

**EVALUATING THE PROCESS FOR PLANNING AND
MANAGEMENT OF SHOREBIRD VIEWING WITHIN THE BAY
OF FUNDY BIOSPHERE RESERVE NOMINATION INITIATIVE**

by

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Title of Project

Evaluating the Process for Planning and Management of Shorebird

Viewing within the Bay of Fundy Biosphere Reserve Nomination Initiative

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ABSTRACT

Good decision making is an essential element of any sustainability strategy. The primary objective of such strategies is to reconcile the competing values and interests of society, within the limits imposed by finite natural resource availability. Tourism, like other forms of development, must integrate environmental, social, and economic perspectives in order to accomplish this. Processes that use collaboration to build mutually acceptable decisions and agreements provide an opportunity to operationalize these principles, and therefore have the potential to lead to more sustainable forms of tourism.

This research evaluates the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process as a mechanism for moving towards sustainable shorebird viewing, a form of nature-based tourism, in the Dorchester-Grande Anse-Johnson's Mills area of the Upper Bay of Fundy. Sustainability principles and decision-making goals are combined to produce a framework of eight evaluative criteria upon which the research instrument, a questionnaire, and assessment are based. Data were collected via the administration of the questionnaire during in-depth interviews with twenty stakeholders.

The BRNI process has acted as a catalyst for increasing collaborative efforts to address shorebird-viewing issues, but its scope and design are not yet sufficiently defined to allow it to deal with such substantive issues efficiently and effectively. This lack of clarity also affects participation, resource availability, and stakeholder support. The process has improved levels of awareness and understanding about challenges to the sustainability of shorebird viewing and shorebird populations; however, it must become more inclusive and consistent if it is to produce stable decisions and agreements.

The study findings provide insights into the design and function of decision-making strategies and processes within a sustainable, nature-based tourism context. Twenty specific recommendations are made for improving the BRNI process. On a broader scale, lessons are generalized to provide information for others considering the use of collaborative processes to facilitate progress towards the sustainability goal.

To Jeremy and to my family.

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LIST OF ACRONYMS

BoFEP	Bay of Fundy Ecosystem Partnership
BoFEP-EWG	Bay of Fundy Ecosystem Partnership – Ecotourism Working Group
BoFTP	Bay of Fundy Tourism Partnership
BRNI	Bay of Fundy Biosphere Reserve Nomination Initiative
CORE	Commission on Resources and Environment
CWS	Canadian Wildlife Service
DELG	New Brunswick Department of Environment and Local Government
DFO	Department of Fisheries and Oceans (Canada)
DNR	New Brunswick Department of Natural Resources
DOT	New Brunswick Department of Transportation
LSD	Local Service District
MAB	Man and the Biosphere Programme
NCC	Nature Conservancy of Canada
NRTEE	National Round Table on the Environment and the Economy
RMA	Resource Management Associates
SDM	Shared Decision Making
TIAC	Tourism Industry Association of Canada
UN	United Nations
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
WHSRN	Western Hemispheric Shorebird Reserve Network
WTO	World Tourism Organization

CHAPTER 1

INTRODUCTION

Good decision making is an essential element of any sustainability strategy. Evaluating the processes by which decisions are made provides an opportunity to assess their functionality as mechanisms for helping to achieve specific sustainability goals. This research project is focused on the design, implementation, and outcomes of one such assessment. An overview of the study background and rationale, purpose, objectives, research questions, significance, methods, and scope is presented in this introductory chapter.

STUDY OVERVIEW

Background and Project Rationale

Ideally, planning and decision-making processes for tourism and other forms of development should ensure that ecological integrity is maintained or enhanced, that any changes are socially acceptable or beneficial for local people, and that tourism and other activities can be conducted to improve the economic prospects for local communities. This balancing of ecological, social, and economic interests is often referred to as sustainability in current literature. While the concepts of sustainability and sustainable tourism seem simple at first glance, translating them into practice has proven to be difficult.

The tourism industry is the largest and one of the fastest growing economic sectors in the world, and that growth is expected to continue (UN 2001, CEC 2000, UN 1999a). Tourism development is often seen as a good strategy for delivering socioeconomic benefits to, and alleviating economic problems in, communities throughout North America and around the world. While this strategy has been successful in many contexts, it also has come under greater scrutiny in recent years, as many of the negative impacts of tourism development have become more widely recognized and reported. As a result, tourism authorities are realizing that “tourism’s role in economic development is important but [that] it cannot be considered in a vacuum. The social

and environmental implications of tourism development must be integrated into development policy” (UN 1999b).

To accomplish this task, change is required within the industry. Efforts are underway in many jurisdictions, at various scales and levels, to reflect this broader, more balanced approach to tourism development policy. The Atlantic Provinces of Canada are no exception.

The stated mission of the New Brunswick Department of Tourism and Parks is “to generate economic prosperity for New Brunswick through responsible promotion and development of year-round tourism activities while maintaining the environmental and cultural integrity of the province” (New Brunswick 2002b). On the economic side, concerted efforts are being made to promote industry growth through aggressive marketing at the local, provincial, national, and international levels (New Brunswick 2003b). As a result, tourism revenues have increased by an average of 5.9% annually over the past decade (New Brunswick 2003b), and statistics show that 2002 was the most successful year in the province’s tourism history. Records were set for the number of nonresident visitors and total tourism expenditures, at 2 million and \$1.2 billion respectively (New Brunswick 2003a). Tourism has become a major contributor to the provincial economy.

The “Bay of Fundy Experience” is an important component in the success of New Brunswick’s tourism marketing and development strategies. The Bay of Fundy is home to world-renowned tides, unique ecosystems, spectacular coastal scenery, a rich cultural history, and internationally significant wildlife areas. These extraordinary attributes attract a multitude of visitors. Consequently, tourism has come to play a vital role in the economies of many communities in the region. Tourism also figures prominently in the plans of many communities for future economic development, particularly in those where traditional industries no longer support past levels of employment. There is little doubt then, that tourism development strategies have created significant economic successes at both the provincial and regional levels. Yet in terms of economic growth and development, this success has led to questions regarding the industry’s ability to balance that growth with other interests.

Several regional stakeholders have expressed concern that the absence of a balanced and coordinated approach to tourism planning and decision making has the potential to cause problems (respondents). These include environmental damage, endangered wildlife, conflict among stakeholder groups, and reduced quality of the tourism experience, which could negatively impact revenues and future economic opportunities. In fact, conflicts over how to balance various interests are already emerging. While these conflicts encompass diverse issues, and have assumed a variety of forms, some of the most prominent concerns relate to the effects of development and increased visitor numbers on critical wildlife areas. One model that has been proposed for addressing these challenges is the biosphere reserve.

“Biosphere Reserves are areas of terrestrial and coastal ecosystems which are internationally recognized within the framework of the United Nations Educational, Scientific, and Cultural Organization’s (UNESCO) Man and the Biosphere Programme” (UNESCO 2002). Each Biosphere Reserve is intended to fulfill a conservation function, a development function—where development is socioculturally and ecologically sustainable—and a logistic or capacity building function (UNESCO 2002). One objective of biosphere reserves is to provide an environment which is conducive to reconciling the challenges inherent in establishing such a balance. All stakeholders must cooperate in order to resolve conflicts in interest and find appropriate coordination, planning, and management mechanisms for the biosphere reserve (UNESCO 2002).

In December of 2000, an initiative was formally undertaken to nominate the Upper Bay of Fundy Region as a candidate for biosphere reserve status (figure 3.1 and 3.2). Many felt that the biosphere reserve model could provide an appropriate framework for addressing conservation and development issues in the region (Young 2002); however, others became concerned about possible impacts if the bid were successful (BoFEP 2001, 2000). Indeed, designation of a portion of the region as a UNESCO Biosphere Reserve would provide international recognition and marketing opportunities. Such activity was expected to further raise the profile of tourism in the region, encouraging additional investment and development. While this would be good for tourism and economic development interests, it was felt that such a designation could detrimentally impact critical wildlife areas (BoFEP 2001).

These concerns are particularly relevant in the Dorchester-Grande Anse-Johnson's Mills area, the site chosen as the case study location. It contains one of three internationally significant shorebird habitat sites in the Bay of Fundy region. As many as two million shorebirds, including up to 95% of the world population of Semipalmated Sandpiper (*Calidris pusillus*), depend on the mudflats at these sites for their survival (Canada 1996). It is therefore essential to ensure that a balanced approach to development and conservation, such as the one espoused in the biosphere reserve concept, is translated into practice. If increases in tourism are to occur without harming the ecosystem, then many stakeholders will have to be involved in the planning (BoFEP 2001), and decision-making processes. It is the process of making decisions with the goal of moving towards more sustainable forms of tourism, specifically sustainable shorebird viewing, that is the focus of this project.

Purpose, Objectives, and Research Questions

The purpose of this research is to evaluate the decision-making process that is currently used to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area of the Upper Bay of Fundy. The research objectives are:

- 1) to develop a framework for evaluating a decision-making process as a mechanism for moving towards more sustainable forms of tourism
- 2) to evaluate efforts to address shorebird-viewing issues within the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process using this framework
- 3) to identify the strengths and weaknesses of the process
- 4) to make recommendations for improving the process, if required, and
- 5) to make general recommendations for improving the capacity of decision-making processes to facilitate progress towards more sustainable forms of tourism.

In order to achieve these objectives, the research aims to answer the following questions:

- 1) What are the most significant challenges to the sustainability of shorebird viewing in the case study area?
- 2) Do efforts within the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process provide an effective means to address those challenges?
- 3) Can the current process be improved?

- 4) What recommendations from this process evaluation can be generalized and applied to other decision-making processes in order to improve their ability to facilitate progress towards more sustainable forms of tourism?

Study Significance

Traditionally, options for resource management utilized a variety of approaches, but were designed to address only one of three perspectives. This choice depended on whether the challenge was perceived to be primarily an environmental, social, or economic one. The concept of sustainability offers a chance to reintegrate them, yet it presents a tremendous challenge. Given the competing values and interests surrounding natural resource use, it seems unlikely that progress towards sustainable tourism, or sustainability in general, will be realized without planning processes that incorporate sustainability principles. To plan effectively, more holistic decisions will have to be made.

A good decision-making process strives to be efficient, effective, and fair while sustainable tourism requires the integration of environmental, social, and economic interests. By developing evaluative criteria that combine these two interests, it may be possible to construct a framework for assessing whether a particular process is contributing to the development of more sustainable forms of tourism. If this is possible, the framework could then be used to evaluate various processes in order to identify their strengths and weaknesses, as well as to make recommendations for improving them.

This project is developed within that objective. It evaluates efforts within the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area. The strengths and weaknesses identified in the project will be used to make recommendations for improving the local process. An improved process for reconciling conservation and development interests would benefit all stakeholders affected or involved by reducing the level of uncertainty and conflict surrounding these issues. In addition, not only the results of the assessment, but also its multistakeholder approach could be used as tools to promote cooperation and collaboration in future planning and decision-making

processes. In short, the study provides an opportunity to take a step towards operationalizing sustainable shorebird viewing in the region.

On a broader scale, this study will contribute to the understanding of how decision-making processes can be used and structured to help facilitate progress towards the achievement of sustainability goals. Although the scope of the study limits the generalization of its conclusions, the lessons learned may prove valuable to others who are currently engaged in, intend to participate in, or are currently designing similar processes. Finally, the project results will contribute to the international body of research on UNESCO's Man and the Biosphere Programme, particularly with respect to the design and function of management processes for addressing sustainability issues within new or proposed Biosphere Reserves.

Research Methods

In the preliminary stage of this project, a theoretical basis was developed for the research to be undertaken. An extensive literature review was conducted into relevant theory on: sustainability; sustainable development; sustainable tourism; nature-based tourism; planning; the United Nations Man and the Biosphere Programme; public participation; decision making; collaborative forms of planning and management such as comanagement, integrated coastal zone management, and shared decision making; and the use of qualitative research techniques such as case studies, interviews, and survey instruments. Information on the Bay of Fundy Biosphere Reserve Nomination Initiative was obtained from Resource Management Associates, one of its original proponents, as well as from newsletters, the initiative's site on the world wide web, meeting minutes from the Bay of Fundy Ecosystem Partnership (BoFEP), and other publicly available documents. In addition, the Bay of Fundy Ecosystem Partnership Ecotourism Working Group (BoFEP-EWG) provided input, identified issues, and functioned in an advisory capacity in the planning phase of this research project.

Next, the results of this review were used to construct a framework for evaluating the decision-making process as a mechanism for moving towards more sustainable forms of tourism. The framework consists of eight evaluative criteria, sorted into three categories: challenge identification, process structure, and process function. A description and indicators were

developed for each criterion. As described briefly above, and in more depth in chapter 2, the overall framework and the justification for its application as an evaluation tool have broad theoretical underpinnings; however, to a significant extent, the instrument itself incorporates and builds on evaluation research that has been conducted into other multiparty natural resource planning and management processes (Frame, Day, and Gunton 2002; Currie-Alder 2001; Duffy et al. 1998; Penrose, Day, and Roseland 1998; Tamblyn and Day 1998; Duffy, Roseland, and Gunton 1996; Hawkes 1996; Kofinas and Griggs 1996; Wilson, Roseland, and Day 1996; CORE 1995). The scope of the evaluation was then narrowed by investigating the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process and tailoring the framework to address sustainable tourism issues specific to it. Thus, for the purposes of this evaluation, the original framework was adapted to focus on the sustainability of a particular form of nature-based tourism, namely shorebird viewing.

The second stage of the project involved the application of the evaluation framework to a case study. The Dorchester-Grande Anse-Johnson's Mills area was chosen as the case study site. The rationale for this choice is discussed in more detail in chapter 3. An interview questionnaire was developed based on the criteria and indicators described in the evaluation framework. The assessment was conducted by administering the interview questionnaire to relevant stakeholders who had participated in efforts within the BRNI process to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area. As a result of the use of this purposeful interviewing technique, twenty-one respondents were selected and successfully contacted to arrange in-person interviews. Twenty were able to participate in the study. For logistical reasons, two of the twenty interviews were conducted by telephone. In addition, not all sectors had representatives with sufficient information on the BRNI process to complete the full questionnaire. To ensure adequate representation of all interests, the use of a modified questionnaire was necessary in those five interviews. In the other fifteen interviews, the full questionnaire was completed. In compliance with the policies and guidelines of the Department of Research Ethics at Simon Fraser University, participation was voluntary and any identifying information will remain strictly confidential.

During the interviews, the respondents were asked to answer a series of questions about the process. Two basic types of question were asked: open and closed. With open questions,

respondents were free to answer as they wished. The majority of the questions; however, were of the closed type. For those questions, participants were asked to indicate the degree to which they agreed or disagreed with a given statement. The closed questions required one of the following responses: SA: strongly agree; MA: mildly agree; U: undecided or unsure; MD: mildly disagree; SD: strongly disagree; or N/A: not applicable. A few of the closed questions simply required a yes or no response. Participants were given the opportunity to explain, or elaborate on, their responses to the closed questions. This interview design was chosen: to allow for quantification of responses while maintaining richness and diversity in the data collected; to make it easier to identify the strengths and weaknesses of the process; to enable differentiation of the degree to which each evaluation criterion was met, based on the level of agreement/disagreement among respondents' replies; to keep the project focused in terms of data collection and analysis requirements; and to ensure that the time commitment required of respondents did not limit their willingness or ability to participate.

In stage three of the project, data collected in the interviews were compiled and analyzed based on the categories, criteria, and indicators of the evaluation framework. The degree to which these criteria were met was evaluated based on both qualitative and quantitative information. Results were presented in qualitative format, supplemented by quantitative analyses. Quantitatively, the percentage of respondents selecting each response was calculated for each of the closed questions that utilized the ordered choice response method. In addition, each potential response type was assigned a number score as follows: SA = +2.0, MA = + 1.0, U = 0, MD = - 1.0, SD = - 2.0, N/A = not included in calculations. These number scores were used to calculate an overall rating for each criterion. The combined data were utilized to assess the extent to which the evaluative criteria were met, to identify the strengths and weaknesses of the process, and as the basis for recommendations to improve the process. To the extent possible, general recommendations were made for evaluating and improving other decision-making processes.

Scope

This project evaluates efforts to address shorebird-viewing issues within the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process. Although there are four internationally significant shorebird habitat sites within the proposed Biosphere Reserve, as well as other areas

that face similar conservation and development issues, only the Dorchester-Grande Anse-Johnson's Mills area is studied in this project. In addition, while some of the study findings may be useful to the broader BRNI process, this evaluation focuses primarily on one aspect of it. Furthermore, improved decision-making processes have the potential to make many forms of development more sustainable. This study investigates tourism development, specifically shorebird viewing, which falls within the category of nature-based tourism. It does not investigate any other development options. Finally, purposeful interviewing involves selecting subjects for participation in the study based on criteria set out in the study design. In order to have valid study results, the pool of potential interview candidates is therefore limited, by definition, to those who meet the criteria.

Report Organization

This report is organized into six chapters. Chapter 1 provides a general overview of the research project, and includes the background and project rationale, purpose, objectives, research questions, study significance, research methods, and project scope. In chapter 2, the relevant literature is reviewed and the evaluative framework is presented. The framework applies a system for evaluating decision-making processes as mechanisms for moving towards more sustainable forms of tourism, to a specific process dealing with one particular form of tourism—in this case shorebird viewing. A copy of the general foundational framework is found in appendix E. The third chapter describes the case study location, the context of the local situation, as well as the process to be evaluated. The project results are presented and discussed in chapter 4. In chapter 5, conclusions are drawn and recommendations are made for improving the process evaluated in the case study. Finally, in chapter 6, general lessons, recommendations, and directions for future research are proposed.

CHAPTER 2

LITERATURE REVIEW AND EVALUATION FRAMEWORK

Chapter 2 presents the theoretical basis upon which this project is based. In the first section, definitions and general principles of sustainability are introduced. The principles are founded on the integration of environmental, social, and economic perspectives within more inclusive planning and management processes that emphasize the need for change. These principles are then applied to define and characterize sustainable tourism. Section two focuses on the design and function of decision-making processes in terms of efficiency, effectiveness, and fairness goals. Traditional and collaborative approaches to decision making are described, and the merits and limitations of each are discussed. The final section lays the foundation for a system to evaluate decision-making processes as mechanisms for moving towards more sustainable forms of tourism. The evaluative system is prefaced by a segment on process evaluation, which is used to tailor it to the process in question.

SUSTAINABILITY

Principles

In recent years “sustainability” has become an international phenomenon. While many of its inherent concepts have existed for some time, momentum for the incorporation of the term into world affairs increased rapidly when the term sustainable development was popularized in *Our Common Future* (Rees 1989). In that document, sustainable development was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”(WCED 1987).

Since that time, a multitude of definitions have been created. Unfortunately, many do not address integration of the complex and diverse issues that would be expected to exist if the intent is to make something “capable of being maintained indefinitely” (CORE 1996), but simply re-frame sustainability definitions along the traditional lines of individual disciplines. In these cases, the emphasis tends to fall on environmental, or social, or economic aspects, depending on the

predilections of the interest groups involved; however, the concept “includes much, much more than either the indefinite availability of environmental assets or long-term business success” (Frazier 1997). While there is much debate as to the definition of sustainability in the current literature, and no definitions are universally accepted, recurrent themes or principles do emerge. These themes are particularly characteristic of sources not aligned with traditional, single-interest groups. Although this chapter is not meant to provide a comprehensive review of the innumerable documents on the topic, pertinent examples will be given.

Integration. The first principle is the inseparability of environmental, economic, and social imperatives. It is the integration of all three which should be the foundation upon which definitions of sustainability are based (UNEP 2002a). The United Nations recognized this need for balance in the “integration of environment and development concerns” in *Agenda 21* (UN 1992), the *Rio Declaration on Environment and Development* (UN-GA 1992), the *Convention on Biological Diversity* (UNEP 1992), and other documents. At the national and provincial levels, the principle is recognized in a variety of documents such as the *Code of Ethics and Guidelines for Sustainable Tourism*, produced by the Tourism Industry Association of Canada and the National Round Table on the Environment and the Economy with the participation of all provinces (1994); *Building Consensus for a Sustainable Future: Putting Principles into Practice* (NRTEE 1996); and the *Land Use Charter* of British Columbia (CORE 1992). Policy statements to this effect also appear in provincial and municipal acts and regulations and in the constitutions of many organizations from coast to coast (NB 2003b, 2002; BoFEP 2002, 1999; Fraser Basin Council 1997).

Change. The second theme that emerges is that change will be required. It is not sufficient to discuss integrating environmental, social, and economic interests without a commitment to shift away from those perspectives, practices, and activities of the past and present that have proven to be detrimental (UN 1999a-d, Marshall 1998, Fraser Basin Council 1997). If the goal is to ensure that something can be maintained indefinitely (CORE 1996), then short-term, single-interest perspectives must give way to long-term, interdisciplinary or holistic ones. This, in turn, supports the idea that issues of temporal and spatial equity must be addressed. As articulated within *Our Common Future* (WCED 1987), for development to be sustainable, the needs of future

generations, as well as the needs of those who currently do not share access to even the most basic necessities, must be considered.

Inclusive Planning. Finally, in defining and moving towards sustainability, the planning and management processes used to achieve integration and change must become more inclusive. Historically, such processes have followed the rational planning model, which proceeds in a top-down manner and is often driven by government officials (Lawrence and Nelson 1999, Joppe 1996, Getz 1983). Under this system, the emphasis is placed on seeking control of a situation (Lawrence and Nelson 1999), through reliance on expertise and authority (NRTEE 1996). While this model can be successful under certain circumstances, experience has shown that “strategies for achieving sustainability generally need active involvement from, and clear understandings among, a wide variety of sectors and groups” (NRTEE 1996). Such strategies differ from those created under a rational approach, because they stem from the recognition that the kinds of decisions that will be required “are inherently value-based and involve social choices” (CORE 1996). In other words:

Achieving sustainability is not primarily a technical or scientific challenge—although there is much to learn about how ecosystems work and respond to human activity. Nor is the challenge merely to manage our resources more effectively although there is much room for improvement in that, too. Rather, it is about dealing with people and their diverse cultures, interests, visions, priorities, and needs (NRTEE 1996).

In short, the concept of sustainability is complex and its definition can be contentious. But, it is possible to define general principles to guide change and progress towards the goal. The question then becomes, how can these principles be applied?

Sustainable Tourism

The tourism industry has tremendous potential as a vehicle for the application of sustainability principles. Although the industry as a whole was not originally recognized as such a vehicle by the United Nations in 1992 in either *Agenda 21* or in the *Convention on Biological Diversity*, it has subsequently been included in both through programs and resolutions (UNEP 2001, UN 1999). The magnitude of the industry in terms of size, growth rate, and socioeconomic impact necessitated its inclusion because its impacts are significant on a global scale. Therefore, if the

tourism industry responds to the challenges facing the world community by moving towards more sustainable practices, not only could it generate substantial results directly, it could also create momentum for change in other sectors through influence and example.

The impacts of tourism can be positive, negative, or a combination of the two. Many people are familiar with tourism's socioeconomic benefits, which may include: direct and indirect job creation, increased investment, improved standard of living, improvements to local infrastructure, human resource and skill development, expense sharing, creation of new markets for local products, conservation of cultural heritage, and increased access to cultural activities and facilities (Inskeep and WTO 1998). Although less obvious, tourism can also contribute to improving environmental quality through clean-up and land use changes, by helping to pay for conservation efforts, and by encouraging greater environmental awareness and stewardship through education and learning opportunities (ibid.). However, as with other forms of development, tourism can cause negative impacts as well. Some of these impacts can include: pollution of air, land, and water; generation of waste and associated disposal issues; reduced local access to amenities and resources; deterioration of natural and cultural sites due to overuse and destruction by tourist activities; degradation of local identity and heritage; destruction of habitats and damage to ecosystems; and leakage of economic benefits from host regions to groups, businesses, and corporations operating from outside the area (Hall 2001, Inskeep and WTO 1998). A more detailed accounting of the potential benefits and challenges of tourism can also be found in literature produced by the United Nations Environment Programme (UNEP 2002a). These lists illustrate that the potential benefits and drawbacks of tourism development do not fit neatly within the boundaries of a single discipline. Rather, they demonstrate that the social, economic, and environmental aspects of tourism development are interconnected and must be planned and managed as such.

Integration. Many challenges associated with defining sustainability are inherent to definitions of sustainable tourism. For example, similar questions arise: What is to be sustained? For what reasons is it to be sustained? How will it be sustained? (McCool 1995). Again, the answers to these questions depend on the perspectives of the parties asking them. There is no single definition of the term that has been agreed to within the tourism literature. Yet many definitions do incorporate the sustainability principles already discussed. According to the first of these

principles, sustainable tourism requires the integration of environmental, social, and economic interests. The World Tourism Organization has recognized this and defines sustainable tourism as development that:

meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems (Inskeep and WTO 1998).

