fundy. The Chronicle-Herald, p.A7

Advocate Harbour- A group of Advocate Harbour residents is crying foul over plans to nominate the Bay of Fundy region for designation as a biosphere reserve through the United Nations Educational, Scientific and Cultural Organization.

Bill Swindell says he and about 30 other citizens will attend upcoming information sessions in hopes of dissuading a Maritime environmental planning committee from pushing the proposal.

The UNESCO designation might cost residents of Advocate Harbour – a community of about 200 adjacent to the Fundy's Chignecto Bay area – their homes, Mr. Swindell said Monday.

“My insurance agent told me to obtain bylaw protection for my property, because if my house were to burn down after the area is designated a reserve, there's a good chance I won't be able to rebuild,” he said.

“My insurance company won't repay me if I can't rebuild.”

Tom Young, a project manager for the planning committee, says there is considerable misunderstanding of what the designation would mean.

“It doesn't bring any legislation or laws that would affect that area,” he said Monday.

UNESCO has given international standing to about 400 sites to conduct non-legislative environmental protection projects, he said.

Reserve status would not impose any restrictions on resource industries or the community at large, he said.

“Preservation is not the right word. Our aim is simply a co-operative effort to keep the area clean.”

Mr. Swindell said some people were also angry the nomination plans have been in the works for almost four years.

“We found out about it on the internet about three weeks ago,” he said, referring to a Colchester Regional Development Agency Web site.

“(Discussions have) been going on since 1998, and they've kept us in the dark.”

Research of the UNESCO program revealed the state of Kentucky “passed a law to prevent biospheres from (being implemented) there,” he said.

“It’s a separate legislation that was put in place to make sure (the state) doesn’t lose control of its own property.”

Many residents have contacted government representatives and been advised to convey their concerns to members of the planning committee, he said.

The next information session is Thursday at Parrsboro Regional High School from 5.30 to 9 p.m.

Mccoag, T. (2002 May 8). Majority oppose plan to protect Fundy area. The Chronicle-Herald, p.A5

Advocate Harbour- Local residents made it clear Monday night they don't want a proposed United Nations biosphere project in their backyard.

With a show of hands, the vast majority of the 150 people attending the occasionally heated meeting voted to oppose the project proposed by the Bay of Fundy Tourism Partnership and the Bay of Fundy Ecosystem Partnership.

The project would see the UN declare the Minas and Chignecto basins, and the watersheds draining into them, a biosphere – an area in which conservation and sustainable economic development are promoted.

Several upset residents forced the unscheduled vote. They complained vigorously that the UN biosphere designation would erode their rights.

“It would take away our sovereignty,” said Bill Swindell, chairman of a group that opposes the designation. “Being a United Nations biosphere would mean that our MPs, MLAs, councilors and the people here would no longer be in control of planning or how we use our properties.”

JoAnn Fewer, co-chairwoman of the biosphere initiative planning group, rejected his claim.

“The designation (as a UN biosphere) does not create new legislation or take precedence over existing legislation. It does not interfere with your use of your property and does not close the area to fishing, logging, agriculture or future economic development.”

In an attempt to show residents the positive side to the UN biosphere designation, Ms. Fewer's group invited Ray Frey, reeve of the Rural Municipality of Park in Manitoba, to explain how the Riding Mountain Biosphere Reserve has benefited his community.

Being part of the biosphere doesn't prevent people from hunting, fishing or operating their farms, he said, adding that the designation has enabled the municipality to promote the area as a place to hunt and fish and generate money through tourism.

Mr. Frey's attempts to outline other benefits were drowned out as audience members demanded answers to their questions and a vote on the matter.

The crowd continually interrupted Ms. Fewer's attempts to answer the questions. Her statement that her organization has postponed applying for the biosphere designation and had agreed to leave Advocate out of the project, if that is what the people want, was met with skepticism.

The repeated interruptions led some residents to apologize to Ms. Fewer and Mr. Frey after the meeting. Several people also said the project seemed like a good idea.

Some, like Coun. Peter Bass of Colchester County council and Ruth Allen, chairwoman of the Cape Chignecto Provincial Park management committee, suggested the biosphere group go back to the drawing board and rework its proposal.

DeLong, J. (2002, June). The Upper Bay of Fundy Initiative: A visionary approach to protecting what's unique. <<http://www.theatlanticcooperator.coop/web/articleindex/regional/region-june02f.htm>> (cited 6 July 2004).

*"Designating the Upper Bay of Fundy as a Biosphere Reserve will open many doors for anyone who wants to get involved. For those who don't, it will probably mean no change at all. If, as a mother, I want my kids to learn about their own region and watershed, having the designation will probably enable the schools or Department of Education to design some site-specific learning materials. As a local development association in a rural region, if I want to propose a 'pilot project' on alternative energy, having the designation will probably help to access funds or bring in people to help us. As a farmer, if I want to get together with others and "test" a new product, having designation might help with support for that."*

- Jo Ann Fewer, CEO of the Colchester Regional Development Agency, and a resident of the Upper Bay of Fundy region.