The trinational Commission on Environmental Cooperation has also recognized the “necessity that tourism as an economic activity be compatible with community and conservation goals” (CEC 2000). Criteria used to identify and assess best practices in Canadian tourism have been based on this principle (Williams and Budke 1999). At the national level, the industry has affirmed that the sustainability of tourism depends “on the wise use and conservation of our natural resources; the protection and enhancement of our environment; and the preservation of our cultural, historic, and aesthetic resources (TIAC and NRTEE 1994). Thus, the importance of this principle to sustainable tourism has been identified clearly.

Change. The next challenge is to evaluate the performance of the tourism industry in terms of this principle. In the past, uncontrolled tourism development has caused serious environmental and sociocultural damage (UN 2001, CEC 2000, Ioannides 1995). This may have occurred as a result of the primary focus being placed on short-term economic objectives, rather than on balancing those objectives with environmental and social considerations over the long term. As McCool (1995) argued, the industry’s dependence on natural environments has not been well understood except, perhaps, in terms of legal requirements. That is beginning to change. Williams (1999) identified “untouched” natural surroundings and genuine communities as being a competitive advantage for the Canadian tourism industry, and argued that all stakeholders, including the tourism industry, are responsible for maintaining and protecting those resources. Since most tourism development “depends on attractions and activities related to the natural environment, heritage, and culture, [i]f these resources are degraded or destroyed, then tourism itself will have lost its’ [sic] own raison d’être” (Ahn et al. 2002). In spite of this recognition, tourism development can have significant negative effects on the environment, communities, and

thereby ultimately on economies, if it is not properly planned and managed (UN 1999a, Williams 1999, Butler 1980). Many examples of such development can be found in the literature. In accordance with the second sustainability principle then, the “quest for sustainable tourism will require change on the part of all major groups involved in tourism” (UN 1999a).

Inclusive Planning. In order to accomplish these objectives and move towards more sustainable forms of tourism, planning, management, and decision-making processes should become more inclusive and incorporate mechanisms to facilitate stakeholder participation. The United Nations developed *International Guidelines for Sustainable Tourism* under the *Convention on Biological Diversity* (UNEP 2002b, 2001). These explicitly recognize that “[m]anagement should be based on a consultative process involving multi-stakeholder participation.” Conditions for the successful implementation of sustainable tourism are based primarily on this idea (UNEP 2002a). Processes should strive to: involve stakeholders in planning and development, promote information exchange between stakeholders, establish networks for dialogue, raise and broaden understanding and awareness, strengthen human resource and institutional capacities, and ensure that sustainability principles are integrated at all levels (ibid.). The necessity of obtaining stakeholder involvement, commitment, and participation to move towards sustainable tourism is not only recognized by international organizations such as the United Nations (UNEP 2002a, 2001; UN 1999a, b, d; UN 1992), the World Tourism Organization (Inskip and WTO 1998), and the Commission for Environmental Cooperation (2000); but also by organizations like the Tourism Industry Association of Canada (TIAC and NRTEE 1994) and the National Round Table on the Environment and the Economy (ibid., NRTEE 1996). Research and on-the-ground efforts at implementation as described by such authors as Ahn et al. (2002), Budke (1999), Gjerdalen (1997), Joppe (1996), Ioannides (1995), and McCool (1995) strengthen this recognition. At the same time they also illuminate some of the difficulties inherent to such an approach. Thus far, the transition from theory to practice has been challenging.

DECISION MAKING

Difficult decisions will have to be made to progress towards the goal of sustainability. The assimilative capacity of Earth’s systems, and the resources available within those systems, are finite. While their continued existence is important in and of itself, their limits are particularly

relevant within the context of human survival over the long term. These limits are often more obvious at the local level, where the consequences of exceeding them can have direct, negative effects not only on environmental, social, and economic systems, but also on people's health, livelihood, quality of life, and life expectancy. It is not surprising then, that conflicts arise over the allocation of these resources. Given this potential for conflict, the number and diversity of prospective stakeholders and issues, the uncertainty surrounding the effects of specific choices, and the challenge of making trade-offs among potential uses and users, a good decision-making process is an essential element of any sustainability strategy.

Goals of Decision Making: Efficiency, Effectiveness, and Fairness

Creating a good decision-making process is a complicated task because no two situations are exactly alike. In order to have credibility, a process must have the support of stakeholders. The process itself must be of appropriate structure and design to function in a manner that will address the issues; yet to succeed, it must also take into account the characteristics of those who would use it. Yaffee (1997) argues that individuals, organizations, and institutions are subject to five behavioral biases that influence decision making:

1. *Short-term rationality outcompetes long-term rationality*: a tendency to make decisions that are rational and effective in the short term, yet counterproductive and ineffective over the long term.
2. *Competitive behavior drives out cooperative behavior*: a tendency to promote competitive behaviors at the expense of cooperative actions, yet often cooperation is needed to find good solutions.
3. *Fragmentation of interests and values*: a proclivity to split the different elements of society, avoiding the integration of interests and values necessary to craft effective courses of action.
4. *Fragmentation of responsibilities and authorities*: a tendency to divide those responsible for resource management, diminishing accountability, and ensuring that management strategies are often piecemeal solutions to crosscutting problems.
5. *Fragmentation of information and knowledge*: a proclivity to fragment what is known about a situation and its context so decision makers make bad choices because they are operating with inadequate information (Yaffee 1997).

An ideal model would thus seek to minimize these biases by ensuring that decision-making processes are efficient, effective, and fair.

By definition, something is efficient when it produces the desired effects, especially without loss or waste. Conventional measures of efficiency tend to focus on the minimization of costs, particularly in terms of time and monetary expense. A good decision-making process should be time and cost effective (Tamblyn and Day 1998; Duffy, Roseland, and Gunton 1996), but in a natural resource management context with multiple objectives and actors, this may not be synonymous with the “cheapest and quickest” route. Even if the decisions are made—an aspect of efficiency that is sometimes overlooked—a process cannot be deemed efficient if those decisions are delayed by challenges and appeals, or if their implementation is not feasible. In many ways, the level of support for a process and its decisions is the real determinant of its efficiency in the long term.

Building an effective process is one way to generate support for decisions. Although it may seem counterintuitive, effective decision making will almost certainly not produce one right answer, nor should it. Given the level of uncertainty surrounding the functioning of natural and human systems, and the value-based social choices involved in selecting from among competing uses, “there is no technical way to identify the optimum tradeoff” (CORE 1996). Processes should, however, strive to “accommodate the best possible technical evidence—no matter which “side” that evidence supports” (Duffy, Roseland, and Gunton 1996). This requires adequate information and assessment, which often must be obtained from multiple sources (Yaffee 1997). To be effective, decision-making processes should also identify all feasible and relevant alternatives; include the appropriate spectrum of stakeholders and a variety of value frameworks; establish accountability mechanisms (CORE 1996); remain consistent with applicable mandates, regulations, and policies; and encourage education and learning (Frame, Day, and Gunton 2002; Duffy et al. 1998; Tamblyn and Day 1998). If one of its objectives is to operationalize sustainability principles, then the process must also incorporate a full range of social, environmental, and economic concerns and values (Frame, Day, and Gunton 2002; Duffy et al. 1998; Penrose, Day, and Roseland 1998; Tamblyn and Day 1998; CORE 1996, 1995). Through careful design, these elements can be used to craft an effective decision-making process, which is more likely to be fair and thereby produce fairer decisions.

Fairness is an important element of good decision making, but its subjectivity presents unique challenges for process design. Processes and outcomes are often judged to be fair not as a result of their efficiency or even their logic, but rather by their degree of acceptability (Albin 1993). In other words, fairness is a function of stakeholder perceptions, “and perceptions depend on the nature of participation that is supported by process design” (Duffy, Roseland, and Gunton 1996). Simply increasing participation levels does not guarantee that processes will be considered fair or effective (Hunt and Haider 2001). Participants must be able to contribute in a meaningful way. “A process designed to achieve a fair decision strives to ensure that all participants understand how and why a decision was reached” (Duffy, Roseland, and Gunton 1996). It is this understanding, coupled with input into problem and issue definition, that generates the sense of ownership and commitment necessary for decisions to receive lasting stakeholder support.

Traditional versus Collaborative Decision Making: Merits and Limitations

Most decision-making processes follow one of two broad approaches. In the traditional or conventional approach, an official or authority makes the requisite decisions. The alternative approach is to allow those who will be affected by decisions to participate in making them. Both approaches are used in efforts to address sustainability issues, but their roles and attributes are quite different.

The traditional approach is the most widely used and is based on the rational planning model. As previously discussed, it is often initiated and driven by government (Lawrence and Nelson 1999) and controlled by an authority with discretion over the level of stakeholder input to be incorporated (Duffy, Roseland, and Gunton 1996). The process proceeds via presentations from the interests involved to the authority in charge. The authority then reviews all of the available information and makes the final decision. Generally, there are limited opportunities for communication between the affected parties, although they may be consulted in the final stages (NRTEE 1996).

This type of process has advantages. Its predominance within the current system means that most individuals, groups, businesses, and agencies use it and are therefore familiar with it. For them, its application does not necessitate major changes, or the learning of new skill sets, because it is

part of regular operating procedures. Decisions are made by a relatively small group of people, so they can be made rapidly and at minimal financial expense. As the public need not be involved in every decision, particularly if stakeholder interest is low or if they deem an issue to be insignificant (CORE 1995), this system can function in an efficient, effective, and fair manner. In addition, the predictability and order offered by such a system permits the scheduling of targets and deadlines which are valued by those responsible for the planning and management of natural resources, as well as by those considering investments or economic development. As its name suggests, it is a logical, rational approach to problem solving through situational control (Lawrence and Nelson 1999).

The approach does have limitations. For example, since "competing interests have little or no commitment to the decision that has been made" (NRTEE 1996), initial gains in efficiency and cost may be outweighed in the long term if conflict ensues or if a decision causes the escalation of previous conflict. The "model [also] assumes that decisions are reached after a rational analysis, which is often not the case in the public sector, where politics play a large role in how decisions are made" (Novo 2000). Other limitations may be inherent to the approach itself, or result from its application. These include: the absence of meaningful public participation (Williams, Day, and Gunton 1998; Duffy, Roseland, and Gunton 1996); the restriction of information exchange (Frame, Day, and Gunton 2002); a poor understanding of, and limited access to, the process; the susceptibility of the process to influence from powerful interests; insufficient accountability of decision-makers; the inadequacy of the process for accommodating a range of interests, values, and changing priorities; and the inability of current institutions to make locally appropriate decisions (Williams, Day, and Gunton 1998; Duffy, Roseland, and Gunton 1996; Pinkerton 1996). These factors cause frustration and discontent, with a resultant rise in the demand for more participatory forms of decision making (Duffy, Roseland, and Gunton 1996).

Alternative decision-making processes have emerged in response to this growing dissatisfaction with the traditional approach. Although a wide range of processes fit within this category, all recognize the importance of allowing the parties who will be affected by decisions to participate in making them, albeit to varying degrees. Unlike the traditional approach, which encourages parties to compete in win-lose battles for the recognition of one position over another, alternative approaches emphasize cooperation and collaboration to build relationships and seek solutions that

accommodate the interests of all (Frame, Day, and Gunton 2002; Novo 2000; Penrose, Day, and Roseland 1998; Duffy, Roseland, and Gunton 1996; Fisher, Ury, and Patton 1991).

“Collaboration occurs when parties who see different aspects of a problem agree to explore their differences and search for solutions that go beyond their own limited vision of what is possible” (Gray 1991). Kofinas and Griggs (1996) postulated that the characteristics of a specific collaborative process depend on its motivating factors and intended outcome or purpose. They identified two categories of motivating factors: the first encompasses collaborative efforts that are induced by conflict, the second efforts motivated by a shared vision. Process characteristics are modified by the relationship between these motivating factors and the intended outcomes, which can range from simple, one-time information exchanges to substantive, binding, joint agreements that require an ongoing commitment (*ibid.*). In other words, collaboration can take many forms.

Collaborative processes are built on a foundation of communication and cooperation. They rely on face-to-face dialogue between and among stakeholders throughout the process (Frame, Day, and Gunton 2002; Novo 2000), yet the specific techniques and approaches used to achieve overall process objectives can vary. Lawrence and Nelson (1999, 1994) suggest a civics approach, in which stakeholders address issues by fostering social learning through seven interactive processes: understanding, communicating, assessing, planning, implementing, monitoring, and adapting. In consensus-building processes, all stakeholders work together as equals to find solutions. While individual stakeholders may not concur with every aspect of an agreement, consensus is reached when the total package is acceptable to all (NRTEE 1996). Principled negotiations separate the people from the problem, focus on interests not positions, create options for mutual gain, and insist on using objective criteria for reaching decisions (Fisher, Ury, and Patton 1991). Shared decision-making (SDM) processes utilize this principled negotiation, in conjunction with consensus-building and mediation strategies, to achieve more inclusive planning through constructive problem solving (Duffy, Roseland, and Gunton 1996). There are several models for SDM, including management boards and councils (Marshall 1998), round tables, multistakeholder working groups, and comanagement agreements (Roseland 1994). SDM processes can involve actual changes in decision-making authority, as is the case with comanagement where a key feature is the sharing of decision-making power and responsibility for natural resource management (Currie-Alder 2001, Pinkerton 1996). However, they need not

because “where the fullest range of interests are effectively represented in a balanced process, the consensus reached should be politically irresistible to government, even without any formal devolution of decision-making authority” (Owen 1998). The hallmark of true collaboration then, is that it “involves planning *with* stakeholders rather than *for* stakeholders” (Duffy, Roseland, and Gunton 1996).

There are many potential benefits to collaborative approaches. Such processes are designed to involve a variety of stakeholders who would not normally communicate with one another. They incorporate a wider range of interests and values than can be accommodated through traditional processes, and should therefore better reflect the diversity of preferences held by stakeholders and the public (Frame, Day, and Gunton 2002; Williams, Day, and Gunton 1998; Fraser Basin Council 1997; Kofinas and Griggs 1996). Parties are able to share information and work together to define and solve problems, highlight issues, and identify information gaps (Frame, Day, and Gunton 2002; Novo 2000; Williams, Day, and Gunton 1998). This builds trust and improves perceptions of fairness, thereby giving legitimacy to decisions (*ibid.*). The high quality, creative solutions thus developed are more easily implemented, reduce conflict, and lead to more effective and equitable management than any one group could accomplish alone (Frame, Day, and Gunton 2002; Currie-Alder 2001). Even if the parties do not reach agreement, the learning and capacity building that result from such processes can be of great benefit to participants and their efforts can, in turn, inform and guide future decision making (Owen 1998). Collaborative processes encourage “a more holistic approach to addressing sustainability challenges” (Williams, Day, and Gunton 1998).

Critics and advocates alike caution that collaborative processes are neither appropriate nor desirable in all situations. They are time and resource intensive (Williams, Day, and Gunton 1998), exhausting (Frame, Day, and Gunton 2002), and by conventional measures, may diminish accountability, yet be more expensive and less efficient than other methods. Even when an assessment has concluded that such a process is warranted, it is difficult to identify and assemble all of the stakeholders and have them voluntarily step out of traditional roles and relationships (Frame, Day, and Gunton 2002; Williams, Day, and Gunton 1998; Kofinas and Griggs 1996). Due to fragmentation of responsibilities, authorities, information, and knowledge (Yaffee 1997), current institutions and systems of governance can themselves hinder collaboration (Williams,

Day, and Gunton 1998). There is often resistance to change that can be manifested directly, or in more subtle ways, through a lack of support. This issue is critical to participants' perceptions of process fairness. Ensuring all participants have access to adequate funding, training, information, expertise, and other resources is one of the most significant mechanisms available to rectify or counter power imbalances among them (Owen 1998; Penrose, Day, and Roseland 1998; Williams, Day, and Gunton 1998). If this access is restricted or controlled, participants are not equal partners (Joppe 1996), and one or more parties can dominate the process and outcomes (Kofinas and Griggs 1996). Processes can then be used as a delaying tactic, or to create the appearance of openness (NRTEE 1996), with little or no change to the status quo. Not only would such a captured process be subject to the criticisms of traditional approaches, it would also serve to deepen mistrust and undermine the chances of success in future processes, collaborative or otherwise.

Collaborative approaches to decision making are not a panacea, but they are an essential tool for progress towards sustainability. Yaffee (1997) argued that the solution to behavioral biases is "some measure of integration between the needs of the present and the future, competitive and cooperative behaviors, differing interests and values, dispersed responsibilities and authority, and information and knowledge." If this is the case, then it is unlikely a rational planning approach will be sufficient because its application is responsible for much of the current fragmentation. Sustainability principles also echo this need for integration and change. Social, environmental, and economic perspectives can no longer be considered separately from each other. Indeed, in order to bring them together effectively and fairly, more inclusive decision-making processes are required. "Public participation through multi-sector, public interest negotiation is an essential component in management for sustainability" (Owen 1998). This is not to suggest that collaborative approaches are the only or best method in all cases, but rather that they provide a means to address many of the shortcomings of traditional approaches. An ideal process would merge the beneficial elements of each, thereby minimizing potential weaknesses and limitations.

EVALUATION FRAMEWORK

The next step is to proceed from theory to practice. For this study, that involves assessing whether or not progress is being made in the effort to move towards more sustainable forms of

tourism. This will be accomplished by evaluating a specific decision-making process to determine if it is functioning as a mechanism to balance social, environmental, and economic interests in a fair, effective, and efficient manner. The case study itself is discussed in more detail in chapter 3.

Process Evaluation

One way in which to make an informed judgement, or produce an informed opinion, is through evaluation. Generally, something is evaluated by applying a set of criteria or standards (Duffy et al. 1998) in order to determine the degree to which it conforms to, or deviates from, them. Process evaluations are used to understand how programs operate (Patton 1990), while outcome evaluations measure process results (Wilson, Roseland, and Day 1996). Since process and outcome are interrelated, it can be helpful to evaluate both simultaneously (Novo 2000), but this is not always practical. In the case of this project—the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI)—it is still at a relatively early stage of development so an outcome evaluation would be inappropriate at this time.

Prior to conducting an evaluation, an appropriate framework of criteria and indicators must be selected. If no such framework exists, one in a related research area can be modified, or a new one developed. One objective of this project is to establish such a framework for measuring progress towards sustainable tourism. As articulated in previous sections of this chapter, theory and applied studies on sustainability, sustainable tourism, and decision making—both traditional and collaborative—indicate that progress towards more sustainable forms of tourism, and sustainability in general, will require change. Research suggests that inclusive decision-making processes that are able to balance social, environmental, and economic interests in an efficient, effective, and fair manner are the key to this change. It is possible to construct a framework based on this ideal process. The framework can then be used to investigate the properties and characteristics of a specific process, identify its strengths and weaknesses, and serve as a template for comparing different processes.

The evaluation framework for this project was synthesized with those objectives in mind. It builds on evaluation research that has been conducted into other multiparty natural resource

planning and management processes (Frame, Day, and Gunton 2002; Currie-Alder 2001; Duffy et al. 1998; Penrose, Day, and Roseland 1998; Tamblyn and Day 1998; Duffy, Roseland, and Gunton 1996; Hawkes 1996; Kofinas and Griggs 1996; Wilson, Roseland, and Day 1996; CORE 1995). It also uses elements of more traditional planning approaches.

The framework consists of eight evaluative criteria, sorted into three categories. Each criterion has a description and multiple indicators associated with it. Challenge identification, the first category, evaluates process motivations and enabling conditions via three criteria: identification of issues, purpose, and level of support. Process structure criteria include representation of interests, access to resources, and process design. These criteria set the scene and determine the environment within which decisions will be made. The final category, process function, deals with how decisions get made using efficiency and effectiveness criteria. The indicators selected for process efficiency are a reflection of the strengths of traditional approaches in this area. Effectiveness refers not only to the internal workings of the process, but also to its ability to address issues from a sustainability perspective. Perceptions of fairness relate largely to acceptability, which is dependent on the degree to which other criteria have been met, so fairness has also been included within the effectiveness criterion. Indicators such as acceptability of decisions, level of support, and stability measure fairness, but a process could not really be considered effective if it did not meet these objectives.

The framework more closely resembles models for the evaluation of SDM and other collaborative approaches, than it does traditional approaches. This is not surprising, as such a framework should emphasize sustainability principles, effectiveness, and fairness, which are cited as potential strengths of collaborative processes, in addition to efficiency, which is the most noted strength of traditional approaches. However, in addition to efficiency, there are several indicators within the framework that measure important process characteristics that originated in traditional/rational approaches. These include: setting goals and objectives, conducting empirical research and assessments, collecting and maintaining relevant information, creating clear mechanisms for the accountability of decision makers, and ensuring that changes or proposals are consistent with democratically-derived regulations, principles, and policies. The framework may be most easily applied to complete evaluations of collaborative-type processes, but it need not be restricted to them.

The framework provides a system for evaluating decision-making processes as mechanisms for moving towards more sustainable forms of tourism. Its concepts can be applied to a variety of processes and the framework adapted to better account for their individual characteristics. In this instance, it will be applied to a case study site in the upper Bay of Fundy region of Atlantic Canada. It will be used to evaluate a process dealing with the sustainability of one particular form of tourism—shorebird viewing. While this required the development of a highly tailored research instrument for the interview process (see appendix D), it did not require substantial changes to the framework. The specificity of the descriptions increased somewhat, but the criteria themselves did not change. For this reason, only the tailored framework is presented in table 2.1. The standard template, which is very similar, is presented in appendix E.

Table 2.1 A Framework for Evaluating the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) Process as a Mechanism for Progressing Towards Sustainable Shorebird Viewing in the Dorchester-Grande Anse-Johnson's Mills Region.

Criteria	Description	Indicators
Challenge Identification		
1. Identification of Issues	Stakeholders should be able to identify the major issues affecting shorebird viewing in the study area. This includes recognition of issues associated with other interests or groups.	<ul style="list-style-type: none"> • List of issues that includes social, economic, and environmental perspectives • Repetition of key issues
2. Purpose	Stakeholders must have a reason to participate. To be successful, there must be some agreement on the definition of what is to be achieved. ^{a, b, c, d, e, g, h, i}	<ul style="list-style-type: none"> • Recognition of interdependence of interests ^{a, c, d, g, h} • Degree of overlap in interests and issues • Common goals and objectives ^{a, b, c, d, f, h}
3. Level of Support	Stakeholders should be committed to addressing shorebird-viewing issues and believe that the process provides a viable opportunity for resolving them. ^{a, c, d, e, g, h, i}	<ul style="list-style-type: none"> • Willingness to dedicate time and/or other resources ^{a, c, d, e, i} • Perception of process appropriateness ^{a, c, d, e, g, h, i} • Commitment to process ^{a, c, d, e, g, h, i}
Process Structure		
4. Inclusive and Effective Representation of Interests	All parties with an interest in the issues and outcome, as well as those with authority to make or implement decisions, and those who could block implementation or undermine the process, should be allowed to participate. The appropriate form(s) for this participation may vary. Representatives who do participate must be accountable to their constituency. ^{a, c, d, e, f, g, h, i, j}	<ul style="list-style-type: none"> • Breadth of stakeholders identified and involved • Ability and willingness to participate ^{a, c, d, h} • Clear lines of accountability with interests and the public ^{a, c, d, e, i, j}
5. Access to Resources	All legitimate interests who wish to participate have adequate funding, training, information, and expertise to enable them to do so in a meaningful way. ^{a, c, d, e, h, i}	<ul style="list-style-type: none"> • Availability of funding, training, and information ^{a, c, d, e, h, i} • Accessibility ^{a, c, d, e, i} • Effect on participation
6. Process Design	Stakeholders should have an understanding of the process. Roles and responsibilities should be clearly defined to enable stakeholders and the general public to understand how, why, and by whom decisions are made. The process should be adaptive and flexible. ^{a, b, c, d, e, f, g, h, i, j}	<ul style="list-style-type: none"> • Process rules and procedures ^{a, c, d, e, h, i} • Lines of authority • Defined communication links ^{a, c, d, e, i} • Mechanism for review and change ^{a, c, d, e, i, j}

Table 2.1 (continued)

Criteria	Description	Indicators
<p>Process Function</p> <p>7. Efficiency</p>	<p>In striving to make good decisions regarding shorebird-viewing issues, the process should coordinate the efforts of all interests and make good use of time and resources. ^{a, c, d, e, h, j}</p>	<ul style="list-style-type: none"> • Cost ^{e, j} • Time ^{a, c, d, e, g, i, j} • Coordination mechanisms ^{a, c, d, e, h, i} • Decisions do/do not get made
<p>8. Effectiveness</p>	<p>An effective process should provide meaningful opportunities for stakeholders to participate in problem solving and in the crafting of mutually acceptable solutions to shorebird-viewing issues. ^{a, c, d, f, i, j}</p> <p>Decisions should be based on adequate information and assessment. It should be clear that they consider the full range of social, environmental, and economic concerns and values, while remaining consistent with applicable regulations, principles, and policies. ^{a, c, d, e, g, j}</p> <p>The overall process should reflect local aspirations and produce wise and stable decisions and agreements. ^{a, c, d, e, f, j}</p> <p>Education and learning should be encouraged.</p>	<ul style="list-style-type: none"> • Opportunities for interaction and formal/informal collaboration ^c • Changes in levels of trust, collaboration, and conflict resolution ^{c, d, e, f, g} • Presence/absence of gaps in necessary information • Consideration of social, environmental, and economic values • Development of mutually acceptable standards ^{c, d} • Acceptability of decisions and agreements to all interests and the public ^{a, f} • Level of local support • Ease of implementation • Improved stability ^{a, f} • Changes in attitudes, practices, and actions ^a

Adapted from and/or constructed based on the results, recommendations, and conclusions of the following:

^a Frame, Day, and Gunton 2002

^b Currie-Alder 2001

^c Duffy et al. 1998

^d Penrose, Day, and Roseland 1998

^e Tamblyn and Day 1998

^f Duffy, Roseland, and Gunton 1996

^g Hawkes 1996

^h Kofinas and Griggs 1996

ⁱ Wilson, Roseland, and Day 1996

^j CORE 1995

CHAPTER 3

THE CASE STUDY

Chapter 3 describes the project's case study. It begins with a brief introduction of the case study approach in section one. This is followed by a three-part overview of the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process in section two. Part one of this section provides background information on the Bay of Fundy, its shorebirds, and their respective relationships to the biosphere reserve concept and the BRNI process. The selection of the case study site is explained next, and finally the location itself is described. Part two outlines the process setting, and the chapter ends with a description of the process to be evaluated.

THE CASE STUDY APPROACH

There are many methods available for conducting social science research. According to Yin (1989), the specific strategy should be selected based on the type of research question being asked, the amount of control the researcher has over behavioral events, and the temporal aspects of the phenomena being examined—that is, contemporary versus historical occurrences. As is often the case, this project contains several lines of inquiry, but all are designed to support the investigation of a broader research question. Specifically, it is: *how* is the BRNI process functioning in terms of progress towards sustainability goals? Since how and why questions can be addressed using case studies, experiments, or histories (Yin 1989), additional assessment of project characteristics was required to select the most appropriate procedure. The BRNI process is contemporary—it is ongoing and continuously changing. While the publication of evaluation results has the potential to influence future behavior, the investigator would have no control over the process or its actors during the course of the research. Under these conditions, the case study is the preferred method of investigation because it uses a variety of evidence—documents, artifacts, interviews, and observations—to allow for the investigation of complex social interactions within their real-life context (Yin 1989). Therefore, a case study approach was adopted.

THE BAY OF FUNDY BIOSPHERE RESERVE NOMINATION INITIATIVE

Process Background

The Bay of Fundy is located on the east coast of Canada, between the provinces of New Brunswick and Nova Scotia (figure 3.1). It has approximately 1300km of diverse coastline and forms a 270km extension on the northeast of the larger Gulf of Maine ecosystem (Bay of Fundy Ecosystem Partnership 1999). The bay is home to world-renowned tides that can exceed 16m in height. These dramatic tidal fluctuations are a major influence on the entire region (Burzynski 1984) and contribute to the recognition of the Bay of Fundy as a “dynamic, highly productive and ecologically diverse coastal ecosystem” (Bay of Fundy Ecosystem Partnership 1999).

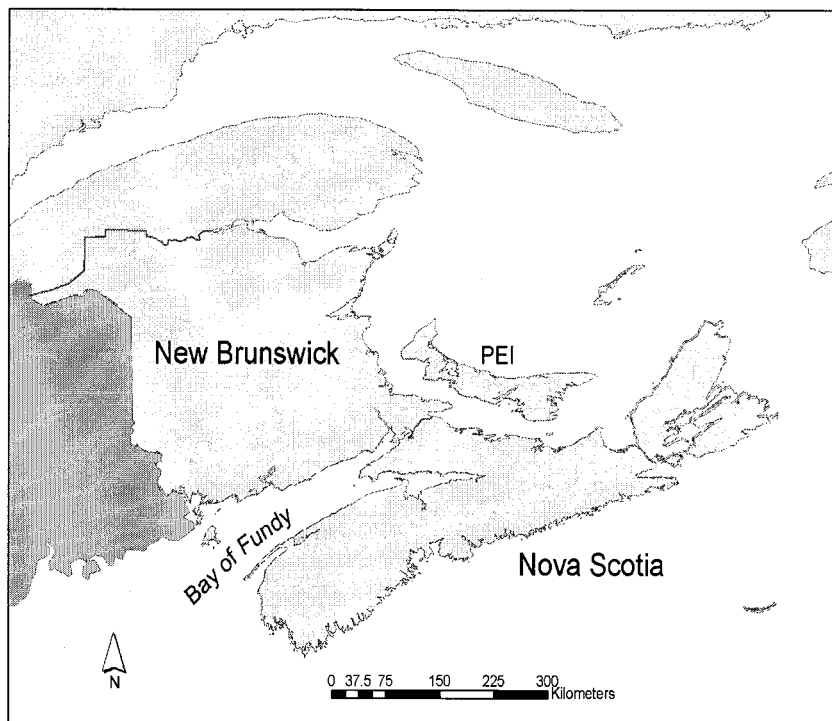


Figure 3.1 The Bay of Fundy Region of Atlantic Canada.

In 1999, the unique characteristics of the Bay of Fundy resulted in the region being proposed as a candidate for nomination as a biosphere reserve. As previously discussed, biosphere reserves are areas of terrestrial and coastal ecosystems where efforts to fulfill three functions—conservation, socioculturally and ecologically sustainable development, and capacity building—are internationally recognized within the framework of UNESCO's Man and the Biosphere (MAB) Programme (UNESCO 2002). All nomination initiatives must demonstrate how each of these functions would be met. In the case of the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI), the interest of the Nova Scotia and New Brunswick tourism industry in promoting ecotourism as a primary focus for the region suggested a potential means for ecologically sustainable development (RMA 2000). If realized, sustainable tourism would be consistent with the principles espoused in the biosphere reserve concept, and fulfill the requirements of the development function criterion for the BRNI.

Tourism plays a role in the economies of many communities in the Bay of Fundy region. In terms of general trends, tourism in the region is increasing, with some areas experiencing growth rates approaching 10% per year (Young 2002). Designation as a UNESCO Biosphere Reserve would provide international recognition and marketing opportunities, encourage additional investment and development, and as a result would be expected to add to that growth. Although sociocultural and ecological sustainability—as well as conservation—are key elements of the biosphere reserve model (UNESCO 2002), and were included in preliminary documents and discussions within the Bay of Fundy context (RMA 2000, BoFEP 2000), some stakeholders expressed concern that they were not being adequately considered (respondents, BoFEP 2000). More specifically, increased visitation resulting from growth in the nature-based tourism industry was viewed by the Canadian Wildlife Service (CWS), and other environmental interests, as a potential threat to critical wildlife areas in general, and to the sites utilized by migrating shorebirds in particular (respondents, BoFEP 2000, 2001).

The Bay of Fundy plays a crucial role in the migration of millions of shorebirds every year. After leaving Arctic and sub-Arctic breeding grounds, shorebirds fly to the bay to feed on a small invertebrate, the mud shrimp (*Corophium volutator*), which occurs in vast numbers in some of Fundy's extensive mudflats (Canada 2001, 1996). In locations where habitat conditions are ideal, the birds expend very little energy to capture this abundant prey and are thus able to build up the

fat reserves that will fuel their nonstop journey to wintering grounds in South America (Canada 1996). The Semipalmated Sandpiper (*Calidris pusillus*) is the most numerous of the visitors—those of this species utilizing the Bay of Fundy represent up to 95% of the world population—but many species of shorebirds depend on these sites for their survival (Canada 1996). As a result of this international significance, these sites have been designated as Western Hemispheric Shorebird Reserves (Canada 1996, 1995).

All of these sites were included within the boundaries of the original BRNI. The potential of a biosphere reserve designation to increase tourism, and specifically the possibility of increasing shorebird viewing and other related activities at these critical shorebird sites, became a defining issue of the overall BRNI process. Efforts within the BRNI process to address these shorebird-viewing issues are the basis for the evaluation undertaken in this study.

Three sites within the Western Hemispheric Shorebird Reserve Network (WHSRN) were considered as potential case study locations for this project (figure 3.2, 3.3). Evangeline Beach, Nova Scotia was not logistically feasible. This left two sites—Mary's Point and the Grande Anse flats at Johnson's Mills—one on either side of Shepody Bay in New Brunswick. Both were excellent candidates; however, it was not possible to evaluate two sites within the parameters and resource allocations of this project. The choice of the Johnson's Mills region was based on research evidence that indicated it was the site of primary concern, from the perspective of potential problems that would be posed by increases in visitation (respondents, working group, personal observation). *It must be stressed that this concern in no way suggests that one site is more important, or that both could not be affected by increased visitation.* It simply reflects that Johnson's Mills is perceived to be more vulnerable to such increases at this time. Vulnerability is influenced by such factors as site characteristics, access, land ownership and use patterns, potential for coastal development, and current infrastructure levels (Young 1999, MacKinnon 1998). In addition, the researcher recognizes that Shepody Bay is one biological system for shorebirds. This ecological reality is reflected in the directions for future research proposed in chapter 6.

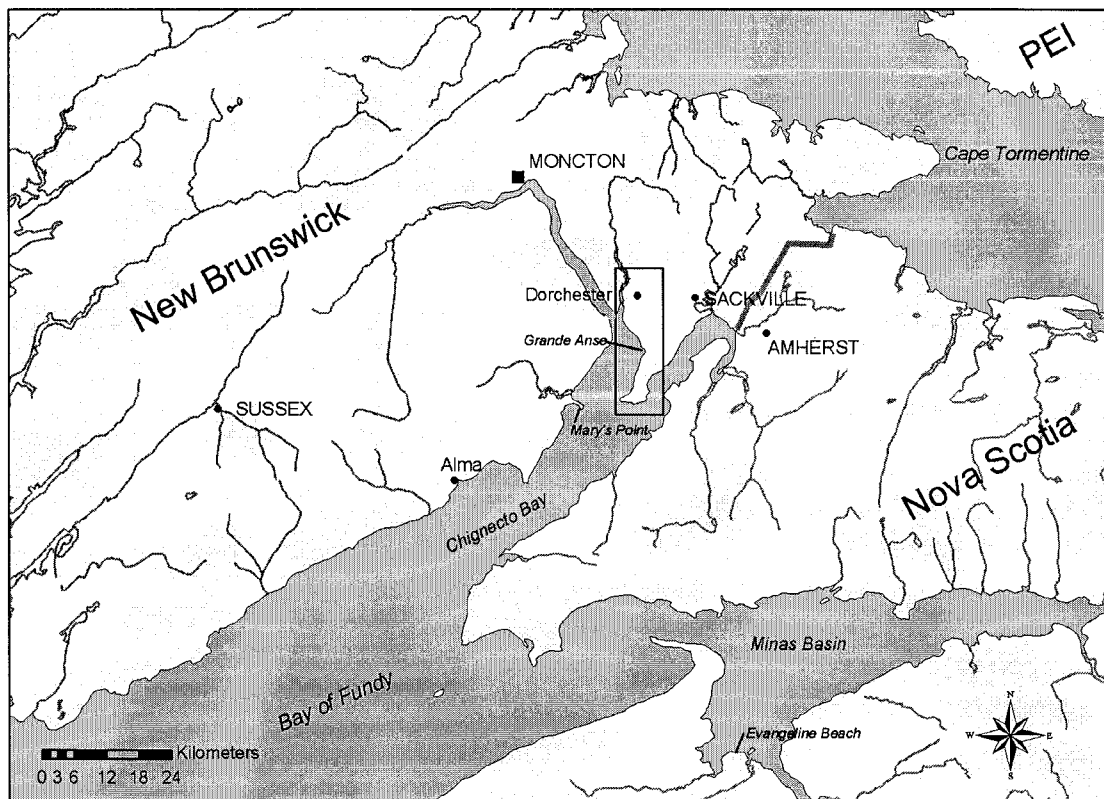


Figure 3.2 Potential Case Study Locations at Western Hemispheric Shorebird Reserves in the Upper Bay of Fundy Region.

The study area is defined as the coastal strip beginning at, and including, the Village of Dorchester, continuing through Dorchester Cape, and extending to Johnson's Mills. The zone reaches five-kilometers inland, and to the seaward side embraces areas exposed at low tide, particularly the mudflats of Grande Anse (figure 3.3). These boundaries were chosen for a variety of reasons: to include the most significant shorebird areas and a cross-section of local interests, to make it easier for participants to answer interview questions, and to ensure that the scope and size of the project was reasonable for the researcher. Other researchers or individuals may choose to define the area differently for other studies. The project setting is described in greater detail in the following section.

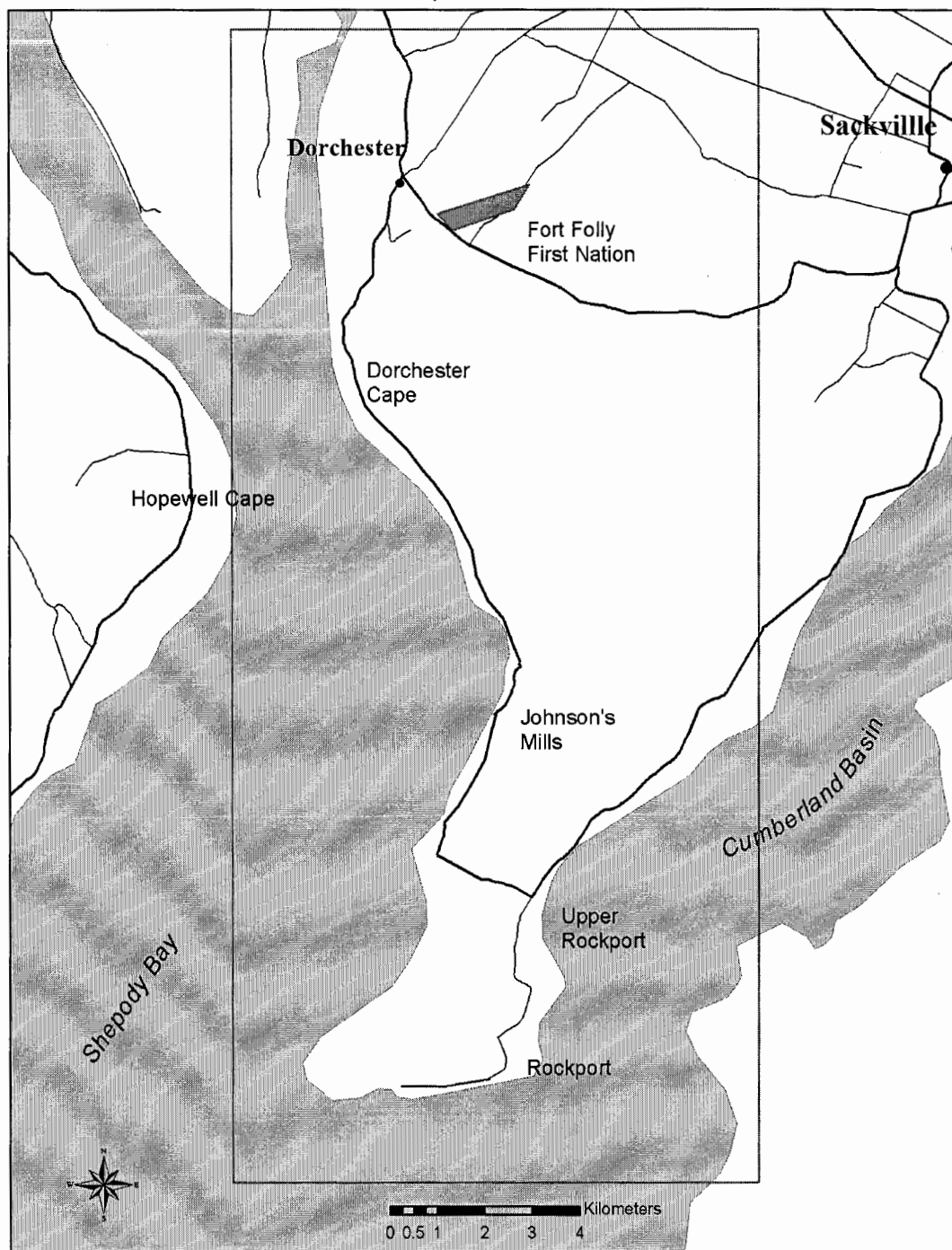


Figure 3.3 The Dorchester-Grande Anse-Johnson's Mills Case Study Site.

Process Setting

The institutional setting in the Dorchester-Grande Anse-Johnson's Mills area is complex. Federal interests are represented by two main agencies. The Canadian Wildlife Service (CWS) of Environment Canada is directly responsible for the shorebird populations, through its mandate to protect and manage migratory birds and nationally significant wildlife habitat (Canada 2001). It also conducts a significant amount of research in the area. The Department of Fisheries and Oceans (DFO) has responsibilities in this coastal, estuarine system under the *Fisheries Act* (Canada 1985), as well as under the integrated coastal zone management provisions of the 1997 *Oceans Act* (Canada 2002) although the implications of the latter have yet to be fully developed. A third federal agency, Parks Canada, does not have a direct mandate in the case study area, but it has been heavily involved in the BRNI. The integrity of the larger Bay of Fundy ecosystem influences Parks Canada's ability to fulfill its mandate within Fundy National Park—a potential core protected area for the biosphere reserve (Upper Bay of Fundy Biosphere Initiative 2002).

At the provincial level, there are four departments with significant interests in the study area. The Department of Natural Resources (DNR) is charged with managing the natural resources of the province in the best interests of its people (NB 2003c). Its responsibilities extend to all Crown lands, including all or any part of land covered by water, and tidally influenced submerged land and overlying waters, that are not privately owned in the Province of New Brunswick (NB 2003c). The Natural Areas Section of DNR has been involved in the overall BRNI, but responsibility for coastal habitat and associated wildlife lies within the mandate of the Wetlands and Coastal Habitat Section (NB 2003c). The Department of Environment and Local Government (DELG): provides integrated stewardship through planning and management of land use, zoning development, and waste management; ensures enforcement of, and compliance with, environmental legislation and regulations; and liaises with communities and local service districts (LSD's) on governance issues (New Brunswick 2003c). The Sustainable Planning Branch of the DELG is also responsible for implementation of the province's new Coastal Areas Protection Policy, in cooperation with other government partners (NB 2002a). While they do not deal with shorebirds or shorebird habitat specifically, DELG is nevertheless a major player given the impact of planning, governance, and enforcement functions on virtually all aspects of land use in

the area. From a natural resource management perspective, the Department of Tourism and Parks does not have direct regulatory authority in the area. However, it is responsible for generating economic prosperity through the responsible promotion and development of tourism-related activities (NB 2002b). Given New Brunswick's significant avitourism (birding) potential (Payne, Eubanks, and Packer 2003), and the increasing demand for shorebird viewing opportunities at the case study site, it has a direct influence on, and role in, sustainability issues there. Finally, the New Brunswick Department of Transportation (DOT), through its mandate to maintain a safe and efficient transportation system (NB 2003c), is responsible for the provincial highway that runs the full length of the case study site. The location of the road presents challenges in terms of site access and visitor safety. In addition, ongoing erosion is likely to necessitate repetition of highway realignment at some point in the future.

First Nations, regional, and local government bodies are also part of the institutional setting. Fort Folly First Nation adjoins the study area. Its people have strong historical ties to the region and continue to play an important role in the development of its cultural, environmental, and economic future. The Village of Dorchester is the largest community, and the only municipality, within the case study area. As part of a community development strategy, the people of the Dorchester area identified increased tourism as a key goal for economic development (Dorchester 1996). One of their specific objectives for achieving that goal was to organize the village to "benefit from the economic potential of shorebirds migrating through Johnson's Mills" (Dorchester 1996). Johnson's Mills itself, and Dorchester Cape, are small, unincorporated communities within a larger rural area known as a local service district (LSD). Residents of Rockport are also part of the LSD and are directly tied to the study area. The Tantram District Planning Commission, a regional arm of the provincial Department of Environment and Local Government, is responsible for collaborating with the LSD's, the municipality of Dorchester, and other community entities in the region on local planning and governance issues. Said towns and villages, such as Sackville and Memramcook, also have a stake, albeit less directly.

The setting would be incomplete if noninstitutional actors were overlooked. Much of the land in the area is private property, so there are myriad landowners—local and absentee, residents, cottage owners, agricultural interests, businesses, artists, artisans, and other individuals and groups whose use of the land and resources affects, and is affected by, the presence of shorebirds.

The Nature Conservancy of Canada has been purchasing property from willing landowners in the area since 1994 (MacKinnon 1998), and has secured some of the most critical habitat and access sites. Ducks Unlimited and the Eastern Habitat Joint Venture also have interests in the region, as do other conservation, and environmental groups. There are regional tourism associations, economic development organizations, festival committees, tourism businesses and operators, nontourism businesses, community associations, Acadian organizations—as at Monument Lefebvre, a National Historic Site—as well as school groups, families, and individuals. Although many do not participate directly, all influence the setting and contribute to the environmental, social, cultural, and economic characteristics of the study area.

Process Description

The concept of the Bay of Fundy region as a biosphere reserve candidate was proposed in 1999 (Young 2002). The Bay of Fundy Product Club—a cooperative organization linking tourism operators and agencies in New Brunswick and Nova Scotia for the purpose of developing high quality, sustainable nature tourism (RMA 1999)—then provided funding for Resource Management Associates (RMA), a consulting firm, to prepare a discussion paper on the subject (BoFEP-EWG 2000). *Exploring the Bay of Fundy's Potential as a Biosphere Reserve* formed the basis for the initial meeting on March 23, 2000 (BoFEP-EWG 2000). Participants modified the objectives outlined in the paper and added a vision statement. As preliminary feedback was encouraging, plans were made to continue with the project and begin broadening the scope of stakeholder involvement (BoFEP-EWG 2000). However, since the aim of the project was to build a strong coalition based on common interests, proponents recognized that it was not essential to define environmental or other issues at this stage. In fact, it was considered important *not* to become involved in issue-based debates (RMA 2002).

Nevertheless, issues arose almost immediately. In addition to support from the Bay of Fundy Product Club, the initiative also received support from the Bay of Fundy Ecosystem Partnership (BoFEP) (RMA 2000). BoFEP is an inclusive, flexible, and multidimensional organization that aims to foster wise conservation and management of the bay's resources and habitats by disseminating information, monitoring the ecosystem, and encouraging communication and cooperation among all Fundy stakeholders (BoFEP 2002). BoFEP's Ecotourism Working Group

was collaborating closely with the Product Club on the biosphere project. In May 2000, less than two months after the initial meeting, the working group provided an update at a BoFEP meeting (BoFEP 2000). It indicated that the biosphere reserve concept was likely to meet with some opposition from resource users. In response to the presentation, a representative from the Canadian Wildlife Service (CWS) also expressed concerns about the growing environmental impacts of ecotourism in the region, particularly with respect to shorebird viewing (BoFEP 2000). The problems with opposition from certain resource users were to become a “definitional issue” (Kofinas and Griggs 1996) later in the BRNI process, but this was the first indication that shorebird viewing already was one.

In hindsight, the initiative probably did not have a vision-building focus in the eyes of some stakeholders at this point. Had environmental stakeholders been better represented in early discussions and the first meetings, the problem might have been avoided (respondent). Instead, the potential impacts of biosphere-related ecotourism increases on critical wildlife habitat—specifically those of shorebird viewing and associated activities on shorebird habitat—were to remain the substantive issue for some stakeholders for more than a year. In order to return efforts to collaboration based on a shared vision, efforts had to be made within the BRNI to address shorebird-viewing issues.

At a public meeting in December 2000, project proponents felt stakeholders supported the continuation of the process, so the consulting firm Resource Management Associates (RMA) agreed to coordinate, develop, and promote the initiative (Young 2001). The ambitious goals and magnitude of the project, the diversity and number of potential stakeholders involved, and the often-contentious nature and history of resource management in the region, made unanimous support unlikely. However, these same characteristics necessitated a broad approach that encouraged communication, fostered cooperation, and built collaborative relationships. Meetings with community stakeholders began and were to continue for approximately a year and a half (RMA 2002b).

Support from many stakeholder groups grew over the next six to twelve months. Two multi-interest area advisory committees were formed (RMA 2002b), and the prospect of becoming involved in this type of process encouraged businesses, municipalities, scientific groups,

government agencies, and others to join (Upper Bay of Fundy Biosphere Initiative 2002). In October 2001, the advisory groups agreed to form a joint planning committee—referred to as the Planning Committee or the Management Committee—to promote, direct, and coordinate the initiative (RMA 2002b). The committee met approximately every four weeks from October 2001 to April 2002 (Young 2003). A project coordinator was also appointed in February of 2002 (RMA 2002a, Young 2003).