Residents living around the Bay of Fundy have always known the region is a unique and precious place. The Bay is famous for its world's highest tides, its complex ecosystems and resources, and its spectacular views. Now the upper region of this remarkable area is poised to become a UNESCO Biosphere Reserve, the first such designation to encompass parts of two provinces and focus specifically on marine environments.

The Biosphere Reserve designation is a project of UNESCO (United Nations Educational, Scientific and Cultural Organization) the non-political arm of the United Nations. The program seeks to establish a world network of outstanding ecosystems which should be protected and recognized.

Biosphere, meaning "sphere of life" is the living layer of the earth, and the designation of Biosphere Reserve recognizes a region where the stakeholders demonstrate visionary approaches to sustainable development and conservation.

Jo Ann Fewer, one of the co-chairs of the Upper Bay of Fundy Initiative's planning committee, observes that UNESCO designation does two things. "It creates international awareness about the strengths of the community in which we live, and it reinforces the pride felt by residents of the area." She adds that she sees "a future in rural communities if we know what our strengths are and work very hard to develop economic opportunities based on those strengths. In rural Canada, those include our natural environment and our resilient people. This designation will allow us to explore the opportunities associated with both."

Presently, there are eleven biosphere reserves in Canada; Waterton, Alta.; Clayoquot Sound, B.C.; Mount Arrowsmith, B.C.; Riding Mountain, Man.; Niagara Escarpment, Ont.; Long Point, Ont.; Charlevoix, Que.; Lac Saint Pierre, Que.; Mont. St. Hillaire, Que.,

and Redberry Lake, Sask. The newest region to have received Biosphere designation is Southwestern Nova Scotia, encompassing five counties of the province, and with Kejimikujik National Park & National Historic Site of Canada and the Tobeatic Wilderness Area as the core protected areas. Southwestern Nova Scotia was designated a Biosphere Reserve by UNESCO in September, 2001.

In recent years both the Nova Scotia and New Brunswick sides of the Bay of Fundy have had groups interested in seeing the Bay designated as a Biosphere Reserve. Numerous meetings and discussions have taken place since 1998, and in October of 2001, a formal group was created, drawing on interest from communities, businesses, and government.

The Upper Bay of Fundy Initiative's project co-ordinator is Stacie Carroll, who acts as an information officer, presenting the idea of Biosphere Reserve designation to interested individuals and organizations. Tourism operators, natural resource users, private citizens, community development offices, scientific researchers and government members all have a stake in seeing the initiative go forward. Carroll hosts information meetings in different communities around the Bay, explaining the initiative and showing what the organization hopes to achieve.

**UNESCO's guidelines stipulate three main functions or features essential to Biosphere status:**

- The conservation function ensures the preservation of ecosystems, landscapes, genetic and specific diversity - a role admirably filled by Fundy National Park and Cape Chignecto Provincial Park.
- The development function promotes local sustainable development at cultural, ecological, and social levels, an aspect filled by community economic development organizations and other interested groups.
- The local capacity building function provides support for research, education, and information distribution relating to conservation and development at municipal, national, and international levels. Mount Allison University in Sackville, New Brunswick, and Acadia University in Wolfville, Nova Scotia, both have the capacity to assist in monitoring and research activities.

Economic activity in the Bay of Fundy region revolves in great part around fisheries, farming, and forestry. Recent years have seen much more emphasis placed on operating these activities in a sustainable manner, so as to preserve and enhance existing resources for future generations.

Tourism, especially ecotourist attractions which advocate the responsible enjoyment of nature, also plays a vital role in economic well-being in the region, and the UNESCO Biosphere designation will certainly benefit this industry as well.

Receiving the Biosphere Reserve designation would not, in effect, change anything about the Bay of Fundy. Carroll is quick to emphasize that no legal restrictions or protections would be imposed upon the region. "Biosphere reserve designation doesn't start anything new, but focuses on what people are already doing. It's mostly a way of joining hands with those interested in sustainable community development."

The designation would also attract visitors, business investors, and researchers from around the world to this special place, not to exploit it but to work with communities for further economic sustainability. It's essential to the project's success that there be positive and enthusiastic community support and input. As the Upper Bay of Fundy Initiative takes its presentation to communities around the Bay of Fundy, more people are catching the vision and growing excited about the prospect of their unique part of the world being recognized as such.