Meanwhile, the issues surrounding the effects of biosphere designation on shorebirds had yet to be adequately addressed. Tensions continued to escalate over the habitat protection-ecotourism debate (BoFEP 2001). The CWS outlined its concerns in a letter to BoFEP in the summer of 2001, and suggested that a formal workshop on the topic be held in the fall (BoFEP 2001). With assistance from BoFEP, Parks Canada, and other groups, the BRNI hired a professional facilitator and hosted the workshop on October 13, 2001 (Burnett 2002). Most participants were pleased with the results of the workshop and felt that it provided guidance as to the next steps to be taken within the BRNI to deal with ecotourism, shorebirds, and other habitat protection issues (respondents).

In the spring of 2002, however, new challenges surfaced. Stakeholder opposition to the BRNI emerged in some communities, particularly in the Advocate Region of Nova Scotia (respondent, Young 2002). As official government endorsement from the Province of Nova Scotia was conditional on community support, the Province decided to take a step back from the BRNI (Young 2003). Yet within the same time period, the Province of New Brunswick provided a formal letter of support (Young 2003). At this point, the initiative entered what some stakeholders termed a “hibernation period,” because the process seemed to be on hold, and very little information was made available for almost a year. A new executive director was brought into the initiative in the fall of 2002. On July 3, at the same time the researcher was completing the last of the interviews for this project, the first stakeholder meeting was held to determine whether or not there was sufficient support to restart the process, this time in New Brunswick only.

CHAPTER 4

RESULTS AND DISCUSSION

Qualitative and quantitative case study data are examined in chapter 4. After a brief description of the study respondents in section one, the remainder of the chapter is dedicated to the presentation and discussion of project results. The results are organized by criterion (see table 2.1), and are expressed in qualitative format, supplemented by quantitative data summaries (tables 4.1-4.8d). For simplicity, percentages are rounded to the nearest whole number. Results are based primarily on data obtained through the administration of the interview questionnaire (appendix D). Additional process details gleaned from meetings, meeting minutes, newspapers, web sites, newsletters, and working groups are used to enhance understanding of the process and its context as well as to ensure study validity. Summary statements distill the overall findings for each criterion. The chapter concludes with a tabular summary of the project results (table 4.9).

THE RESPONDENTS

Respondents were selected using a purposeful interviewing technique. Potential candidates were identified based on their participation in efforts within the BRNI process to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area. To reduce the possibility of response bias, the research protocol was designed to achieve balanced representation in three ways: equal representation from each of three local communities; equal representation of environmental, social, and economic interests; and finally equal numbers of federal/provincial agency representatives and local/regional representatives. As a result, twenty-one respondents were selected and successfully contacted. Twenty were able to participate in the study.

There were challenges associated with achieving balanced representation. Not all sectors had representatives with sufficient information on the BRNI process to complete the full questionnaire. To ensure adequate representation of all interests, the use of a modified questionnaire was necessary for five interviewees. In the other fifteen interviews, the full questionnaire was completed. In addition, the interdisciplinary nature of natural resource management and sustainability issues meant that it was not always possible to classify interests as

being strictly environmental, social, or economic. This was particularly true of the social and economic interest respondents involved in the case study. Consequently, representation was not perfectly equal. However, in an effort to comply with the protocol, it was balanced as follows:

- 1) There were an equal number of respondents from each community.
- 2) The number of environmental-interest respondents (9) was approximately equal to the number of social-economic interest respondents (11).
- 3) Seven respondents represented local residents, businesses, or nongovernmental groups; two represented local or regional government bodies; and eleven represented federal or provincial agencies. First Nations were unable to participate within the project time frame.

Respondents participated in the study on a voluntary basis with the assurance of complete confidentiality. In compliance with the policies and guidelines of the Department of Research Ethics at Simon Fraser University, neither the identity of the individual participants, nor the names of the groups, businesses, or agencies represented, can be revealed. Individual responses were pooled and identifying information removed prior to reporting the project results. Given the purpose, objectives, and scope of the project, it was not possible to interview every individual with a potential interest in the issues. However, efforts were made to ensure that the selection of respondents was as balanced and inclusive as possible.

EVALUATION RESULTS

In addition to qualitative data, two types of scores are presented in the results. Individual question scores appear in tables 4.1-4.8d. Each score is the average of responses with SA=+2.0, MA=+1.0, U=0, MD=-1.0, SD=-2.0, and N/A = not included in calculations. Criterion scores within the written text represent overall findings, and are summarized in table 4.9 at the end of the chapter. They were calculated by averaging the individual question scores within the criterion, or subsection thereof.

Challenge Identification

1. Identification of Issues

Stakeholders should be able to identify the major issues affecting the sustainability of shorebird viewing in the study area. This includes recognition of issues associated with other interests or groups.

All respondents identified issues with the potential to affect the sustainability of shorebird viewing in the study area. There was a large degree of overlap in the issues identified. When asked an open question about which issues affect, or have the potential to affect, the sustainability of shorebird viewing, only two respondents identified individual issues from all three perspectives: economic, environmental, and social. Responses focused predominantly on the environmental aspects of various issues. Some referred to economic concerns, but very few specific social issues were raised in response to the open question. As might be expected, respondents were more likely to identify problems closely related to their own interests; however, most identified at least one broad category of issue, such as visitor management or infrastructure, with significant implications for all three perspectives.

When respondents were asked specifically about the role of economic, environmental, and social factors, they identified far more issues associated with other interests than when they were asked the more general sustainability question. There was a significant increase in the number of social issues identified. Overall, there was a high level of agreement (criterion score 1.60, table 4.9) that economic, environmental, and social factors all play an important role in shorebird-viewing concerns. Environmental factors scored the highest level of agreement, followed by social factors (table 4.1). Most respondents also felt that economic factors were important (ibid.). Two respondents mildly disagreed, but one did so not because he/she considered economic interests unimportant, but rather because he/she felt that given the international significance of the site, conservation interests should have higher priority.

Table 4.1 Summary of Quantitative Responses for Identification of Issues Criterion

Identification of Issues	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q4 - Economic Factors	20	8	40	10	50	0	0	2	10	0	0	1.20
Q5 - Environmental Factors	20	19	95	0	0	1	5	0	0	0	0	1.90
Q6 - Social Factors	20	14	70	6	30	0	0	0	0	0	0	1.70

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%.

To a large extent, economic, environmental, and social issues are interrelated and often overlap. While it was not possible to classify every issue into one distinct perspective, eight general categories emerged. Issues identified by respondents as playing a role in the sustainability of shorebird viewing, sorted by category from most to least frequent, included:

- 1) *Biology, Ecology, and Environmental Change* – issues specific to the biological needs of shorebirds; the maintenance of shorebird populations; habitat requirements; the multijurisdictional management of migratory species; natural predation; mudflat ecology; scientific uncertainty; and the effects of changes in harvesting activities in the intertidal zone, sedimentation patterns (particularly due to the influence of tidal barriers), sea level rise, and climate change.
- 2) *Visitor Management* – issues surrounding the number, timing, and behavior of visitors, both those from the local area and those from other regions.
- 3) *Infrastructure* – issues related to the adequacy of current infrastructure and to the planning, management, and development of physical structures, facilities, or services. Some examples included: viewing platforms, blinds, boardwalks, trails, interpretation centers, parking lots, roads, signs, support buildings, washrooms, garbage cans, solid waste management, educational programming, literature, guides, staff scheduled at appropriate times, forums for discussing issues, transportation, safety, food services, and sewage.

- 4) *Coastal Development* – issues associated with personal, commercial, and industrial property development, land use regulations, and planning. Some issues raised were: the construction of new businesses and cottages, changes in land value, changing patterns of land ownership, reduction in quality and quantity of available wildlife habitats, concern about economic development that is inconsistent with the character and wishes of local communities and the ecology of the area, resource extraction, and lack of recognition of the value of “undeveloped” land, and full-cost accounting to accurately reflect the true price of development.
- 5) *Social and Community Concerns* – issues encompassing aspects of social costs, benefits, diversity, and change. Responses included: insufficient local input; the balance between local costs and societal benefits; inadequate diversity of voices, opinions, wishes, and community interests in decision making; fear; leakage of benefits outside the study area; pride; need for community support and buy-in; lifestyle choices; and reconciling the desire of some for economic growth with the desires of those who do not want change.
- 6) *Marketing and Economics* – issues of appropriateness with respect to the level and type of tourism promotion, the reasonableness of visitor expectations, consideration of site limitations, and consistency with local social, environmental, and economic conditions. Respondents also considered: the increasing significance of tourism to the local economy, potential for revenue, economic leakage, the primacy given to economic ramifications when difficult management decisions are required, and the importance of public access to the site.
- 7) *Site Access and the Road* – issues that result from relatively open access to the shorebird sites and proximity of the current road to them. Although these issues are related to visitor management and infrastructure, several respondents from different perspectives identified them as being sufficiently significant to warrant individual attention.
- 8) *Cost and Responsibility* – issues of financial, management, and civic responsibility. How much will planning, infrastructure, research, and management cost? Who is responsible? Who will pay?

- 9) *Other* – issues identified by three or fewer respondents: all terrain vehicle (ATV) use, pollution, the political system, and ecological vandalism.

Summary: Overall, there was strong agreement among respondents that environmental, social, and economic factors play an important role in the sustainability of shorebird viewing in the study area. Respondents identified issues from all three perspectives. Eight key categories of issue emerged: biology, ecology, and environmental change; visitor management; infrastructure; coastal development; social and community concerns; marketing and economics; site access and the road; and cost and responsibility for financial, civic, and management matters. Every respondent identified at least one issue that was repeated by other respondents; many identified several. Respondents were most likely to identify environmental issues, or to approach multifaceted issues from an environmental perspective, but they did not necessarily consider them to be the most important. While some respondents clearly did, others felt social or economic interests were more important, or had the potential to play a more significant role, in the sustainability of shorebird viewing. This demonstrated the respondents' recognition of interests other than their own, but reinforced the necessity of obtaining input from a variety of perspectives in order to ensure that all issues are identified in the process of formulating a plan to ensure the sustainability of shorebird viewing.

2. Purpose

Stakeholders must have a reason to participate. To be successful, there must be some agreement on the definition of what is to be achieved.

Respondents expressed an understanding of the interdependence of various interests, and all said that cooperation is necessary to address shorebird-viewing issues (criterion score 1.80, table 4.9). While there was some agreement on what stakeholders would like to achieve in a general sense, agreement on specific challenges, goals, and objectives was much less clear (criterion score 0.64, table 4.9). Communication was seen as an important, but challenging, element because not all stakeholders share the same point of view. Several respondents suggested that a forum where people could learn about, and discuss, other perspectives is necessary to build bridges, coordinate efforts, promote understanding and education, and encourage stewardship and responsibility. The

significance of cooperation to finding effective solutions was summed up by one respondent as: "If you want something to fail, do it in isolation."

Responses were split on the question of agreement on the major challenges to the sustainability of shorebird viewing (table 4.2). They also covered a large range. One respondent who strongly agreed said that consensus had been achieved, while another respondent who strongly disagreed said that *recognition* of the issues had not yet been achieved. This discrepancy is indicative of a common theme that emerged from respondents' replies; levels of understanding, information, and awareness among stakeholder groups are highly variable. Many felt this could be attributed to differing mandates, points of view, and competing interests, but suggested that the situation is improving through cooperative efforts. However, these efforts do not seem to involve all interests equally, as evidenced by the local opposition and misunderstandings surrounding them cited by some respondents. Indeed, it would be difficult to obtain agreement from most stakeholders if any of them felt that they were not involved in the decision-making process.

Table 4. 2 Summary of Quantitative Responses for Purpose Criterion

Purpose	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q7 - Agreement on Challenges	19	2	11	5	26	2	11	9	47	1	5	-0.11
Q8 - Cooperation	20	16	80	4	20	0	0	0	0	0	0	1.80
Q9 - Goals and Objectives	16	7	44	5	31	1	6	1	6	2	13	0.88
Q10 - Agreement on Goals and Objectives	19	6	32	10	53	3	16	0	0	0	0	1.16

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore their sum equals 100% +/- 1%.

A majority of the sixteen respondents who considered the question applicable did have goals and objectives for shorebird viewing in the study area (table 4.2). For the most part, the goals and objectives of those who agreed directly reflected the mandate/perspective of their interest group. Four respondents said the question was not applicable, and two respondents who did answer said that they were not directly involved, or were unsure about their role. Of the two remaining respondents, one gave no indication as to his/her reasons for disagreeing and the other wanted to make certain people understood that the BRNI process is not about shorebird viewing. While it

can include such issues, its focus is meant to be much broader and to embrace a larger region and multiple issues.

Finally, the respondents interpreted and responded to question 10 in general terms (table 4.2). Although several alluded to a "feeling of agreement," they did not identify specific goals, objectives, or concrete agreements. Instead, they talked about relationship building, improved communication, cooperation, and common understanding that were developing between tourism/economic and conservation interests. While any one of these may provide sufficient incentive to participate in a process, the combination suggests that progress is being made towards creating a shared vision. However, three respondents from the local communities had a different perspective. The first said he/she was not aware of any agreement. The second went further by saying that stakeholders had not met or cooperated. The third said that although he/she considered himself/herself to be part of a larger group that does agree, for the most part, local people do not. Thus, while there did seem to be some agreement, it was not uniform across all interest groups.

Summary: All respondents recognized the need for cooperation among interests to successfully address the concerns of each. The majority of respondents felt there was general agreement on what stakeholders would like to achieve, indicating that progress has been made towards creating a shared vision, or that the potential exists to establish one. However, agreement on a vision was not as uniform as some believed it to be. Differing perspectives and levels of awareness, involvement, understanding, and information contributed to this variability. Some respondents indicated that local communities had not been sufficiently involved in cooperative efforts and therefore were more likely to oppose any such agreements. Finally, while goals and objectives were set by individual groups, there did not seem to be specific, shared goals and objectives.

3. Level of Support

Stakeholders should be committed to addressing shorebird-viewing issues and believe that the process provides a viable opportunity for resolving them.

A majority of the respondents who were asked indicated that there is a reasonable opportunity to resolve shorebird-viewing issues within the BRNI process, and most contributed resources towards those efforts (criterion score 1.27, table 4.9). The true level of support was more difficult to assess. In spite of general agreement on process appropriateness, most respondents indicated that they could achieve their goals and objectives without participating (criterion score -0.74, table 4.9). In addition, not all respondents had sufficient knowledge of the process to answer all questions. Three of the five respondents who subsequently completed the modified questionnaire were local community residents. Therefore, conclusions regarding the level of support should be considered within that context. A double asterisk was used to denote results where the sample size was affected by the use of the modified questionnaire (table 4.3).

Table 4.3 Summary of Quantitative Responses for Level of Support Criterion

Level of Support	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q11 - Alternatives *	19	7	37	7	37	1	5	1	5	3	16	-0.74*
Q12 - Resources												
a) Time	15	10	67	5	33	0	0	0	0	0	0	1.67**
b) Personnel	14	9	64	4	29	0	0	1	7	0	0	1.50**
c) Financial	14	5	36	3	21	0	0	6	43	0	0	0.50**
d) Other	10	6	60	3	30	1	10	0	0	0	0	1.50**
Q13 - Process Appropriateness	15	9	60	3	20	1	7	1	7	1	7	1.20**

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%. *Agreement with question represented negative response; therefore the sign of the score is reversed. **Number of respondents reduced due to use of modified questionnaire.

All respondents contributed at least one type of resource to the process (table 4.3). Respondents were most likely to have contributed time, personnel, or other resources—such as administrative support, meeting space, marketing or awareness, training, data, maps, information, facilitators, contacts, experts, and consultants. They were less likely to have contributed financially, although several provided substantial amounts. Some individuals supplied resources personally, but indicated that they had a limited ability to continue doing so. Many said they would have liked to contribute more. Three respondents indicated that there was significant potential for them to do more if the process were defined more clearly, its benefits were better explained, and if it were

publicly endorsed by government agencies and/or politicians. It should be noted that one respondent said the question was not applicable if the resources had to be specifically earmarked for addressing shorebird-viewing issues, but was willing to answer for the overall BRNI process. His/her responses did not affect the overall proportions of the results, so they were included. It is not known if any other respondents chose to answer from a broader perspective than what was asked in the question. In any case, the two are interrelated, so resources supplied to the larger process would influence its capacity to address shorebird-viewing issues.

While most respondents agreed on the appropriateness of the BRNI process for resolving shorebird-viewing issues (table 4.3), support was often conditional. Some respondents felt it was but one option of several. Others who agreed seemed to do so more on a theoretical level. They explained that it had potential, but expressed uncertainty regarding the current status of the initiative, which seemed to be "in hibernation." Two respondents cited examples of how the process had already improved things, while another strongly agreed, but said the issues would get resolved regardless. Of those who disagreed, one said the potential was there, but that the initiative was focusing on broader issues of inclusion and process. The other strongly disagreed, and simply stated that the BRNI was "not the process to deal with shorebird-viewing issues." Finally, one respondent was undecided because he/she felt that not all stakeholders were buying in, and he/she thought any solutions would be unlikely to work if they did not.

At this time, there does not appear to be strong commitment to the process from all stakeholders. Most respondents did not feel that participating in the BRNI process was necessary to achieve their goals and objectives (table 4.3). (Question 11 was worded such that agreement indicated the process was *not* required.) Some suggested that while the process has tremendous potential, it has not engaged people enough to secure the necessary buy-in from various stakeholder groups. Indeed, not all respondents were even aware of it. Again, several felt that the process provides one way, but not the only way, to address the issues. One believed there was no value to being involved. On a more positive note, others said that while they could achieve their objectives or mandates without participating, it would probably be better to resolve them together. There were also respondents who believed participation in the process is required, particularly if long-term, regional, and ecosystem objectives are to be met.

Summary: Stakeholders are committed to addressing shorebird-viewing issues, particularly those they deem most significant, and those that are directly derived from group or agency mandates. However, they are not necessarily committed to addressing them through the BRNI process. Although most believed that the BRNI process has the potential to provide a viable opportunity for resolving the issues, the majority indicated that they could achieve their objectives without participating. In addition, some stakeholder groups, particularly at the community level, were not familiar with the process. Conclusions regarding the level of support must be considered within that context.

Process Structure

4. Inclusive and Effective Representation of Interests

All parties with an interest in the issues and outcome, as well as those with authority to make or implement decisions, and those who could block implementation or undermine the process, should be allowed to participate. The appropriate form(s) for this participation may vary. Representatives who do participate must be accountable to their constituency.

Overall, respondents expressed concern about the level of stakeholder representation in the BRNI process (criterion score 0.32, table 4.9). Most felt those who were participating were accountable (criterion score 1.14, table 4.9); however, not all respondents were asked the accountability questions (see table 4.4). As previously mentioned, five respondents completed a modified questionnaire because they did not have sufficient information to answer detailed process questions. In terms of the inclusiveness and effectiveness of representation of all interests in the process, that is a significant finding in and of itself.

Respondents were asked an open question (Q14) regarding who had an interest in the issues. Most recognized that multiple interests have a stake and simply did not try to name them all. However, some identified very few stakeholders and did not seem to be aware that others might wish to be involved, or have a mandate to be. In total, respondents identified fifty groups, businesses, and agencies with varying levels of interest in shorebird conservation and tourism development issues. In alphabetical order, the ten most common responses were:

- 1) Canadian Wildlife Service (CWS)
- 2) Governments: federal, provincial (NB, NS), municipal
- 3) Local residents and landowners
- 4) Local tourism operators and businesses
- 5) Local and regional tourism industry associations
- 6) Nature Conservancy of Canada (NCC)
- 7) NB Department of Natural Resources
- 8) NB Department of Tourism and Parks
- 9) Town of Sackville
- 10) Village of Dorchester

A complete listing of all fifty interests identified by respondents is included in appendix F. (To ensure respondent confidentiality, the names of individuals are not included on this list.) While it was not expected, or considered desirable, for each interest in this compilation to participate to the same degree, some respondents felt that there were major stakeholder groups that were not sufficiently involved.

Table 4.4 Summary of Quantitative Responses for Representation Criterion

Representation	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q15 - Representation	19	3	16	5	26	6	32	5	26	0	0	0.32
Q16 - Accountability												
a) Process	14	8	57	2	14	2	14	2	14	0	0	1.14**
b) Interests	14	8	57	1	7	3	21	2	14	0	0	1.07**
c) Public	14	9	64	2	14	0	0	3	21	0	0	1.21**

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%. **Number of respondents reduced due to use of modified questionnaire.

When asked, respondents indicated that all stakeholders should be allowed to participate if they wish to. Some respondents said that relevant interests were already represented in the BRNI process, while many were unsure or felt they were not (table 4.4). Those who disagreed said the following groups were missing: local communities from both sides of the bay; local businesses, operators, associations, and artisans; the Department of Fisheries and Oceans; the Tantramar

District Planning Commission of the NB Department of Environment and Local Government; NB Department of Natural Resources; First Nations; school groups; harvesting groups; and the Province of Nova Scotia. One respondent said it was difficult to know for certain who was missing because the boundaries of the proposed biosphere reserve were not clear. The development of a method for representing all interests will be a challenge because many individuals equated inclusiveness with being able to attend personally. Respondents indicated that much work would be required to build relationships and increase levels of trust, within and among stakeholder groups, to the point where they would have the confidence to allow others to represent their interests.

A majority of respondents felt that representatives participating in the BRNI process were accountable. They said most followed the rules, participated in good faith, adequately represented the interest groups they spoke for, and respected agency regulations and nonnegotiable issues (table 4.4). Some respondents were less certain or disagreed, and cited concerns regarding the representation of personal versus group interests, the limited level of stakeholder involvement, confusion about the process itself, and a lack of understanding and awareness—especially in the broader public—as reasons for doing so.

Summary: Collectively, respondents identified more than fifty individuals, groups, businesses, and agencies with an interest in shorebird conservation or tourism development issues in the study area. They felt the BRNI process should be as inclusive as possible. While many respondents recognized this as one of the goals of the process, several felt it had not yet been achieved in practice. Five respondents were not sufficiently familiar with the process to answer all questions. This supports interview data that suggested not all interests are represented in, or aware of, the process. In particular, the inclusion of community interests seems to be limited. The majority of respondents felt process representatives were accountable, but called for greater clarity in defining the process and specific accountability mechanisms. In fact, many challenges identified thus far have related to process definition. This, in turn, was undoubtedly influenced by the changing status of the initiative and the corresponding effects of those changes on its stage of development. (For a more detailed explanation, see the case study description in chapter 3 and conclusions in chapter 5.)

5. Access to Resources

All legitimate interests who wish to participate have adequate funding, training, information, and expertise to enable them to do so in a meaningful way.

In almost all cases, respondents felt that increasing access to resources would improve the process. Current levels of funding were considered inadequate (criterion score -1.05, table 4.9). Access to information, training, and the process is better, but also needs to be improved (criterion score 0.43, table 4.9). The uncertainty inherent to the management of natural and social systems seemed to affect responses; however, it was difficult to determine the extent of its role in influencing respondents' perceptions of resource sufficiency.

Most respondents disagreed when asked if they had adequate funding to participate in the process (table 4.5). Almost all said that funding was limited. Most had no source of dedicated funding, nor any long-term commitment, to ensure financial support for continued participation, or for the implementation of any proposed agreements or solutions. One respondent disagreed, even though his/her group had made significant financial contributions, because he/she felt they should be doing more. Of those who said they did have adequate funding to participate, two were supported, and one was willing to commit personal resources, because they and/or their groups felt the potential benefits of participation outweighed the costs. Interestingly, the remaining respondent said that he/she did not currently have any specific funding for the process, but that funding per se was not the real issue. He/she said that if participation in the process became a political, governmental, or agency priority, then funding would be found.

Table 4.5 Summary of Quantitative Responses for Access to Resources Criterion

Access to Resources	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q17 - Adequacy of Resources												
a) Funding	19	2	11	2	11	0	0	4	21	11	58	-1.05
b) Information	20	4	20	6	30	0	0	9	45	1	5	0.15
c) Training	20	4	20	10	50	1	5	2	10	3	15	0.50
d) Access to Process	20	4	20	11	55	1	5	2	10	2	10	0.65

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%.

Half of the respondents said they had adequate information to participate; the other half said they did not (table 4.5). Some answered from a process perspective, but most answered in terms of specific research and information requirements. Those concerned about the process said it was difficult to obtain information about what was going on. The others identified specific research and data that were missing. Several suggested that there would always be a need for more and better information. While information on some issues did appear to be lacking, the assessment was complicated by the differing perceptions of respondents when it came to defining "adequate" information.

Many of those who considered their training adequate (table 4.5) said the specialized skills they could offer were underutilized within the process. Some were disappointed that they had not been given an opportunity to contribute in this area and suggested that they could play a larger role if asked. One respondent said the process was not a high enough priority to warrant the participation of such individuals from his/her group. Of those who disagreed, most did not have enough such people to meet the additional demands of the process. Some had never received training, but thought it would be of benefit to board members and possibly to themselves, as long as it did not detract from their other responsibilities.

The majority of respondents considered the process to be reasonably accessible (table 4.5). However, half of those said they did not have sufficient funding or personnel to take full advantage of that access, even though they were welcome to do so. Others disagreed, or were unsure, and indicated that they had very little, or no, knowledge of the process and were unsure how to become involved. Two respondents were concerned that their access was due to personal interest and contacts, rather than process design. This reinforced the necessity of incorporating mechanisms to keep stakeholders informed and involved, a recommendation put forward by one respondent as a possible solution to some of the access issues identified.

Summary: Most respondents felt that inadequate access to one or more types of resources limited their ability to fully participate in the process. The majority agreed that the process itself was open and would welcome newcomers as participants, but in many cases a lack of dedicated funding hindered accessibility and participation. Local interests seemed less likely to be aware

of, or represented in, the process than other stakeholders did. In addition, training and information were limiting factors for some. Although the majority of respondents said someone within their group had adequate training, the availability of such individuals was constrained by human resource capacity issues and by the relatively low priority some groups assigned to the process. There were exceptions to this trend, and a few groups suggested that they could provide additional resources in this regard. Half the respondents felt that more information was required. While it was clear that uncertainty was a factor in how respondents answered the information question, it was not possible to define its exact role. Overall, at this point in time, approximately 80% of respondents do have adequate resources to participate in the process in a meaningful way.

6. Process Design

Stakeholders should have an understanding of the process. Roles and responsibilities should be clearly defined to enable stakeholders and the general public to understand how, why, and by whom decisions are made. The process should be adaptive and flexible.

Although the BRNI process was started more than 2.5-years ago, its scope, rules, procedures, roles, and responsibilities have yet to be fully defined. (The reasons for this are discussed in chapters 3 and 5.) To a certain extent, this may have been unavoidable; however, as a result, many stakeholders do not have a good understanding of the process (criterion score -0.10, table 4.9). Concerning shorebird-viewing issues, many were unsure or unclear about who is responsible for making decisions, how decisions are made, the reasons why they are made, and the ease with which such information can be obtained. All respondents who were asked felt the process was flexible and could be adapted to accommodate new information or circumstances (criterion score 1.75, table 4.9).

For many stakeholders, it is not clear who is responsible for making decisions about shorebird viewing in the study area (table 4.6). Although only a small majority of respondents were unsure, or did not know the answer to this question, many of the others qualified their responses. Of respondents who said it was clear, most agreed because it was clear to them personally, or because they felt that the mandate of each agency was clear to those within it. However, many acknowledged that those roles were probably *not* clear to other agencies, stakeholders, or the

public. This was confirmed by the responses of several interviewees, which ranged from “clear to individual agencies” and “most people realize [who is responsible]” to “not clear to everyone,” “clear as mud,” and “couldn’t be any fuzzier.”

Only two respondents said that it was clear how decisions are made (table 4.6). The other 90% of respondents said they were unsure or that it was not clear. While some said they understood how decisions were made within their own group, they did not necessarily think other groups understood, and vice versa. Some felt it was difficult to develop such understanding and awareness because of the number and complexity of issues and authorities, and because even internally, mandates are often clearer than the processes to achieve them.

Table 4.6 Summary of Quantitative Responses for Process Design Criterion

Process Design	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q18 - Understanding												
a) Who	20	4	20	5	25	1	5	7	35	3	15	0.00
b) How	20	1	5	1	5	5	25	8	40	5	25	-0.75
c) Why	19	2	11	8	42	3	16	4	21	2	11	0.21
d) Ease of Obtaining Information	20	3	15	6	30	4	20	5	25	2	10	0.15
Q19 - Flexibility	12	9	75	3	25	0	0	0	0	0	0	1.75**

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%. **Number of respondents reduced due to use of modified questionnaire.

The reasoning behind decisions is clear only to a small majority of respondents (table 4.6). Respondents identified poor communication, complicated management arrangements, mixed ownership, and the differing goals and objectives of various stakeholders, as possible factors that affected stakeholders’ perceptions. Although there was cautious optimism expressed that recent efforts at collaboration are improving the situation, progress is difficult and will require much time and groundwork (respondent).

Opinions were also split when respondents were asked if information on decision making could be easily obtained (table 4.6). Most of those who agreed did not elaborate on their responses. Of

those who did, one respondent said it was usually possible to get information. Three other respondents said that they personally had access to some information, but that it might be difficult for other stakeholders to obtain it. Some respondents were unsure, or had not tried to get information. Respondents who disagreed said that it was sometimes difficult to know what information was available and how to get it. This was cited as a significant problem within the BRNI context. Several respondents said that the process has not been clarified, nor its structures formalized, and that much more effort was needed to secure stakeholder buy-in for the planning process. As a result, many consider its design to remain largely theoretical, so they do not know who is responsible for what. According to one respondent, this sometimes makes it seem “like everyone is speaking a different language.”

Respondents generally agreed that the process is flexible (table 4.6). Again, some qualified their responses, saying that the process was not sufficiently advanced to make a final judgement. Others asserted that it had already been used to identify issues and help resolve them. The “huge cultural shift in approach” was cited as evidence that the process itself had changed to accommodate new information, understandings, and relationships.

Summary: Roles, responsibilities, and procedures are not defined clearly enough for everyone to understand how, why, and by whom decisions are made. Levels of clarity, understanding, and participation varied tremendously among stakeholder groups. There are significant opportunities to reduce this disparity and uncertainty by promoting balance and understanding through greater attention to the elements of process design. It is important to recognize, however, that while uncertainty surrounding the BRNI process has contributed to stakeholder confusion, and better process design would almost certainly reduce confusion, many of the underlying causes existed prior to the initiative’s inception.

Process Function

7. Efficiency

In striving to make good decisions regarding shorebird-viewing issues, the process should coordinate the efforts of all interests and make good use of time and resources.

Most respondents were unsure when they were asked if decisions about shorebird-viewing issues were being made within the BRNI process (criterion score = score = 0.00, tables 4.9 and 4.7). Some simply did not know, while others said that the process had not progressed to that stage. The respondents who disagreed felt that the process was not having a major impact on how shorebird-viewing issues were being dealt with. One said that decisions were being made, but not within the process. The other said decision making was an inappropriate process goal because the mandate belonged to others. Those who agreed said that although decision making was not yet formalized, and things were moving slowly, much progress had been made in terms of shifting away from unilateral, isolated decision making towards more cooperative efforts.

These results seemed somewhat inconsistent when considered in conjunction with other data, such as those on process effectiveness (criterion 8). However, this may have been due to variations in the underlying expectations and assumptions of respondents, some of which occurred as a result of uncertainty surrounding the process, its changing status, and elements of process design. These effects are discussed in more detail in chapter 5.

Table 4.7 Summary of Quantitative Responses for Efficiency Criterion

Efficiency	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q20 - Decisions Get Made	12	1	8	2	17	7	58	0	0	2	17	0.00**
Q21 - Cost	2	1	-	1	-	0	0	0	0	0	0	-
Q22 - Time	2	1	-	1	-	0	0	0	0	0	0	-
Q23 - Process Coordinator	16	8	50	4	25	3	19	1	6	0	0	1.19**

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%. **Number of respondents reduced due to use of modified questionnaire.

The lack of formal process decisions limited the applicability of questions pertaining to the reasonableness of cost and time requirements for the BRNI process. As a result, only two respondents provided information about time and cost, making quantitative analysis inappropriate (table 4.7). Qualitatively, both said that current costs were low and the amount of time reasonable. One said that most solutions would not be that expensive, but that getting cooperation and ensuring everyone understands why decisions are necessary, would be. One

respondent felt the process was moving quickly, the other slowly, but both considered the amount of time to be appropriate and acceptable.

A majority of respondents believed that someone is coordinating the process (criterion score = score = 1.19, tables 4.9 and 4.7), but there was some confusion as to exactly who is responsible. Four felt it would be of benefit to the process if the roles of the coordinator and the committee were defined more clearly. Four respondents said this information was already quite clear, and three said the roles were still in flux. One respondent said changes to the structure of the committee would improve its probability of success. Although most respondents indicated that there was room to improve in terms of effectiveness, with the exception of "poor communication," they were not overly critical of current efforts. Most were willing to allow some leeway, given the enormity, and predominantly volunteer nature, of the task.

Summary: One paid individual and a volunteer planning group/committee are responsible for coordinating the efforts of all interests within the BRNI process, but not all respondents have up-to-date information on their identities, roles, and tasks. Their ability to clearly define responsibilities and to function effectively is limited by the uncertainty surrounding the process itself. Process uncertainty is having a negative impact on other aspects of efficiency as well. For example, decisions that affect the sustainability of shorebird viewing are undoubtedly being made, but according to most respondents, they are not yet occurring at a formal level within the process. Only three of twelve respondents felt they were. Although two said decisions were reasonably efficient in terms of cost and time, it is not known if other stakeholders would have agreed, given their contention that such decisions had not yet been made.

8. Effectiveness

Although many respondents said that formal decisions were not yet occurring within the BRNI process, all but one answered most questions on process effectiveness. Possible reasons for this seeming inconsistency are discussed in chapter 5.

Meaningful Participation

An effective process should provide meaningful opportunities for stakeholders to participate in problem solving and in the crafting of mutually acceptable solutions to shorebird-viewing issues.

Stakeholders want meaningful opportunities to participate in problem solving. Ninety percent of respondents felt that decisions about shorebird-viewing issues could be improved by increasing collaborative efforts (criterion score 1.60, table 4.9). More formal and informal opportunities for collaboration within the BRNI process are required (criterion score 0.69, table 4.9).

Nearly all respondents agreed that increasing the level of collaboration would produce better decisions about shorebird-viewing issues (table 4.8a). Some agreed in principle, saying that things could always be improved, but felt that the level of collaboration was already quite good. Others said a balanced, collaborative approach to planning was crucial to the long-term success of efforts, but either felt this type of approach did not currently exist, or that stronger political commitment and additional work were necessary to make it operational. One of the respondents cautioned that placing too much emphasis on collaboration could result in things being “studied to death” rather than improving decisions.

Table 4. 8a Summary of Quantitative Responses for Meaningful Participation Section of Effectiveness Criterion

Meaningful Participation	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Cooperation and Collaboration												
Q24 - Formal Mechanisms	19	4	21	5	26	7	37	3	16	0	0	0.53
Q26 -Informal Mechanisms	20	4	20	11	55	3	15	2	10	0	0	0.85
Q27 - Increasing Would Help	20	14	70	4	20	2	10	0	0	0	0	1.60

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%.

Approximately half of all respondents were unsure or disagreed when asked if there were formal opportunities for interaction or collaboration to address shorebird-viewing issues (table 4.8a). Of those who agreed, some said opportunities were limited, while others said such efforts were taking place with increasing frequency. It was not always easy for stakeholders to correctly

identify the sponsor of formal undertakings. As a result, opportunities like the BRNI workshop on habitat protection and ecotourism—which was conducted primarily as a result of concerns about the effects of increased development on migratory shorebirds—were sometimes not considered by respondents in their answers to this question.

Respondents were more likely to agree that there were informal opportunities for collaboration (table 4.8a). They identified drop-in visits, telephone conversations, visits to the site during peak migration, gatherings and meetings, tours, experts—amateur and professional, volunteers, and personal contacts at various agencies and groups as the means for such interactions. They said people involved in the issues usually tried hard to make themselves available. Three respondents were unsure about potential opportunities. One said he/she could probably get information quite easily, one felt “out of the loop” but wanted to be more included, and the third did not comment. Of those who disagreed, one was not aware of any opportunities, while the other simply felt more were needed.

Summary: While most respondents identified informal opportunities for interaction and collaboration, many were either not aware of formal ones, or did not recognize those that existed as being part of the BRNI process. Overall, respondents expressed a strong commitment to using increased collaboration as a vehicle for improving decision making about shorebird-viewing issues.

Sustainability Principles

Decisions should be based on adequate information and assessment. It should be clear that they consider the full range of social, environmental, and economic concerns and values, while remaining consistent with applicable regulations, principles, and policies.

When analyzed collectively, respondents' replies indicated that sustainability principles were being considered somewhat in decision making (criterion score 0.62, table 4.9). However, not all received equal priority. Several obstacles to effective and balanced consideration were identified.

There were some concerns expressed regarding the adequacy and availability of information, research, and assessment being used for making decisions about shorebird-viewing issues (table 4.8b). Respondents who agreed on the sufficiency of these resources tended to focus almost exclusively on biological data. However, when asked about the accessibility of that information, nearly half acknowledged that accessibility is a problem, particularly for nonspecialists and the public. Respondents who said resources were inadequate identified information gaps in the following areas: basic tourism research—statistics, trends, preferences, attitudes, willingness to pay, economic feasibility studies, infrastructure requirements, potential impacts, and visitor management strategies; road issues—location, potential changes, and safety; expectations of potential developers, managers, local people, and visitors; land ownership and use; community change; mudflat ecology; and the effects of interactions between birds, predators, and people. Most respondents in this group felt an adequate amount of biological information was already available.

For the process to be effective from a sustainability perspective, decisions made within it should consider a range of environmental, economic, and social issues and values. Respondents were asked about twelve issues of concern, four from each of the three perspectives. Responses varied markedly, but aggregated scores indicated that environmental, economic, and social perspectives are being considered to some extent. Many respondents chose not to provide explanations for their answers to this series of questions. Quantitative data are summarized in table 4.8b.

Environmental issues and concerns were the most likely to be considered (score 0.78, table 4.8b). Respondents said that it was becoming clearer to most that decisions need to consider shorebird conservation and habitat protection, but that it was still not clear how to balance them with development interests. It was much less clear, however, whether or not decisions consider ecosystem function and cumulative effects. In terms of ecosystems, respondents said that although the situation is improving, there is still not a good understanding of mud flats and salt marshes, so it is difficult to ensure that decisions consider them appropriately. Cumulative effects were identified as being important, but many did not think it was clear that they are being addressed. One respondent who strongly disagreed said that addressing cumulative effects is difficult, and no one in the country does it well, but that the BRNI process provides a great opportunity to do so.

Table 4.8b Summary of Quantitative Responses for Sustainability Principles Section of Effectiveness Criterion

Sustainability Principles	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q28 - Availability of Info.	20	5	25	7	35	3	15	5	25	0	0	0.60
Q29 - Clear Decisions Consider												
Environmental Interests												
a) Shorebird Conservation	19	9	47	7	37	3	16	0	0	0	0	1.32
b) Habitat Protection	19	7	37	9	47	3	16	0	0	0	0	1.21
c) Ecosystem Function	19	3	16	8	42	5	26	2	11	1	5	0.53
d) Cumulative Effects	19	2	11	6	32	6	32	1	5	4	21	0.05
												0.78
Social Interests												
e) Visitor Management	19	3	16	11	58	4	21	0	0	1	5	0.79
f) Wishes of Community	19	2	11	5	26	8	42	2	11	2	11	0.16
g) Social Structure and Services	18	3	17	6	33	6	33	3	17	0	0	0.50
h) Lifestyle and Character	19	0	0	11	58	7	37	1	5	0	0	0.53
												0.49
Economic Interests												
i) Tourism Development	19	7	37	8	42	3	16	1	5	0	0	1.11
j) Employment Oppor.	19	3	16	9	47	6	32	0	0	1	5	0.68
k) Infrastructure Req.	19	5	26	6	32	5	26	2	11	1	5	0.63
l) Other Development	16	0	0	5	31	9	56	2	13	0	0	0.19
												0.65
Q30 - Mutual Standards	18	3	17	4	22	7	39	4	22	0	0	0.33

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%.

Economic issues were the next most likely to be considered (score 0.65, table 4.8b). Most respondents not only agreed that tourism development is considered in decision making, they also suggested it is one of the factors that created the need for a process. Many said shorebird viewing, and activities related to it, are the main focus for development in the Village of Dorchester, even though shorebirds do not congregate within village limits. It was felt that Dorchester would be the most likely recipient of any additional employment opportunities. However, some were skeptical that there would be much change in employment levels, and were concerned those opportunities that did arise would not go to local people. The hiring of guides

from Ontario was cited as evidence that this is already happening. Almost all respondents said improvements to infrastructure would be required to accommodate such changes. Not all respondents were convinced that these needs were being realistically evaluated. Some suggested this was because discussions have focused primarily on viewing structures, such as platforms and blinds, and have not yet considered the broader implications of visitor management infrastructure associated with transportation, safety, facility, and waste-disposal requirements. It should be noted, however, that some stakeholders do not see any need for additional infrastructure. The implications of other, nontourism, development opportunities remain largely unexplored; indeed, not everyone is in favor of development—tourism or otherwise.

Respondents were least likely to feel that social issues had been considered (score 0.49, table 4.8b). Of the issues in this category, visitor management received the highest agreement rating. The majority of respondents agreed that visitor management is being considered, but some were unsure, and one very strongly disagreed. Several respondents said that improvements are needed. To be effective, one respondent stressed that management measures must be in place during all peak-viewing times, not just when those times coincide with a 9-5 work schedule. It was much less clear whether or not current decisions consider effects on the lifestyle/character or social structure and services of surrounding communities. Three respondents said that these issues have always been of concern to some local people, but many said it is not clear that they are considered, except possibly for the Village of Dorchester. For the majority, it was not clear that the wishes of the local communities were being considered. However, as some respondents pointed out: “the community” is not a homogeneous group, community members do not necessarily agree among themselves as to their wishes, those who disagree tend to have a disproportionately large voice compared to others, and there are distinct differences between the opinions of community members from Dorchester Cape, Johnson’s Mills, or Rockport versus those from Dorchester or Sackville.

Overall, there do not seem to be any formal, mutually adopted standards in place to guide decisions about shorebird-viewing issues (table 4.8b). While the majority of respondents were unsure or disagreed about the existence of such standards, several said that there is general, informal agreement on some basic principles. Translating this agreement into concrete

management strategies that are consistent with the responsibilities of all parties was viewed as a challenging task.

Summary: Process effectiveness is impacted by the level of comprehensiveness with which information, concerns, issues, values, and standards are formally incorporated into decision making. Recognizing that information will never be perfect, and that there will always be some degree of uncertainty, the adequacy of biological information does not appear to be an impediment to good decision making, although its accessibility may be. This does not suggest that all environmental research needs have been met, or that gaps do not exist, but rather that there is a base of knowledge that can be used to inform decision making. In contrast, significant information gaps have been identified in both social and economic areas. These findings may partially explain respondents' perceptions that environmental issues and concerns were more likely to be considered in decision making than economic and social ones. Aggregate scores indicate that all three perspectives are being considered; however, the levels of agreement/disagreement on the extent of that consideration varied among respondents, and from issue to issue. Overall, respondents felt social issues were the least likely to be included in decision making. A set of mutually adopted standards could help stakeholders integrate these issues, and ensure that decisions are consistent with applicable principles, regulations, and policies, many of which are unfamiliar to them. Such standards have not yet been developed.

Acceptability

The overall process should reflect local aspirations and produce wise and stable decisions and agreements.

Although levels of understanding have improved, disagreement and uncertainty caused some respondents to express reservations about the ability of decisions to endure (criterion score 0.57, table 4.9).

While most respondents agreed that decisions are likely to be acceptable to stakeholders and the public at the present time (table 4.8c), some were concerned about the stability of the situation. Several said considerable progress had been made in terms of groups understanding each other's

interests, and the significance and sensitivity of the shorebirds themselves. But there is still disagreement and dissent over some issues. Even when stakeholders and the public accept that decisions are being made to protect species, they do not necessarily understand subregional planning issues and implications at the local level, such as the need for rules to promote responsible conduct, and the appropriateness/inappropriateness of certain land uses or development proposals (respondents). It was generally felt that education and stewardship activities could be used to bridge this gap; however, there is some expectation that management and decision making had the potential to become crisis-driven if efforts aimed at increasing dialogue, communication, and cooperation did not become more proactive.

Table 4.8c Summary of Quantitative Responses for Acceptability Section of Effectiveness Criterion

Acceptability	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q31 - Acceptable to Interests	19	3	16	13	68	2	11	1	5	0	0	0.95
Q32 - Acceptable to Public	19	4	21	11	58	4	21	0	0	0	0	1.00
Q33 - Improved Implementation	12	2	17	2	17	2	17	3	25	3	25	-0.25**

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%. **Number of respondents reduced due to use of modified questionnaire.

The overall levels of agreement on decision acceptability did not translate into improved ease of implementation (table 4.8c). Those who did not agree said the process really had not helped and, in fact, was somewhat of a hindrance in its early stages. Some individuals (5/12 or 42%) felt it was now approaching neutrality with respect to its effects on their ability to implement decisions, or that there was potential for further improvement in the future. One respondent was concerned that implementation would become more difficult if the BRNI was successful. Others said it really had not had much effect because most decisions are still being made outside the process and stakeholders seem satisfied with that. Those who felt the process has made implementation easier said it brought groups together, improved relationships, resolved misunderstandings, increased trust, and heightened awareness that issues surrounding shorebird viewing are not just

important from environmental and development perspectives, but that they form part of the social fabric of communities. Two respondents who disagreed also recognized some of these benefits.

Summary: At the present time, decisions about shorebird-viewing issues seem to be acceptable to most stakeholders and the public, but many such decisions are not made within the BRNI process. Uneven levels of awareness surrounding decisions and their implications, the difficulty of their implementation, and concerns about their stability highlight the difference between acceptability and informed support. Stakeholders from all three perspectives have made assumptions and confused the former with the latter. In order to produce wise and stable decisions and agreements, this study suggests that greater efforts must be put into improving understanding and earning the support of stakeholders, particularly at the local level.

Facilitating Change

Education and learning should be encouraged.

The process has begun to facilitate change (criterion score 1.38, table 4.9). Its ability to continue doing so depends on whether or not improvements are made. Seven participants did not answer these questions, either due to the use of the modified questionnaire or because they chose not to. Since 5 were representatives of local community or business interests, the results for this section must be considered within the context of its reduced sample size (see table 4.8d) and representation.

Most respondents who were asked felt that the process had encouraged education and learning (table 4.8d), although not yet to the extent some had hoped. This may be partially due to the volunteer nature of participation, and to unequal stakeholder involvement. Based on the number and interests of those who were not in a position to respond to this question, it is doubtful that all respondents have had access to such opportunities. Local community and business interests are of particular concern. Those who did feel the process encouraged education and learning cited examples such as: workshops; discussions of best business practices and habitat and economic conditions; community meetings; working educational sessions; and interactions between and among groups where people talked, listened, and worked together to coordinate efforts.

Table 4.8d Summary of Quantitative Responses for Facilitating Change Section of Effectiveness Criterion

Facilitating Change	n	SA	% SA	MA	% MA	U	% U	MD	%MD	SD	%SD	SCORE
Q34 - Education and Learning	13	8	62	3	23	1	8	1	8	0	0	1.38**
Q35 - Changing Attitudes	13	6	46	4	31	3	23	0	0	0	0	1.23**
Q36 - Changing Choices	13	7	54	6	46	0	0	0	0	0	0	1.54**
Q37 - Improvements to Process	14	10	71	2	14	2	14	0	0	0	0	-1.57*

SA: Strongly Agree; MA: Mildly Agree; U: Undecided or Unsure; MD: Mildly Disagree; SD: Strongly Disagree; n: number of respondents when N/A (Not Applicable) responses excluded. Score is the average of responses with SA=2.0, MA=1.0, U=0, MD=-1.0, SD=-2.0. Percentages rounded to the nearest whole number; therefore, their sum equals 100% +/- 1%. *Agreement with question represented negative response; therefore sign of score reversed. **Number of respondents reduced due to use of modified questionnaire.

Overall, respondents agreed that the BRNI process was likely to affect stakeholder attitudes and choices about shorebird-viewing issues (table 4.8d). Some felt attitudes were already changing; however, there was concern that if the process did not go well, such changes would be for the worse, not for the better. One of the respondents said the process would broaden the attitudes of others, but that it would not change his/her group/agency. Most respondents said the process had the potential to give various stakeholders a greater understanding and appreciation of sustainability principles, the perspectives of others, and the challenges involved. It was felt that this consideration of others' perspectives would result in different choices than if decisions were made in isolation. Two respondents said these collaborative efforts to resolve shorebird-viewing issues have allowed people to see the value of the BRNI process.

All respondents, even those who chose the undecided response, identified things that could be done to improve the process. The number one suggestion was to improve communication. Many said that the process scope, vision, goals, and objectives require further definition and clarification. Mechanisms need to be put in place to ensure that stakeholders have access to information, education and participation opportunities, and are able to stay up-to-date and involved. Some felt that the process needed to do a better job of engaging people and explaining, through example, its possible benefits. Other suggestions included: dedicated staff, funding, personnel, time, and other resources; greater participation from agencies, local communities, and

the public; more research; additional meetings—assuming sufficient resources had been allocated; more-inclusive representation; demonstration projects; better organization; increased media involvement; a more balanced committee structure; and greater openness. These suggestions are discussed in greater detail in chapter 5.