Setting up a Biosphere Reserve requires "perseverance, patience and imagination," says Munju Ravindra, a director with the Canadian Biosphere Reserves Association. Community input is vital to the success of the project, and establishment of biospheres in Canada has taken anywhere from three to ten years. Carroll says the planning committee doesn't have a concrete timeline, but that "we'll do what needs doing, for as long as it takes," to prepare their nomination. The Upper Bay of Fundy Initiative hopes to receive designation by 2003 or 2004

## **APPENDIX G: Guest Editorial from the Property Rights of America Website**

Boddy, D. Bias Fear or Biosphere: The Proposed Bay of Fundy Biosphere Reserve.  
<prfamerica.org/BiasFear.html> (cited 12 January 2004)

### **Property Rights Foundation of America, Inc.**

Guest editorial by Douglas Boddy  
Advocate Harbour, Nova Scotia, Canada

Upon examining released documents relating to the proposed Bay of Fundy Biosphere Designation, several items come to the forefront. The advocates of the Biosphere for the Bay of Fundy like to proclaim the fact that they are worldwide in scope. The fact that UNESCO is their benefactor leads me to believe that they intend to deliver our sovereignty into the hands of this alien power, even though they deny this fact.

The area of Nova Scotia that they intend to use in creation of this biosphere comprises five counties, over 180,000 people and approximately 900,000 hectares or 2,225,000 acres. At the rate they are carrying out their agenda of meetings and keeping the public in the dark as to their objectives, less than 1/10th of 1 percent of the people will be informed.

I am sure some of the individuals involved in this scheme are well intentioned, but these super-sales people are manipulating them. They know how to play the "shell game" and hoodwink the unsuspecting public with scientific and sesquipedalian words.

At the first meeting we attended at Nappan, they used the Chignecto Park as a "core zone" and stated they would apply a "buffer zone" around it and a "transition;cone" around that. They talked of species and control. Then at the next meeting at Amherst they didn't even bring this up until we mentioned it and their answer was, "We forgot." The Nappan meeting was targeted at large landowners. There are quite a few in the Advocate area and none of them were invited, although the organization slated that they had sent out over 400 private invitations. They only invite people they know are sympathetic to their cause of saving the entire world at the expense of the common peoples. WE THE PEOPLE ARE THE ENDANGERED SPECIES.

We have spent considerable time searching for and downloading information on this and other Biospheres and find that once signed into the UNESCO fold it is hard to extricate one's property. We have found instances where farms have been denied and private property is being forced to be torn down without the benefit of compensation. It got so bad that the Senate of the State of Kentucky ruled against the formation of biospheres in that state, as it would displace people and cost jobs. They have also lost in Arkansas and New York. I realize the local group doesn't want to be compared to the U.S. model, but they are all tarred with the same brush as they all have the same objective.

If groups like the “Bay of Fundy Biosphere Initiative” are allowed to continue designating land for biosphere reserves, the globe will look like it has blisters on its face when viewed from outer space.

The Fundy Biosphere group is made up of scientific academics, who can manipulate numbers and semantics to suit any situation that fits their cause.

The FEAR FACTOR enters into the equation in that they have been planning this action for years and keeping the public in the dark. Now, they are holding a few public meetings involving mainly their friends and associates. Their plan was to submit their application for UNESCO approval in June 2002. People have to attend the meetings in their areas and let them know just how bad this plan is and how much it will affect many of them and their lives. People don’t like to being “sweet-talked” by these super-sales persons.

ITEM OF NOTE; Guess who dictates the rules here?

You guessed it, the environmentalists who have brought you this Biosphere in the first place. We don’t need another agency dictating what we do with our property.

This experiment called the Fundy Biosphere put together by these academics and scientists leaves one feeling like a lab rat in a cage or an amoeba under a microscope.

## **GLOSSARY of TERMS**

(Taken from Biosphere Initiative papers)

### **BIOSPHERE,**

Bio. Referring to biology, as the study of plants and animals. Sphere a round solid body with a continuous surface similar to a globe.

### **CORE AREA,**

An area dedicated to long-term protection (e.g. Provincial protected areas, Provincial / Federal Parks, National Wildlife areas, etc.) Core areas have clearly defined boundaries and usually have legal protection under provincial or federal legislation so that their use or natural condition cannot be changed by a simple decision by the landowner or land manager.

### **BUFFER ZONE,**

An area of land or water that is managed in a way that supports the conservation objectives of the core areas. Lands with conservation easements, sustainable management practices, and other kinds of managed working or protected landscapes could be considered as “buffer.” Buffer areas usually have identified boundaries and are not regulated, other than by the landowners voluntary commitment to sustainable management.

### **TRANSITION ZONE,**

The broader area outside the “core” and “buffer” where the sustainable management practices developed in the buffer are shared with the wider community. The boundaries of

the area of cooperation are not necessarily fixed, but can shift according to the interests and needs of the communities involved.