Summary: The process has begun to encourage education and learning for some stakeholders. In order to ensure that this results in positive changes with respect to attitudes, practices, and actions that affect shorebird-viewing issues, improvements to the process are required. Specifically, it must provide meaningful access to those opportunities for all stakeholders—particularly those who are underrepresented in the current decision-making structure—through improved communication, greater participation, and access to dedicated resources.

To conclude, the assessment explored assumptions regarding the application of collaboration and sustainability principles to the case study site. First, respondents were asked whether or not it is possible to reconcile conservation and development interests and find solutions that are acceptable to all parties. Although some identified significant obstacles to the realization of this goal, nearly all (18/20 or 90%) said they do believe it is possible given sufficient time, effort, and resources. One respondent was unsure because he/she felt the level of uncertainty was too great, and the remaining respondent said solutions would be possible for some issues, but not others. At the other end of the spectrum, one respondent said that through a collaborative process, it would be possible for all groups to get exactly what they want. The majority of respondents expressed opinions that fell between the two. In the second question, respondents were asked if this type of multi-interest management policy contributes to the sustainability of shorebird populations in the study area. All said that such policies do contribute to sustainability, and many indicated that they are the only way to achieve it. However, some respondents pointed out that this does not necessarily mean that the biosphere reserve model is the only, or even the most appropriate, choice for the case study area. All in all, respondents recognized that collaborative processes can be very long, slow, and laborious, but they do have long-term benefits. In the words of one respondent, “the key to future conservation activities surrounding shorebirds will be centered around an educated, well-informed public.”

Summary results are presented in Table 4.9. When appropriate, criteria have been broken down into components to provide a more precise and complete evaluation. Criterion scores reflect these divisions.

Table 4.9 Summary of BRNI Process Evaluation Results.

Criteria	Score	Results Summary
Challenge Identification		
1. Identification of Issues	1.60	Overall, respondents strongly agreed that social, environmental, and economic interests all play a role in the sustainability of shorebird viewing. Respondents identified eight categories of issues affecting sustainability, covering a broad range of perspectives. Environmental factors were identified most frequently, and received the highest agreement rating, but they were not necessarily considered to be more important than the other factors.
2. Purpose Cooperation is necessary	1.80	All respondents recognized the need for cooperation among interests to successfully address the issues of each. The majority felt there was some agreement on what needed to be achieved; however, study findings indicated this agreement was not as uniform as some believed it to be. There did not seem to be specific, shared goals and objectives.
Agreement on challenges, goals, and objectives	0.64	
3. Level of Support Best alternative	-0.74	Stakeholders are committed to addressing shorebird-viewing issues—particularly those directly derived from group or agency mandates—but not necessarily through the BRNI process. Most believe the BRNI has the potential to become a viable process for resolving issues, although the majority indicated that they could achieve their objectives without participating.
Resources committed and process appropriateness	1.27	
Process Structure		
4. Inclusive and Effective Representation of Interests Representation	0.32	Respondents felt the process should be as inclusive as possible, but said this goal has not yet been achieved in practice. Although the process was not deliberately excluding parties, community and other local interests were not adequately represented. The majority said process representatives were accountable, but called for greater clarity in defining the process and specific accountability mechanisms.
Accountability	1.14	
5. Access to Resources Funding	-1.05	Most respondents felt that the process was open. However, they said that inadequate access to resources, especially dedicated funding, limits their ability to participate in a meaningful way. Some stakeholders have assigned a relatively low priority to the process. A few identified resources that are not being fully utilized.
Information, training, and access	0.43	

Table 4.9 (continued)

Criteria	Score	Results Summary
Process Structure		
6. Process Design		
Understanding	-0.10	Roles, responsibilities, and procedures are not defined well enough for all stakeholders to understand how, why, and by whom decisions are made. Levels of clarity, understanding, uncertainty, and participation varied tremendously among stakeholder groups. Underlying contextual issues, such as land ownership and complex institutional arrangements, contribute to this confusion.
Flexibility	1.75	
Process Function		
7. Efficiency		
Decisions	0.00	Decisions that affect the sustainability of shorebird viewing are undoubtedly being made, but according to respondents, they are not yet occurring at a formal level within the process. Data were insufficient to assess cost and time criteria. Not all respondents had up-to-date information on coordination mechanisms.
Coordinator	1.19	
8. Effectiveness		
Need to increase collaboration	1.60	Overall, respondents expressed a strong commitment to using increased collaboration as a vehicle for improving decision making about shorebird-viewing issues.
Meaningful participation	0.69	Stakeholders said more formal and informal opportunities for participation are needed, but tended not to recognize those that already existed.
Sustainability principles	0.62	Most respondents felt that there were sufficient biological data to inform decision making. In contrast, significant gaps were identified in social and economic areas. Overall results indicated that environmental, economic, and social perspectives are being considered in that order; however, the level of agreement on the extent varied among respondents, and from issue to issue.
Acceptability	0.57	Decisions about shorebird-viewing issues seem to be acceptable, but very few local interests had sufficient information to answer the question. BRNI proponents AND responsible authorities incorrectly assume that a lack of dissent or visible conflict is the same as support for the process or support for current management decisions respectively.
Facilitating change	1.38	The process has begun to encourage education and learning for some, especially environmental and tourism interests. Not all have access to such opportunities.
Other		
Communication	N/A	While some respondents identified increased dialogue among stakeholders—particularly tourism and environmental interests—as a significant development, others did not seem to recognize its importance as a measurable benefit.

CHAPTER 5

MANAGEMENT IMPLICATIONS

This research assessed the decision-making process as a mechanism for moving towards more sustainable forms of tourism. Specifically, it evaluated efforts within the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area of the Upper Bay of Fundy. The study findings are presented in this chapter. Conclusions and recommendations for each of the eight criteria—identification of issues, purpose, level of support, inclusive and effective representation of interests, access to resources, process design, efficiency, and effectiveness—are in section one. Overall project findings are summarized in section two. Conclusions and recommendations were formulated based on the interview results and then considered within the parameters set out in the project design.

MANAGEMENT RECOMMENDATIONS

Challenge Identification

1. Identification of Issues

Conclusions: The process has improved levels of awareness and understanding regarding challenges to the sustainability of shorebird viewing and shorebird populations, especially among environmental and economic interests. As a result of the limited involvement of community and local interests in the study area, social concerns are not as well articulated or understood.

Some of the most significant process successes to date have occurred in the area of challenge identification. Although stakeholders were aware of interest-specific issues prior to the process, many did not recognize the concerns of other groups. The commencement of the process, and perceptions surrounding the motivations for its initiation, generated a great deal of discussion, debate, enthusiasm, and concern. This raised the profile of shorebird-viewing issues, particularly

those of an environmental nature. As a result, communication among some—most notably tourism and environmental—interests has increased, new partnerships have been created or existing ones strengthened, and general levels of awareness have been raised. In addition, listening to the points of view and concerns of others has begun to influence the assumptions groups make about one another's intentions, motivations, and actions, thereby affecting the decisions they make. For example, the habitat protection and ecotourism workshop (Burnett 2002), invitations to attend and present at conferences and meetings of "other" interests, the establishment of personal contacts at various agencies and groups (respondents), the creation of a multistakeholder working group to assist with the preliminary stages of this project (personal comment), and agency-level policy changes (respondent) are but a few examples of the endeavors undertaken as part of, or as a result of, the BRNI process. All of these have created opportunities to translate issue recognition into genuine understanding by better defining the issues and explaining why they are significant. Further efforts are necessary to include the concerns of community and local stakeholders, who have yet to become equally involved, and to clarify how everyday activities and decisions relate to the challenges identified.

Recommendation 1: Maintain momentum of projects that increase awareness of sustainability issues. Build on successes occurring within the process and improve integration with related projects occurring outside it.

Recommendation 2: In conjunction with ongoing efforts to increase awareness, provide concrete, understandable, and accessible explanations of why the issues are important and how stakeholders' decisions can affect them.

2. Purpose

Conclusions: All interests have reasons to participate. Most agree that maintaining shorebird populations should be part of any overall vision. Social and economic elements are also deemed essential, but not by all. Currently, goals and objectives tend to be interest-specific, not shared or integrative. The definition of what is to be achieved varies accordingly. However, there are elements of a shared vision, on an informal level.

Respondents recognize the interdependence of their interests and the corresponding need for cooperation to address them. There is a growing appreciation that most stakeholders do not want shorebird populations to be negatively affected. However, many are making assumptions about others' perceptions of the level of agreement regarding the issues that need to be addressed, their priority rankings, who is or should be responsible for addressing them, and how to best accomplish the task. Also, the level of importance accorded issues from each of the three perspectives—social, economic, and environmental—does not appear to be equal. Therefore, while all stakeholders have reasons to participate in the process, if they do not develop common or shared expectations, their differences and assumptions will almost certainly lead to misunderstandings in the future, and may affect the ability of the process to succeed.

Recommendation 3: In order to improve the probability of process success, stakeholders should work together to better define a shared vision, the most significant challenges to that vision, and specific goals and objectives for achieving it. Formalizing these products should reduce the potential for misunderstandings.

3. Level of Support

Conclusions: Preassessment was inadequate. The BRNI process is a low priority for most government agencies. More work is required to raise awareness and build support at the broader community level. The process is unlikely to succeed unless more effort is put into engaging people, securing government endorsement, and identifying leaders or champions in various sectors.

Initially, the BRNI tried to progress too quickly. Many stakeholders were simply not ready to enter into a collaborative process without some preparatory work to establish relationships and build trust. A formal, thorough preassessment would have provided information on levels of stakeholder interest, readiness, and commitment, as well as helped to identify potential problem areas, data gaps, and other challenges.

The level of direct support for the process was somewhat more difficult to evaluate. The lack of dedicated resources and relatively low priority assigned to the process by several government

agencies suggest that while they may be committed to addressing shorebird-viewing issues—and think the BRNI process has potential to do so—they do not necessarily support it. For some environmental interests, both governmental and nongovernmental, this seems to be a consequence of feeling excluded from the early stages of the initiative, although they acknowledge the situation has improved. For others, it is a function of the lack of clarity surrounding the process itself. They support the concept, but say it is still too abstract to justify reallocating resources from other projects, or to leverage resources and support from more senior personnel. At the local level, many stakeholders are not aware of the process. Particular attention should be paid to addressing this shortcoming, as local support is an integral part of the biosphere reserve concept, and the process is unlikely to succeed without it.

Recommendation 4: Process conveners should increase efforts to engage people and secure buy-in from all stakeholders. A better understanding of the benefits of participation and cooperation would provide incentives for various interests to become more actively involved. Stakeholders must collectively view the planning and implementation process as a higher priority than they do at present, if it is to obtain real support and commitment of resources.

Process Structure

Currently, the ability of the process to address substantive issues is hindered by a lack of definition and clarity surrounding process structure. Rather than being the result of insufficiencies within a single structural element, difficulties stem from a combination of challenges related to stakeholder representation, resource access, process design, institutional arrangements, local context and conditions, and the complex and interdisciplinary nature of the issues. While a good process can—and should—address many of these challenges directly, several lie outside the control of the BRNI process, even though it has the potential to positively influence them.

4. Inclusive and Effective Representation of Interests

Conclusions: Parties are allowed to participate, but many do not. Most relevant government agencies are involved. Some nongovernmental economic and environmental interests participate.

Awareness and representation of local and community interests is very limited. Generally, participants are accountable. Mechanisms need to be put in place to assure this. Community interests must be included.

A key challenge for a biosphere reserve is to create a forum that allows for the effective representation of diverse interests. Contrary to the perceptions of some, the results of this study suggest that stakeholders have not been deliberately excluded from the process. However, openness alone does not guarantee that stakeholders will feel included and involved, or that such representation will be effective. In many cases—particularly at the local or community level—deliberate, active, and ongoing efforts are required to ensure that potential stakeholders are aware of the initiative and understand its relevance to them. To be effective, representatives must be willing to participate, have the tools to do so, and accept that they will have responsibilities within the process. Overall, the BRNI process has struggled with issues of inclusiveness and representation. Several reasons for this are discussed below. Although progress is being made in this regard for some interests within the specific context of shorebird-viewing issues in the study area, levels of awareness and representation among various local, and community groups are still very limited.

Recommendation 5: While “openness” is important, greater emphasis must be placed on the explanation and application of the concept to ensure that stakeholders are included. Process conveners must make active efforts to translate openness into awareness, understanding, and involvement, particularly at the local level.

Recommendation 6: Identify barriers to participation and work to remove them.

5. Access to Resources

Conclusions: Funding for stakeholders, and for the process itself, is inadequate. Although there is some intrainterest sharing of information, stakeholders' access to interinterest information is limited. Many agencies have staff with appropriate training, but those individuals are not necessarily the ones participating.

A project of this size and scope simply requires more dedicated resources than it currently can access. Many agencies, businesses, groups, and individuals are making significant in-kind contributions, but most have not made direct funding commitments. Efforts are underway to secure additional resources. However, unless the process becomes a higher priority for government and other stakeholders, many will continue to be reluctant to commit resources to it. It will be very difficult for the process to succeed without them.

Access to funding, personnel, and information influences all aspects of the process. For example, some stakeholders are not aware of the process at all, while others have heard of it, but do not know how to get involved. Additional funding to create and maintain information sources and outreach materials, and personnel to deliver them, would reduce the susceptibility of the process to misinformation and broaden the pool of informed interest groups. It would also increase the likelihood that local interests could participate by providing the means for them to do so, and by removing some barriers to participation that may exist due to power imbalances. Access to information can also provide other benefits. It allows groups to identify the most pressing research needs and information gaps and to combine their efforts to address them: reducing overlap, streamlining data collection, and improving efficiency. However, it must be recognized that while the availability of information and resources is often a limiting factor, even with excellent information and abundant resources, it is not possible to eliminate uncertainty entirely. Effort spent on amassing data and resources should not compromise the ability of the process to make progress on substantive matters (Tamblyn and Day 1998).

Recommendation 7: Process conveners and proponents must work to secure dedicated funding and personnel for the process, as well as to ensure that adequate information, training, process access, and other resources are available. Official political and government endorsement would greatly facilitate such efforts.

Recommendation 8: Streamline data collection by cooperating to identify and fill research gaps. Given that uncertainty cannot be eliminated, data collected for process purposes should be limited to those that are necessary for making decisions.

6. Process Design

Conclusions: Insufficient definition and explanation of the process mandate, time frame, logistics, format, contacts, involvement mechanisms, and the form of support and commitment required frustrate stakeholders. Outside the context of the BRNI, management agencies have not done enough to explain their roles and responsibilities. This contributes to the confusion.

Better definition of process design and structure would make it easier for stakeholders to understand the process. There are many factors that contribute to the current confusion, including: the ambitious and changing scope of the project; the complex economic, sociocultural, environmental, and management context within which it is taking place; the limited amount of resources dedicated to the process; the inherent difficulty of informing and obtaining buy-in from diverse groups of stakeholders; inaccurate and misleading information put forward unintentionally, or by those attempting to undermine the process; lack of up-to-date information; inadequate strategies for dealing with conflicts and challenges; inconsistent communication; and a lack of definition regarding process design, roles, responsibilities, and communication links. As a result, even though various interests assume there are common understandings—and in some cases there are—many such understandings differ considerably from stakeholder to stakeholder, as do the interpretations, expectations, and decisions based on them.

The stage of the process also has a significant bearing on its level of definition. The process stalled for several months when support faltered in Nova Scotia. It has recommenced on a smaller scale in New Brunswick only, but the setback seemed to eliminate momentum and push the process back to the early stages of securing support. Although this study did not specifically investigate process setbacks, its findings suggest factors that may have contributed to this problem.

A common complaint voiced by respondents and some members of the public was that process definition is so broad and vague that they do not understand it, do not know what supporting it would mean, or both. That stakeholders believe the process has yet to be clarified, after more than two years, frustrates some and makes others suspicious of its agenda. While their perceptions regarding the lack of definition seem justified for some aspects, unrealistic expectations may also have contributed to the problem. A project of this scope and magnitude is

unlikely to be completed in a short period of time, especially as until the recent hiring of a new coordinator, it was run almost entirely by people who volunteered time over and above full-time employment, family, and other commitments. The task is made more difficult because multistakeholder collaboration is the exception, rather than the norm, and there is a history of mistrust between some stakeholders. In addition, not everyone seems to recognize that although collaborative processes use a different approach than traditional initiatives, the need for planning is not diminished and may actually increase. Consequently, it is a challenge to craft a process that balances openness, inclusiveness, and participant definition, with the appropriate level of structure to ensure understanding, efficiency, effectiveness (Wilson, Roseland, and Day 1996), and progress.

It is reasonable, however, for stakeholders to expect definition of some structural elements very early on. Without information on such elements as the proposed time frame, mandate, process manager/convener, logistics, process type, and form of support and commitment required, it is difficult for them to make informed decisions regarding participation. While some within the BRNI process possess some of this information, most of these parameters have yet to be formally defined in a manner that is accessible to stakeholders and the public. Again, this confirms that process structure is relatively undeveloped, but does not explain why. It seems likely that in addition to the other challenges discussed in this chapter, competing demands overwhelmed the capacity of the neophyte process. It would have been difficult, even for an established organization with abundant resources, to develop and administer a communications program to provide information, increase awareness, and build support over such a large geographical area; to deal with multiple requests, answer questions, and to resolve conflict; and to address substantive issues, such as shorebird viewing, habitat protection, and resource allocation, while concurrently trying to create the mechanism for doing so.

Finally, it is important to note that process structure and design are influenced by contextual issues that are largely outside the control of process proponents. The roles and responsibilities of management agencies are generally not well understood by stakeholders, the public, or even by other agencies (respondents). This is not uncommon in natural resource management settings, particularly those that involve the coastal zone. Information and responsibility tend to be divided among a variety of individuals, groups, agencies, and authorities with interlinked and overlapping

jurisdictions, and a mix of public, private, and shared ownership and management arrangements. Thus, each aspect of an interdisciplinary issue may require a decision from a different authority. This undoubtedly complicates the situation in the study area, as do matters relating to: differing stakeholder values; property rights; land ownership and management; economic outlook and development; the tension between the public interest, centralized governance, and communities' rights to self-determination; First Nations' interests; and local culture and history. These matters pre-date the initiative, form part of the current reality, and will continue to present a challenge whether the initiative is successful or not. The initiative has certainly increased awareness of these matters and illuminated just how complex and value-laden the situation is. Although it has created some tension in and of itself, it would be inaccurate and unfair to suggest that it has caused the problems. Cooperative efforts have the potential to help resolve some of these issues; however, well-planned, unambiguous, process design is imperative. Proponents must clearly lay out what the process is and is not, what it can and cannot do, and what it is and is not responsible for. Otherwise the process risks becoming a target for the frustrations of those affected by unpopular decisions made entirely outside it.

Recommendation 9: The overall BRNI process scope, mandate, format, logistics, time line, and type of commitment required for participation must be clearly defined and articulated to stakeholders. While substantive issues and many process design elements can—and should—be formulated collaboratively as part of the process, some structure is required up front to ensure understanding, secure buy-in, and move the process forward.

Recommendation 10: Within the process itself, participants should establish and formalize ground rules, accountability and flexibility mechanisms, communication links, a conflict-resolution strategy, and policies to explain rules of access for new participants.

Recommendation 11: Process conveners must ensure that accurate information is available and accessible to stakeholders and the public. To be effective, stakeholders must be made aware that such information exists, and understand how to use it.

Recommendation 12: Roles and responsibilities of all stakeholders *must* be clearly defined. Stakeholders need to have a thorough understanding of what the BRNI process

is and is not, what it can and cannot do, and how it fits within current planning, management, and decision-making regimes. Stakeholders should know where final decision-making authority rests.

Recommendation 13: Every effort should be made to define a mutually acceptable process structure as soon as possible. Currently, uncertainty and confusion limit the ability of the process to move forward, and reduce the likelihood that substantive issues will be successfully addressed in the future.

Process Function

The BRNI process does not play a central role in decision making about shorebird-viewing issues in the study area at this time. However, contrary to opinions expressed by some respondents, the process *is* having a positive influence on such decisions, as exemplified by new cooperative arrangements between government and nongovernment groups, the proactive solicitation of professional opinions on environmental aspects of tourism activities, lines of communication and contacts that allow for collaborative discussion of options, and new departmental policies designed to better integrate other perspectives. This is significant because it suggests that the BRNI process has the potential to become a vehicle for progress, if shortcomings identified by respondents related to communication, resource availability, stakeholder engagement and participation, access mechanisms, and process definition are addressed.

Respondents' replies to efficiency and effectiveness questions seemed inconsistent. While the majority of respondents said that formal decisions were not being taken within the process, nearly all of them answered questions regarding process and decision-making effectiveness. There are several possible reasons for this apparent inconsistency. First, decisions are being made, and some collaboration is occurring, outside of the process. Respondents may have answered effectiveness questions based on their overall perceptions of these efforts, not just those within the BRNI. This may also have influenced responses to questions about the acceptability of current decisions. Second, there is considerable confusion as to which efforts fall within the BRNI process and which do not. For example, many did not recognize a formal BRNI workshop on habitat conservation and ecotourism as being part of the process; therefore they probably did

not consider it when responding to questions. Third, based on project evidence, informal decision-making and collaborative efforts were less likely to be considered as being part of the process than formal ones. It is possible that respondents who indicated formal decisions were not being made within the process did consider informal efforts when asked specific questions about them in the effectiveness section. Fourth, individual respondents may have perceived the meaning of questions differently. Fifth, there may have been some who focused on the decisions of an individual, group, or agency, rather than on broader process-wide decisions. Finally, some respondents may have based their replies on what should be the case, or what they anticipate will occur, instead of the current situation—although in many instances, respondents' comments ruled out this possibility.

7. Efficiency

Conclusions: The time and resources allocated to the process are insufficient to match its scope. It has not progressed to formal decision making. The management committee and the process coordinator are committed, but their ability to function effectively is limited by process uncertainty, lack of visibility, and perceptions of bias.

For the process to be efficient, decisions need to be made within reasonable time and expense limits. Most respondents felt that formal decisions were not being made at all, so it was difficult to evaluate the exact roles of cost and time in process efficiency. However, it was possible to evaluate coordination mechanisms, which have an important role to play in this regard. Over the course of the initiative, coordination responsibilities have been shared among several individuals, a management committee, and with two process coordinators. However, the history of the initiative affects the functioning of these mechanisms at the present time. In the early stages of the process, some stakeholders felt the BRNI process agenda was being driven by a small number of interest groups. This created concern and disagreement regarding whether all interests would have an equal role in the process, or whether it would predominantly benefit the interests of a few. Subsequently, relations improved dramatically, in a change some respondents characterized as being a complete turnaround. Not all stakeholders have been part of this change, and some who have been involved have not embraced it. Although coordinators and the committee may not be aware of this problem, it interferes with their ability to make progress because it affects

stakeholders' perceptions of their neutrality. Even if the committee were completely neutral, but was perceived by some as being biased, it would almost certainly continue to experience difficulties making progress. Stakeholders would be more likely to get involved in, and support, the process if they had a better understanding of the responsibilities of the committee and believed its structure and composition to be neutral or balanced, so as to be fair.

Recommendation 14: Stakeholders should be given a greater role in defining the structure and composition of the management committee. This would improve understanding of its role and responsibilities, and reduce or eliminate concerns about bias, which have the potential to impede progress. Care must be taken to ensure that all decisions, as well as changes to the committee structure, are acceptable to all.

8. Effectiveness

In terms of effectiveness, the BRNI process is having an impact on shorebird-viewing issues, even if it does not play a central role in decision making, or in the day-to-day management of the study area. For many stakeholders, it has increased awareness of sustainability concerns, reopened dormant lines of communication and created new ones, and resulted in greater cooperation, new partnerships, and decreased conflict. In some cases, however, partnerships have come about in response to the perception of the BRNI as a threat of mutual concern, as opposed to a mutually beneficial opportunity. Collaborative efforts, such as the BRNI workshop on habitat protection and ecotourism have helped stakeholders identify common ground, and begin building the trust that is necessary for parties to work together successfully. The process has drawn attention to the complexity of the situation, to the variability in stakeholder perceptions and values, and to the potential benefits of using cooperative relationships to work towards solutions.

The process has also had some negative impacts. Initially, it increased the level of conflict among some stakeholder groups, particularly those who felt excluded from the process. This made it more difficult for some within environmental agencies to implement management decisions. While many of these concerns have since been addressed, this is not the case for all managers. In addition, significant opposition to the BRNI in some areas of Nova Scotia, such as

the Advocate Region, may affect efforts to address sustainability concerns, including those related to shorebird viewing and other forms of tourism and development, in other locations. The extent of such effects was not investigated as part of this project.

Respondents generally support the increased use of collaborative efforts to address shorebird-viewing issues, but there are questions regarding the effectiveness of using the BRNI process as the mechanism for doing so. Some of the challenges include: providing meaningful opportunities for collaboration; coordinating cooperative efforts within the process with those outside it to reduce duplication and confusion; incorporating environmental, social, and economic information, concerns, issues, values, and standards in a comprehensive way; addressing information gaps; dealing with assumptions and uncertainty; establishing the importance and legitimacy of others' perspectives; and translating concepts like habitat protection into concrete, on-the-ground objectives and best practices. As process effectiveness is a function of structure, addressing problematic structural elements identified in previous sections should also contribute to improved effectiveness.

Meaningful Participation

***Conclusions:** Formal opportunities for collaboration are quite limited, but efforts have led to increased communication and trust between tourism and environmental interests. Opportunities need to be expanded to include more local business and community interests.*

The process has provided some formal and informal participation opportunities for stakeholders. As discussed previously, these have led to significant gains in awareness, understanding, trust, communication, and cooperation. However, representation of local interests has been limited, and many are not aware that such opportunities have been provided by the BRNI. Even some of those who participated in BRNI-sponsored events do not identify them when asked about collaboration opportunities within the process. There seems to be a significant amount of overlap among the various programs and efforts that are underway within the area, and as a result, it is not always clear which efforts fall within the BRNI and which are occurring in parallel to it.

Recommendation 15: More opportunities for formal and informal, face-to-face discussion and collaboration are required. Mechanisms must be put in place to ensure that all stakeholders have access to participation opportunities.

Recommendation 16: Collaborative efforts within the process should be coordinated with those occurring outside it in order to enhance and better define the profiles of each. Increased cooperation would also reduce overlap, allowing for more efficient use of time and other resources.

Sustainability Principles

Conclusions: Decision making is primarily sector-based. Most are willing to consider environmental, social, and economic interests, but in a hierarchical—rather than integrated—manner. Insufficient research and assessment on social, economic, and interdisciplinary matters hinders progress.

There is some question as to the level of comprehensiveness with which environmental, economic, and social concerns and values are formally incorporated in decision making. While the overall results indicated that each is considered to some extent, responses were highly variable. Several reasons for this variability were identified. First, based on respondents' replies, it seems likely that most of the decision making about shorebird-viewing issues is occurring outside the process. As a result, stakeholders are unsure what is being considered, what standards are being applied, and whether or not such decisions will lead to solutions that are adequate and acceptable for their specific interests. In addition, it suggests that responses based on the current situation may reflect more than just a BRNI process perspective. Second, the interests, values, knowledge, understanding, and responsibilities that shape responses differ from stakeholder-to-stakeholder. Third, there is considerable uncertainty surrounding the process, shorebird-viewing issues and approaches to their resolution, management and development objectives, sustainability requirements, and the potential outcomes of various scenarios. Finally, the assumptions under which particular stakeholders are operating may or may not be shared by others. For example, several participants said that although there are no formal arrangements, there is general agreement on principles because everyone knows what needs to be done. While like-minded

interests may agree, and some elements of an overall vision do seem to be shared among a significant proportion of respondents, this is not the case for all interests. Even among those making similar assumptions in the broad sense, interpretations and expectations regarding their translation into practice—such as those related to specific options, goals, costs, benefits, and potential effects—are often not defined or shared. A set of mutually adopted standards could help stakeholders integrate these issues, and ensure that decisions are consistent with applicable principles, regulations, and policies, many of which are unfamiliar to them. Such standards have not yet been developed.

Recommendation 17: Stakeholders should work together to develop a set of mutually acceptable decision-making standards. Mechanisms for defining assumptions and dealing with uncertainty should be included.

Acceptability

Conclusions: Some community residents feel that government managers and other major actors exclude them. If the BRNI does not make significant efforts to include them, not only will it have to deal with criticisms about lack of representation, but it will also risk becoming the target of criticisms meant for others.

One indicator of the wisdom and stability of decisions is their acceptability to a wide spectrum of interests and the public. However, even though respondents generally felt current decisions were acceptable, conclusions must be considered within the context of study evidence indicating that most decisions are made outside the process. Several respondents also expressed reservations regarding the true level of support this acceptance represents, and consequently about the stability of such decisions over the long term. Some were concerned that a lack of vocal opposition to decisions made by various interests—including not only proponents of development, but also those with environmental mandates—is being construed as support, which is not necessarily the case. Care must be taken to distinguish between acceptance of broad concepts, which are often somewhat abstract, and informed support for implementing them, which is based on an understanding of the measures required to do so.

Recommendation 18: Responsible authorities should communicate their management goals and objectives, ensuring that stakeholders understand the role of uncertainty and the necessity of including mechanisms for revising and adapting them based on new information, changing circumstances, or the results of periodic evaluations. There should be flexibility in determining the means by which these goals and objectives are achieved.

Facilitating Change

Conclusions: Additional education and learning opportunities would benefit all parties. Action-oriented approaches, such as pilot projects, appeal to many stakeholders. Better follow-up of existing efforts is needed.

Education and learning opportunities can help foster positive changes in attitudes, practices, and actions. There have been a limited number of such opportunities within the BRNI process to date, with mixed results. Every effort must be made to ensure that all stakeholders have access to these opportunities, adequate information, and the resources necessary to participate. Otherwise, some are likely to feel excluded from the process and will probably not be supportive of change. In the context of the case study, the overall results in this regard have been largely positive, with significant increases in communication and understanding, particularly among government agencies and other conservation and development interests. However, community stakeholders are currently underrepresented, so their interests may not be receiving the same levels of recognition and consideration as those of other groups. While the inclusive, effective participation of all interests is difficult to achieve, it can help create a sense of shared purpose among disparate groups. It is important to recognize, however, that in order to progress towards sustainable shorebird viewing, change is required of *all* stakeholders. Therefore, although the specific needs of individuals, groups, businesses, or agencies may be different, additional education and learning opportunities would be of benefit to *all* parties.

Recommendation 19: The process should provide, or facilitate, additional education and learning opportunities for all parties. It must ensure that all stakeholders have meaningful access to them.

Communication

Conclusions: One of the biggest achievements of the process to date has been the increased communication between environmental and tourism interests. Better communication with all stakeholders is required if the process is to succeed.

Communication is the common theme that links all elements of the process evaluation together. Many of the process weaknesses and challenges identified and discussed in this document are related to inadequate communication and communication processes, or could be largely addressed by improving them. This is not a simple task. While collaborative processes provide an alternative framework for communication and decision making, they do not eliminate conflicting values, nor do they produce perfect solutions. Difficult trade-offs still have to be made. However, inclusive, participatory processes that encourage respectful communication can build trust. Trust enables cooperation, and cooperation can produce integrated solutions that would be impossible for individual stakeholders to achieve on their own. Because many of these benefits are intangible and difficult to quantify using conventional measures, their importance is often overlooked.

One of the most significant achievements of the BRNI process is its positive effect on communication among some stakeholders, especially tourism and conservation interests. The process provided the impetus for increasing dialogue, and has helped some stakeholders begin the transition from conflict and distrust to establishing working relationships and moving towards real collaboration. These successes, in turn, have encouraged some to take a more proactive approach to consultation and collaboration, even when such efforts are not mandated. This represents a substantial shift in the approach to managing issues that impact on the sustainability of shorebird populations and shorebird viewing. The challenge, then, is to move beyond preliminary discussions, include those interests not currently involved, and translate this potential into concrete decision making on substantive environmental, social, and economic matters. Such an integrative approach is congruent with models such as biosphere reserves.

Recommendation 20: Ensure that stakeholders are aware of process successes and benefits. Improvements to the less tangible elements of good decision making—such as communication, trust, relationship and capacity building, cooperation, stewardship, credibility, good will, commitment, and others—are often not captured by conventional measures of success. Sensitize participants and the public to recognize their importance.

SUMMARY OF PROJECT FINDINGS

Project findings are summarized in table 5.1. As with the results summary in chapter 4 (table 4.9), criteria have been separated into components to provide a more precise and complete picture of the project results and conclusions. A written summary concludes the chapter.

Table 5.1 Summary of BRNI Process Evaluation Findings.

Criteria	Rating	Conclusions
Challenge Identification		
1. Identification of Issues	High	The process has improved levels of awareness and understanding regarding challenges to the sustainability of shorebird populations and viewing activities, especially among environmental and economic interests. Due to the limited involvement of community and local interests, social concerns are not as well articulated or understood.
2. Purpose Cooperation is necessary Agreement on challenges, goals, and objectives	High Moderate	All interests have reasons to participate. Most agree that maintaining shorebird populations should be part of any overall vision. Social and economic elements are also deemed essential, but not by all. Currently, goals and objectives tend to be interest-specific, not shared or integrative. The definition of what should be achieved varies accordingly. However, there are elements of a shared vision, on an informal level.
3. Level of Support Best alternative Resources committed and process appropriateness	Low Fair	Preassessment was inadequate. The BRNI process is a low priority for most government agencies. More work is required to raise awareness and build support at the broader community level. The process is unlikely to succeed unless it does a better job of engaging people, securing government endorsement, and identifying leaders or champions in various sectors.
Process Structure		
4. Inclusive and Effective Representation of Interests Representation Accountability	Low Moderate	Parties are allowed to participate, but many do not. Most relevant government agencies are involved. Some non-governmental economic and environmental interests participate. Awareness and representation of local, community, and First Nations interests is very limited. Generally, participants are accountable. Mechanisms need to be put in place to assure this. Community interests must be included.
5. Access to Resources Funding Information, training, and access	Low Low	Funding for stakeholders, and for the process itself, is inadequate. Although there is some intrainterest sharing of information, stakeholders' access to interinterest information is limited. Many agencies have staff with appropriate training, but those individuals are not necessarily the ones participating.

Table 5.1 (continued)

Criteria	Rating	Conclusions
Process Structure		
6. Process Design		
Understanding	Low	Insufficient definition and explanation of the process mandate, time frame, logistics, format, contacts, involvement mechanisms, and the form of support and commitment required frustrate stakeholders. Outside of the context of the BRNI, management agencies have not done enough to explain their roles and responsibilities. This contributes to the confusion.
Flexibility	High	
Process Function		
7. Efficiency		
Decisions	N/A	The time and resources allocated to the process are insufficient to match its scope. It has not progressed to formal decision making. The management committee and the process coordinator are committed, but their ability to function effectively is limited by process uncertainty, lack of visibility, and perceptions of bias.
Coordinator	Moderate	
8. Effectiveness		
Need to increase collaboration	High	Formal opportunities for collaboration are quite limited, but efforts have led to increased communication and trust between tourism and environmental interests.
Meaningful participation	Fair	
Sustainability principles	Fair	Decision making is primarily sector-based. Most are willing to consider environmental, social, and economic interests, but in a hierarchical—rather than integrated—manner. Insufficient research and assessment on social, economic, and interdisciplinary matters hinders progress.
Acceptability	Fair	Some community residents feel that government managers and other major actors exclude them. If the BRNI does not make significant efforts to include them, not only will it have to deal with criticisms about lack of representation, it will also risk becoming the target of criticisms meant for others.
Facilitating change	Moderate	Additional education and learning opportunities would benefit all parties. Action-oriented approaches, such as pilot projects, appeal to many stakeholders. Better follow-up of existing efforts is needed.
Other		
Communication	N/A	One of the biggest achievements of the process to date has been the increased communication between environmental and tourism interests. Better communication with all stakeholders is required if the process is to succeed.

Overall, the BRNI process faces an uncertain future as a mechanism for moving towards sustainable shorebird viewing in the study area. It has acted as a catalyst for increasing collaborative efforts to address shorebird-viewing issues, but its scope and design are not yet sufficiently defined to allow it to deal with such substantive matters efficiently and effectively. This lack of clarity, coupled with uncertainty, has negatively affected participation, resource availability, and stakeholder support. The process has improved levels of awareness and understanding about challenges to the sustainability of shorebird viewing and shorebird populations, but not for all stakeholders. It must become more inclusive, balanced, and consistent if it is to produce stable decisions and agreements. The BRNI process has the potential to become an instrument of change and a legitimate forum for addressing sustainability issues, if it is able to address these concerns and secure the support necessary to move forward.

CHAPTER 6

CONCLUSIONS

The final chapter discusses project applications. Section one is a synopsis of lessons learned from the evaluation, and includes general recommendations for those considering the use of collaborative processes to facilitate progress towards the sustainability goal. Directions for future research are proposed in section two, and the author's final comments in section three conclude both the chapter and the document.

As explained in chapter 3, the case study method was chosen as the research strategy because it allows for the investigation of complex social interactions within their real-life context (Yin 1989). It is robust enough to evaluate contemporary events, which need not be progressing well. It is worth noting, however, that the analytic generalizations drawn from case studies differ considerably from the statistical generalizations of traditional experiments (Yin 1989). In this project, analytic generalizations contribute to the theoretical propositions outlined in chapter 2 dealing with sustainability and sustainable tourism principles; efficient, effective, and fair decision making; and process evaluation. As the findings support this model, generalizations of lessons learned may be useful to others considering similar types of collaborative processes to address sustainability issues. However, these findings are distinctly different from the statistical generalization of results to large populations based on representative sampling.

LESSONS LEARNED AND GENERAL RECOMMENDATIONS

The final objective of the project is to make general recommendations for improving the capacity of decision-making processes to facilitate progress towards more sustainable forms of tourism. The research results support their theoretical propositions; therefore, the following lessons and recommendations may be useful to others considering the use of collaborative processes to achieve similar goals.

- 1) **Readiness:** Preassessment is an important component of any process, but it is often overlooked. Essentially a preliminary evaluation of enabling conditions, such assessments

can be used to identify the reasons stakeholders may have to participate, as well as their interest, willingness, and ability to do so. They ensure that *basic* information is available and in a suitable form for its intended audience. Gaps, potential challenges, resource needs and availability, and the extent of relationships among the likely participants can be scrutinized at this stage to determine whether or not it is appropriate to proceed. If additional preparatory work is required, for example to fill research gaps or to build trust so that groups are able to interact, then interim strategies can be developed and put in place. While there may be incentives to omit or skim over the preassessment stage, it is imperative to ensure enabling conditions can be met, since untimely or inappropriate processes can worsen a situation (NRTEE 1996).

Recommendation: Invest the necessary time and planning effort in the early stages of a collaborative process to ensure that essential enabling conditions can be met.

- 2) **Structure:** It is important to delineate a preliminary framework in order to give structure to a collaborative process. Some basic elements that should be included are:
- a) *Who* – which individuals, groups, businesses, agencies, and other interests will be involved?
 - b) *What* – is the mandate of the process? What is the process scope?
 - c) *When* – and for how long will the process be taking place? What is the time frame?
 - d) *Where* – will the process be taking place in terms of area covered and physical location? What are the process logistics?
 - e) *Why* – is the process taking place? Is there a shared purpose? Why would stakeholders want to get involved? Do they have reasons to participate?
 - f) *How* – will the process be able to function? Have dedicated resources been secured?

Setting these parameters will help to define stakeholders' roles and responsibilities, as well as the context within which decisions will be made. This is particularly important in situations of conflict—or where institutional, ownership, land use, and management arrangements are complex—both of which are common in natural resource management settings. Further definition of process structure can, and should, take place in conjunction with stakeholders.

For example, as part of such a process, participants could define ground rules, identify specific goals and objectives, develop mutually acceptable standards, and otherwise tailor it to meet their needs, thereby creating a sense of ownership.

Recommendation: A process framework should set basic parameters, such as potential participants, mandate, time frame, scope, logistics, purpose, and the resources available. When further defining a process, the goal should be to provide balance—neither too much nor too little structure—given the characteristics and context of a situation.

3) **Function:** Stakeholders are much more likely to participate, and work towards solutions, if they believe a process is fair. Process efficiency and effectiveness, both of which are largely derived from structure, influence perceptions of fairness.

a) *Efficiency* –The efforts of all interests must be coordinated to make good use of time and resources, which in turn, must be proportional to the process scope in order to promote efficiency. The coordination mechanism itself must also be fair.

Recommendation: Ensure that the time frame and resources allocated to a process match its scope.

Recommendation: Select a process coordinator that all participants perceive to be fair. The simplest option is to choose a neutral party. Fairness can also be achieved using a coordinating body, such as a board or committee, if all stakeholders believe representation is balanced.

b) *Effectiveness* – An effective process provides meaningful opportunities for stakeholders to participate in the reintegration of social, economic, and environmental interests in a manner that produces stable decisions. Concrete actions and projects are more likely to engage stakeholders and encourage learning and change than are academic presentations and discussions of abstract concepts.

Recommendation: Provide formal and informal collaboration opportunities for all stakeholders.

Recommendation: Have stakeholders develop mechanisms and standards that formally incorporate social, economic, and environmental concerns and values in the decision-making process. Ensure that such mechanisms are acceptable to all parties.

Recommendation: Provide opportunities for action. Pilot projects, community activities, stewardship initiatives, and other hands-on undertakings engage stakeholders, encourage learning and change, and help to build the relationships necessary for effective collaboration.

- 4) **Communication:** Good communication is an essential element of decision making, given the competing interests and values involved in sustainability issues; uncertainty; the general lack of familiarity and experience with, and trust in, collaborative decision-making models; and the need for changes that have the potential to impact some groups more than others. Effective communication requires more than just the production of information, or the provision of documents. All stakeholders must have access to these messages, understand them, and be able to formulate a response that is equally accessible and comprehensible to the originating party.

Recommendation: Mechanisms must be put in place to ensure that all stakeholders have access to information, education and meaningful participation opportunities, as well as the ability to stay up-to-date and involved.

DIRECTIONS FOR FUTURE RESEARCH

This research investigated the functioning of a collaborative decision-making model, the biosphere reserve, as a tool for progress towards more sustainable forms of tourism. The case study evaluation of efforts to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area of the Upper Bay of Fundy not only improved understanding of that specific

process, but its findings will also inform and improve future efforts—both within the BRNI context, and on a broader scale. The results obtained, challenges described, and information gaps identified by this project suggest several avenues for future research. Answering these questions would be a useful contribution to our understanding of, and ability to improve, decision-making processes in terms of sustainability goals.

- 1) What causes some collaborative efforts to falter, seemingly before they begin? Can specific factors be identified and strategies designed to overcome them, or to warn of impending difficulties? Evaluation of failed processes, or those that are sufficiently large to have had areas of differential success and failure, may provide valuable lessons. An analysis of the collapse of the BRNI process in Nova Scotia is an example of one such potential project.
- 2) What role do site characteristics play in the success or failure of such initiatives? What effects do they have on study results? In this case study, it was not possible to determine the extent to which results were site-specific, rather than problem-specific. In other words, would results be similar at other sites dealing with shorebird-viewing issues, or would they differ based on site conditions such as access, visitation, location of habitat, institutional arrangements, socioeconomic conditions, or the personalities involved. Other case study sites, both within the region and outside it, could be evaluated to determine whether or not results are affected by such characteristics.
- 3) Can the assessment of more advanced processes provide lessons for improving the probability of process success? The evaluation framework used here could be expanded to include outcome criteria, in addition to its process criteria, and applied to mature, ongoing processes, or those that have been completed. Such a framework could also be used to conduct a follow-up investigation of the BRNI process at a future date if it achieves sufficient support to move forward.
- 4) Is the evaluation framework applicable to other processes, or to models other than biosphere reserves?

- 5) What are the barriers to effective collaboration for institutional, business, and community interests? How can these barriers be minimized or overcome?
- 6) How well do various interests understand the concepts of sustainability and sustainable tourism? To what extent are the definitions shared? Has this translated into understanding and agreement on what changes would be necessary to move towards the sustainability goal?
- 7) How can such information be most effectively communicated to the various levels at which choices are made? To what extent does this kind of information contribute to change?

TOWARDS SUSTAINABILITY

One of the most encouraging themes encountered over the course of this research was that almost all stakeholders recognize environmental, social, and economic interests as legitimate components of sustainability. However, in practice, not all are accorded the same level of importance, and as a result they are often assigned priorities in a hierarchical, rather than integrated, manner. In other words, one or two of the three interests often become secondary concerns, which may be considered, but usually only after the primary interest. That other interests are considered at all—in more than a perfunctory way—represents a significant shift in management and decision-making paradigms, given the reductionistic origins of many modern-day institutions, social norms, and modes of interaction. Even so, sustainability principles suggest that a more holistic, comprehensive approach is required in order to develop appropriate, long-term solutions. Recognizing that the goals of groups, businesses, and agencies must reflect their mandates—whether protecting shorebirds and their habitat, creating economic well-being, or maintaining community lifestyles and values—does not alter the necessity of incorporating all three perspectives when establishing the objectives and actions to achieve those goals. Discretionary consideration of other perspectives after planning has been completed does not promote integrative solutions to problems.

The quest for sustainability is an ongoing, ever-evolving process, rather than a singular, fixed event. Decision making is at the crux of the challenge. The test for collaborative models like biosphere reserves, is the extent to which they are able to facilitate real changes in the attitudes,

practices, and actions of decision makers. While groups, businesses, agencies, and governments leading by example can be powerful instruments of change, ultimately decisions rest in the hands of individuals. Conflicts in values and interests will always exist. Yet if participants in this project are any indication, there are many committed, knowledgeable individuals who are willing to get involved in, and help resolve, issues that affect them. Empowering such individuals to make informed decisions—whether on a personal, or professional level—that actualize rather than compromise sustainability principles, provides the best opportunity for ensuring progress towards the sustainability goal.

APPENDIX A

Ethical Approval of Research Involving Human Subjects

SIMON FRASER UNIVERSITY

OFFICE OF RESEARCH ETHICS



BURNABY, BRITISH COLUMBIA
CANADA V5A 1S6
Telephone: 604-291-3447
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October 29, 2003

Ms. Sherene Faulkner Jackson
Graduate Student
School of Resource &
Environmental Management
Simon Fraser University

Dear Ms. Faulkner Jackson:

**Re: Evaluating the Process for Planning and Management of
Shorebird Viewing within the
Bay of Fundy Biosphere Reserve Nomination Initiative**

The above-titled ethics application has been granted approval by the Simon Fraser Research Ethics Board, in accordance with Policy R 20.01, "Ethics Review of Research Involving Human Subjects".

Sincerely,

/ /
Dr. Hal Weinberg, Director
Office of Research Ethics

For inclusion in thesis/dissertation/extended essays/research project report, as submitted to the university library in fulfillment of final requirements for graduation. Note: correct page number required.

APPENDIX B

Project Information Document

Title of Project: Using Sustainability Principles to Reconcile Conservation and Tourism Development Interests: A Case Study on Shorebird Viewing in the Bay of Fundy

Interview Locations: Interviews will take place in the greater Dorchester Region, the greater Sackville Region, Saint John, and Fredericton, New Brunswick.

Investigator: Sherene Faulkner Jackson

I would like to thank you for considering participation in this study. Its comprehensiveness depends on the willingness of individuals to share their expertise, perspectives, and opinions on efforts to address shorebird-viewing issues. Your contribution would be very valuable to my research. It is for these reasons that you have been asked to participate. This document will provide additional information for you to use in making your decision.

The overall goals of the study are:

- 1) To assess efforts to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area, as undertaken within the Bay of Fundy Biosphere Reserve Nomination Initiative process;
- 2) To identify the strengths and weaknesses of this process;
- 3) To make recommendations for improving this process; and
- 4) To make recommendations for improving the ability of decision-making processes in general to contribute to the development of more sustainable forms of tourism.

The study area has been defined as the coastal strip beginning at, and including, the Village of Dorchester and extending to Johnson's Mills. The zone reaches five-kilometers inland, and to the seaward side embraces areas exposed at low tide, particularly the mudflats of Grande Anse. These boundaries were chosen for a variety of reasons: to include the most significant shorebird areas and a cross-section of local interests, to make it easier for participants to answer interview questions, and to ensure that the scope and size of the project was reasonable for the researcher. Other researchers or individuals may choose to define the area differently for other studies.

If, after reading this Project Information Document and the Interview Consent Form, you decide to participate in the interview process, please complete one copy of the Interview Consent Form and return it to the researcher, Sherene Faulkner Jackson. You may keep a second copy for your records.

The interview will take approximately one hour. During the interview, you will be asked to respond to a series of questions regarding efforts to address the conflicts that have arisen over shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area, particularly within the context of the Bay of Fundy Biosphere Reserve Nomination Initiative. The questions are of

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two types. With the first type, the open question, you may answer as you wish. With the second type, the closed question, you will be asked to indicate the degree to which you agree or disagree with a given statement. A few questions simply require a yes or no response. You will be given the opportunity to explain or elaborate on your responses to both types of closed question.

By participating, you ensure that your interests, concerns, values, and perspectives or those of the group or agency you represent are incorporated into the assessment of efforts to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area. This will allow for a more thorough, balanced evaluation upon which to base recommendations for changing current and future processes in the event that improvement is possible. Improved processes for reconciling conservation and development interests may benefit all stakeholders involved or affected by reducing the level of uncertainty and conflict surrounding these issues.

As previously explained, all interviews and the information obtained from them will remain confidential. Responses to interview questions from individual participants will all be combined and presented in such a manner that it will not be possible to identify them with any individual, group, business, or agency. In addition, your participation is voluntary and you may terminate the interview at any time. As a result, there is no reasonable expectation of risk to the participants in this project, to third parties, or to society.

The information from this interview will be incorporated into a Master's Research Project for the School of Resource and Environmental Management at Simon Fraser University, Burnaby, BC, V5A 1S6. A copy of the study results will be made available to participants who wish to receive it.

Please note that some agencies, supervisors, or employers may require you to obtain permission prior to participating in a study of this kind.

Should you have any questions, concerns, or information requests please contact Sherene (Sheri) Faulkner Jackson by telephone (506) 635-8068, by email fauljack@nbnet.nb.ca or by fax at (506) 734-1980. If further resources are required, you may contact any or all of the following individuals:

Dr. J. Chadwick Day, Senior Project Supervisor
School of Resource and Environmental Management

H. Weinberg, Director
Office of Research Ethics

Dr. Frank Gobas, Director
School of Resource and Environmental Management

8888 University Way, Simon Fraser University, Burnaby, British Columbia, V5A 1S6, Canada.

Thank you for taking the time to read the project documents and for your assistance with my research.

APPENDIX C

Interview Consent Form

The University and those conducting this project subscribe to the ethical conduct of research and to the protection at all times of the interests, comfort, and safety of subjects. This research is being conducted under permission of the Simon Fraser Research Ethics Board. The chief concern of the Board is for the health, safety, and psychological well-being of research participants.

Should you wish to obtain information about your rights as a participant in research, or about the responsibilities of researchers, or if you have any questions, concerns, or complaints about the manner in which you were treated in this study, please contact the Director, Office of Research Ethics by email at hweinber@sfu.ca or phone at 604-268-6593.

Your signature on this form will signify that you have received a document which describes the procedures, possible risks, and benefits of this research project; that you have received an adequate opportunity to consider the information in the documents describing the project or experiment; and that you voluntarily agree to participate in the project or experiment.

Any information that is obtained during this study will be kept confidential to the full extent permitted by the law. Knowledge of your identity is not required. You will not be required to write your name or any other identifying information on research materials. Materials will be maintained in a secure location.

Title of Project: Using Sustainability Principles to Reconcile Conservation and Tourism Development Interests: A Case Study on Shorebird Viewing in the Bay of Fundy

Investigator Name: Sherene Faulkner Jackson

Investigator Department: School of Resource and Environmental Management, Simon Fraser University

Having been asked to participate in a research project, I certify that I have read the procedures specified in the Project Information Document, describing the project. I understand the procedures to be used in this project, and the personal risks and benefits to me in taking part in the project, as stated below:

Risks: There is no reasonable expectation of risk to the participants in this project. The information to be gathered in the course of the interviews will remain confidential. All responses to the interview questions will be combined and presented in such a manner that it will not be possible to identify them with any individual, group, business, or agency.

Benefits: The information obtained from the interviews will be utilized to assess the strengths and weakness of efforts to address shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area. By participating, subjects ensure that their interests, concerns, values, and perspectives or those of the group or agency they represent are incorporated into the assessment. This will allow for a more thorough, balanced evaluation upon which to base recommendations for improving current and future processes. Improved processes for reconciling conservation and development interests can benefit all stakeholders involved or affected by reducing the level of uncertainty and conflict surrounding these issues.

I understand that I may withdraw my participation at any time. I also understand that I may register any complaint with the researcher named above, or with the Director of the School of Resource and Environmental Management or the Director of the Office of Research Ethics as shown below.

SIMON FRASER UNIVERSITY

Dr. Frank Gobas, Director
School of Resource and Environmental Management

or

H. Weinberg, Director
Office of Research Ethics

8888 University Way, Simon Fraser University, Burnaby, British Columbia, V5A 1S6, Canada

I may obtain a copy of the results of this study, upon its completion by contacting:

Sherene Faulkner Jackson
27 Christopher Court, Apt. 12
Saint John, New Brunswick, E2K 4L4
fauljack@nbnet.nb.ca

School of Resource and Environmental Management
8888 University Way, Simon Fraser University
Burnaby, British Columbia, V5A 1S6

I have been informed that the research will be confidential to the full extent permitted by law.

I understand that my supervisor or employer may require me to obtain his or her permission prior to my participation in a study of this kind.

Subject Requirements:

In order to participate, I understand that I am required to read the Project Information Document and the Interview Consent Form. If I choose to participate, I will complete one copy of the Interview Consent Form and return it to the researcher, Sherene Faulkner Jackson. I will retain the other copy for my records. I will then be contacted by the researcher to set up a mutually acceptable interview time and location.

I understand that the interview will take approximately one hour, and that during the interview, I will be asked to respond to a series of questions regarding efforts to address the conflicts that have arisen over shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area, particularly within the context of the Bay of Fundy Biosphere Reserve Nomination Initiative.

I understand that all interviews are confidential, that my participation is voluntary, and that I may terminate the interview at any time. By completing this form, I am providing informed consent to indicate my willingness to participate in the project.

The subject and witness shall fill in this box. (Please Print Legibly)

Subject Last Name:

Subject First Name:

Subject Contact Information:

Subject Signature:

Witness:

Date (use format MM/DD/YYYY): _____

The subject and witness shall fill in this box. (Please Print Legibly)

APPENDIX D

Interview Questionnaire and Closed Question Responses

The purpose of this interview is to learn more about efforts to address issues that have arisen over a particular form of nature-based tourism development—namely shorebird viewing—in the Dorchester-Grande Anse-Johnson's Mills area of the upper Bay of Fundy.

The study area has been defined as the coastal strip beginning at, and including, the Village of Dorchester and extending to Johnson's Mills. The zone reaches five-kilometers inland, and to the seaward side embraces areas exposed at low tide, particularly the mudflats of Grande Anse. These boundaries were chosen for a variety of reasons: to include the most significant shorebird areas and a cross-section of local interests, to make it easier for participants to answer interview questions, and to ensure that the scope and size of the project was reasonable for the researcher. Other researchers or individuals may choose to define the area differently for other studies.

You will be asked to respond to two types of questions. With the first type, the open question, you may answer as you wish. With the second type, you will be asked to indicate the degree to which you agree or disagree with a given statement. These closed questions require one of the following responses: SA: strongly agree; MA: mildly agree; U: undecided or unsure; MD: mildly disagree; SD: strongly disagree; or N/A: not applicable. A few require a yes or no only. You will be given the opportunity to explain or elaborate on your responses to both types of closed question.

It is very important that you answer the questions as accurately and completely as possible. As explained on the consent form, your personal responses to questions in this interview will remain confidential. Responses from individual participants will be combined so that no individual/group/business/agency can be identified with a particular response when the study results are presented. In addition, your participation is voluntary and you may terminate the interview at any time. Should you have any questions or concerns that are not adequately addressed by the researcher, you may contact the individuals and/or departments listed on the consent form.

The information from this interview will be incorporated into a Master's Research Project for the School of Resource and Environmental Management at Simon Fraser University, Burnaby, BC, V5A 1S6. A copy of the study results will also be made available to participants who wish to receive it.

Unless you have any questions, let's begin.

Introductory Questions

- Q1. Do you live in the Dorchester-Grande Anse-Johnson's Mills study area as defined above?
If yes, how long have you lived there?
- Q2. What is your connection to the study area?

Challenge Identification

1. Identification of Issues

- Q3. What are the most significant issues that currently affect, or have the potential to affect, the sustainability of shorebird viewing in the Dorchester-Grande Anse-Johnson's Mills study area?
- Q4. Economic factors (such as development opportunities, infrastructure, etc.) play an important role in shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills study area.

8 SA, 10 MA, 2 MD

If the respondent agrees:

What are the most significant economic factors?

- Q5. Environmental factors (such as habitat protection, species conservation, etc.) play an important role in shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills study area.

19 SA, 1 U

If the respondent agrees:

What are the most significant environmental factors?

Q6. Social factors (such as the wishes of local people, the potential effects of change on local communities, etc.) play an important role in shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills study area.

14 SA, 6 MA

If the respondent agrees:

What are the most significant social factors?

****Questions administered to determine the necessity of using the modified questionnaire.****

Q(A). Have you heard of the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI)?

Q(B). How familiar are you with it?

Q(C). Are you or would you like to be involved?

2. Purpose

The next group of questions examines the reasons stakeholders may have to participate in addressing shorebird-viewing issues within the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process. For the purposes of this interview, a **stakeholder** is defined as any party with an interest in the issues and/or outcome.

Q7. Most stakeholders agree on what the major challenges are when it comes to the sustainability of shorebird viewing in the study area.

Please explain.

2 SA, 5 MA, 2 U, 9 MD, 1 SD, 1 N/A

Q8. Some form of cooperation is necessary to address the shorebird-viewing issues that I/my group/my agency feel(s) are most significant in the study area.

Would you like to explain further?

16 SA, 4 MA

Q9. I/my group/my agency have (has) goals and objectives for shorebird viewing in the study area. Would you like to explain further?

7 SA, 5 MA, 1 U, 1 MD, 2 SD, 4 N/A

Q10. There is some agreement about what stakeholders would like to achieve with respect to reconciling conservation and development interests in shorebird viewing in the study area.
Would you like to explain further?

6 SA, 10 MA, 3 U, 1 N/A

3. Level of Support

Q11. I/my group/my agency can achieve my (its) objectives with regard to shorebird-viewing issues in the study area without participating in the BRNI process.
Would you like to explain further?

7 SA, 7 MA, 1 U, 1 MD, 3 SD, 1 N/A

Q12. **I/my group/my agency have (has) dedicated the following resources to the Bay of Fundy Biosphere Reserve Nomination Initiative (BRNI) process in order to address shorebird-viewing issues in the study area.

Would you like to explain further?

- | | |
|------------------------|-------------------------|
| a) Time | 10 SA, 5 MA, 5 N/A |
| b) Personnel | 9 SA, 4 MA, 1 MD, 6 N/A |
| c) Financial resources | 5 SA, 3 MA, 6 MD, 6 N/A |
| d) Other resources | 6 SA, 3 MA, 1 U, 10 N/A |

Q13. **There is a reasonable opportunity to resolve the shorebird-viewing issues in the study area within the (BRNI) process.

9 SA, 3 MA, 1 U, 1 MD, 1 SD, 5 N/A

You may elaborate now if you wish; however, there will be other opportunities in the interview to address the specific reasons for your answer to this question.

Process Structure

4. Inclusive and Effective Representation of Interests

Q14. Who has an interest in shorebird conservation and/or tourism development issues in the Dorchester-Grande Anse-Johnson's Mills study area?

If the respondent's reply is very general:

Are there any specific individuals, groups, businesses, or agencies that come to mind?

Q15. All relevant interests, including those identified in the previous question, are represented in the BRNI process to address shorebird-viewing issues in the study area.

3 SA, 5 MA, 6 U, 5 MD, 1 N/A

If the respondent agrees:

- a) Is it reasonable to combine those with similar interests into a group with one representative in order to keep numbers manageable?
- b) Do you have any suggestions for recommended groupings?

If the respondent disagrees:

- a) Which individuals/groups/businesses/agencies are missing?
- b) Should all of the stakeholder groups be allowed to participate if they wish?
- c) Should any individuals/groups/businesses/agencies be excluded? For what reasons?

Would you like to explain further?

Q16. **It is clear that all representatives in the BRNI process are accountable to:

- a) The process (they follow rules that have been agreed to, they participate in good faith, etc.).

8 SA, 2 MA, 2 U, 2 MD, 6 N/A

- b) The interests they speak for.

8 SA, 1 MA, 3 U, 2 MD, 6 N/A

- c) The public (they respect that agencies must operate within certain rules, that some issues—such as public safety—are not negotiable, etc.).

9 SA, 2 MA, 3 MD, 6 N/A

5. Access to Resources

Q17. I/my group/my agency have (has) adequate resources to participate in the BRNI process to address shorebird-viewing issues in the study area, even if I/we are not currently involved.

Would you like to explain further?

- a) Funding 2 SA, 2 MA, 4 MD, 11 SD, 1 N/A
- b) Information 4 SA, 6 MA, 9 MD, 1 SD
- c) Training 4 SA, 10 MA, 1 U, 2 MD, 3 SD
- d) Access to the process 4 SA, 11 MA, 1 U, 2 MD, 2 SD

If the respondent is unsure or disagrees:

What resources would you need to participate more fully?

FOR PROCESS SPONSORS/CONVENERS ONLY

The BRNI has adequate resources to sponsor the process, or processes, for addressing shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area.

Would you like to explain further?

1 MA, 1 U, 1 MD, 2 SD, 15 N/A

6. Process Design

Q18. The following statements are designed to evaluate stakeholders' understanding of how, why, and by whom decisions about shorebird-viewing issues are made within the BRNI process. Please elaborate after each response.

- a) It is clear which groups/agencies/authorities are responsible for making decisions regarding shorebird viewing in the Dorchester-Grande Anse-Johnson's Mills area.

4 SA, 5 MA, 1 U, 7 MD, 3 SD

- b) It is clear what steps are involved in making such decisions.

1 SA, 1 MA, 5 U, 8 MD, 5 SD

c) The reasons why particular decisions are made are clear.

2 SA, 8 MA, 3 U, 4 MD, 2 SD, 1 N/A

d) Information on how, why, and by whom decisions are made can be easily obtained.

3 SA, 6 MA, 4 U, 5 MD, 2 SD

Q19. **The BRNI process for addressing shorebird-viewing issues is flexible. It can be changed to accommodate new information or circumstances.

Would you like to explain further?

9 SA, 3 MA, 8 N/A

Process Function

7. Efficiency

Q20. **Within the BRNI process, decisions about shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills area do get made.

Would you like to explain further?

1 SA, 2 MA, 7 U, 2 SD, 8 N/A

If the respondent disagrees, do not ask questions 21 and 22.

Q21. Decisions about shorebird-viewing issues within the BRNI process are being made at a reasonable financial expense.

Would you like to explain further?

1 SA, 1 MA

Q22. Decisions about shorebird-viewing issues within the BRNI process are being made within a reasonable amount of time.

Would you like to explain further?

1 SA, 1 MA

Q23. There is a person/group/agency responsible for coordinating the overall BRNI process.

8 SA, 4 MA, 3 U, 1 MD, 4 N/A

If the respondent agrees:

- a) Which individual/group/agency is responsible?
- b) Is the role of this individual/group/agency clearly defined?
- c) Is the task being carried out effectively?

Would you like to explain further?

If the respondent disagrees:

- a) Would a coordinator/coordinating group/coordinating agency be helpful?
- b) Who do you think should be responsible for this task?

Would you like to explain further?

8. Effectiveness

Q24. There are formal opportunities for interaction and/or collaboration to address shorebird-viewing issues (such as workshops, meetings, committees, written or oral submissions, reviews, etc.).

Would you like to explain further?

4 SA, 5 MA, 7 U, 3 MD, 1 N/A

Q25. Did you attend the October 2001 workshop in Sackville, New Brunswick on reconciling conservation and development issues related to shorebird viewing and ecotourism?

If yes:

- a) Were participants able to agree on which shorebird-viewing issues are the most significant?
- b) Did participants work together to set goals and objectives for finding solutions to these issues?
- c) Do you think that this effort at collaboration was successful in terms of making progress on shorebird-viewing issues? Why or why not?

d) As a result of this conference, do you think that the level of conflict surrounding shorebird-viewing issues stayed at the same level, decreased, or increased?
Would you like to explain further?

Q26. There are informal opportunities for interaction and/or collaboration to address shorebird-viewing issues (such as field trips, lunches, drop-in visits, conversations, shared activities, etc.).

Would you like to explain further?

4 SA, 11 MA, 3 U, 2 MD

Q27. Increasing the level of collaboration would produce better decisions in terms of shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills study area.

Would you like to explain further?

14 SA, 4 MA, 2 U

Q28. Adequate information, research, and assessment exist to make decisions about shorebird-viewing issues in the study area.

5 SA, 7 MA, 3 U, 5 MD

If the respondent agrees:

a) Is this information in a form that is readily accessible and understandable to those who need it?

b) Is this information being used for making decisions?

Would you like to explain further?

If the respondent disagrees:

a) What information gaps exist?

b) If some information is available, is it in a form that is readily accessible and understandable to those who need it?

Would you like to explain further?

Q29. It is clear that decisions about shorebird viewing in the study area consider:

- a) Shorebird conservation
9 SA, 7 MA, 3 U, 1 N/A
- b) Habitat protection
7 SA, 9 MA, 3 U, 1 N/A
- c) Ecosystem function
3 SA, 8 MA, 5 U, 2 MD, 1 SD, 1 N/A
- d) Cumulative effects
2 SA, 6 MA, 6 U, 1 MD, 4 SD, 1 N/A
- e) Visitor management
3 SA, 11 MA, 4 U, 1 SD, 1 N/A
- f) Wishes of local community
2 SA, 5 MA, 8 U, 2 MD, 2 SD, 1 N/A
- g) Effects on the social structure and services of surrounding communities
3 SA, 6 MA, 6 U, 3 MD, 2 N/A
- h) Effects on the lifestyle/character of surrounding communities
11 MA, 7 U, 1 MD, 1 N/A
- i) Tourism development
7 SA, 8 MA, 3 U, 1 MD, 1 N/A
- j) Employment opportunities
3 SA, 9 MA, 6 U, 1 SD, 1 N/A
- k) Infrastructure requirements
5 SA, 6 MA, 5 U, 2 MD, 1 SD, 1 N/A
- l) Other development opportunities
5 MA, 9 U, 2 MD, 4 N/A

Would you like to explain further?

Q30. Decisions about shorebird-viewing issues are based on mutually adopted standards.

Would you like to explain further?

3 SA, 4 MA, 7 U, 4 MD, 2 N/A

Q31. At this point in time, decisions about shorebird-viewing issues in the Dorchester-Grande Anse-Johnson's Mills study area are likely to be acceptable, though not necessarily ideal, to the various interests involved.

Would you like to explain further?

3 SA, 13 MA, 2 U, 1 MD, 1 N/A

Q32. At this point in time, decisions about shorebird-viewing issues in the study area are likely to be acceptable to, though not necessarily ideal for, the public.

Would you like to explain further?

4 SA, 11 MA, 4 U, 1 N/A

Q33. **Overall, the BRNI process has made it easier for me/my group/my agency to implement decisions about shorebird-viewing issues in the study area.

Would you like to explain further?

2 SA, 2 MA, 2 U, 3 MD, 3 SD, 8 N/A

Q34. **Overall, the process encourages education and learning for ALL stakeholders.

8 SA, 3 MA, 1 U, 1 MD, 7 N/A

If the respondent agrees:

Please give some examples of how education and learning are encouraged.

If the respondent disagrees:

- a) Does the process encourage education and learning for any stakeholders?
- b) If so, which ones?
- c) If not, why not?
- d) Who is excluded from education and learning opportunities?

Q35. **Overall, the process is likely to change attitudes toward shorebird-viewing issues.

Would you like to explain further?

6 SA, 4 MA, 3 U, 7 N/A

Q36. **Overall, the process is likely to affect the choices that stakeholders make about activities that may impact on shorebird viewing. ,

Would you like to explain further?

7 SA, 6 MA, 7 N/A

Q37. **There are things that could be done to improve the process.

Would you like to explain further?

10 SA, 2 MA, 2 U, 6 N/A

Q38. Do you believe that it is possible to reach a mutually acceptable resolution to the conflict between conservation and development interests over shorebird viewing in the Dorchester-Grande Anse-Johnson's Mills area? In other words, while no interest may get exactly what it wants, it is or it may be possible to find solutions that are acceptable to all parties.

Please explain.

Q39. Do you think that these multi-interest management policies promote the preservation of ecosystems that will help the long-term sustainability of shorebird populations in the Dorchester-Grande Anse-Johnson's Mills area?

Please explain.

This is the end of the formal interview. Is there any other information that you would like to share?

Thank you for participating.

APPENDIX E

A Framework for Evaluating a Decision-making Process as a Mechanism for Progressing Towards More Sustainable Forms of Tourism

Criteria	Description	Indicators
Challenge Identification		
1. Identification of Issues	Stakeholders should be able to identify the major issues affecting the sustainability of the form of tourism being studied. This includes recognition of issues associated with other interests or groups.	<ul style="list-style-type: none"> • List of issues that includes social, economic, and environmental perspectives • Repetition of key issues
2. Purpose	Stakeholders must have a reason to participate. To be successful, there must be some agreement on the definition of what is to be achieved. ^{a, b, c, d, e, g, h, i}	<ul style="list-style-type: none"> • Recognition of interdependence of interests ^{a, c, d, g, h,} • Degree of overlap in interests and issues • Common goals and objectives ^{a, b, c, d, f, h}
3. Level of Support	Stakeholders should be committed to addressing the issues that have been identified and believe that the process provides a viable opportunity for resolving them. ^{a, c, d, e, g, h, i}	<ul style="list-style-type: none"> • Willingness to dedicate time and/or other resources ^{a, c, d, e, i} • Perception of process appropriateness ^{a, c, d, e, g, h, i} • Commitment to process ^{a, c, d, e, g, h, i}
Process Structure		
4. Inclusive and Effective Representation of Interests	All parties with an interest in the issues and outcome, as well as those with authority to make or implement decisions, and those who could block implementation or undermine the process, should be allowed to participate. The appropriate form(s) for this participation may vary. Representatives who do participate must be accountable to their constituency. ^{a, c, d, e, f, g, h, i, j}	<ul style="list-style-type: none"> • Breadth of stakeholders identified and involved • Ability and willingness to participate ^{a, c, d, h} • Clear lines of accountability with interests and the public ^{a, c, d, e, i, j}
5. Access to Resources	All legitimate interests who wish to participate have adequate funding, training, information, and expertise to enable them to do so in a meaningful way. ^{a, c, d, e, h, i}	<ul style="list-style-type: none"> • Availability of funding, training, and information ^{a, c, d, e, h, i} • Accessibility ^{a, c, d, e, i} • Effect on participation

Framework (continued)

Criteria	Description	Indicators
Process Structure		
6. Process Design	Stakeholders should have an understanding of the process. Roles and responsibilities should be clearly defined to enable stakeholders and the general public to understand how, why, and by whom decisions are made. The process should be adaptive and flexible. ^{a, b, c, d, e, f, g, h, i, j}	<ul style="list-style-type: none"> • Process rules and procedures ^{a, c, d, e, h, i} • Lines of authority • Defined communication links ^{a, c, d, e, i} • Mechanism for review and change ^{a, c, d, e, i, j}
Process Function		
7. Efficiency	In striving to make good decisions about the issues identified, the process should coordinate the efforts of all interests and make good use of time and resources. ^{a, c, d, e, h, j}	<ul style="list-style-type: none"> • Cost ^{e, j} • Time ^{a, c, d, e, g, i, j} • Coordination mechanisms ^{a, c, d, e, h, i} • Decisions do/do not get made
8. Effectiveness	<p>An effective process should provide meaningful opportunities for stakeholders to participate in problem solving and in the crafting of mutually acceptable solutions to the issues. ^{a, c, d, f, i, j}</p> <p>Decisions should be based on adequate information and assessment. It should be clear that they consider the full range of social, environmental, and economic concerns and values, while remaining consistent with applicable regulations, principles, and policies. ^{a, c, d, e, g, j}</p> <p>The overall process should reflect local aspirations and produce wise and stable decisions and agreements. ^{a, c, d, e, f, j}</p> <p>Education and learning should be encouraged. ^{a, c, e}</p>	<ul style="list-style-type: none"> • Opportunities for interaction and formal/informal collaboration ^c • Changes in levels of trust, collaboration, and conflict resolution ^{c, d, e, f, g} • Presence/absence of gaps in necessary information • Consideration of social, environmental, and economic values • Development of mutually acceptable standards ^{c, d} • Acceptability of decisions and agreements to all interests and the public ^{a, f} • Level of local support • Ease of implementation • Improved stability ^{a, f} • Changes in attitudes, practices, and actions ^a

Adapted from and/or constructed based on the results, recommendations, and conclusions of the following:

- ^a Frame, Day, and Gunton 2002
- ^b Currie-Alder 2001
- ^c Duffy et al. 1998
- ^d Penrose, Day, and Roseland 1998
- ^e Tambllyn and Day 1998

- ^f Duffy, Roseland, and Gunton 1996
- ^g Hawkes 1996
- ^h Kofinas and Griggs 1996
- ⁱ Wilson, Roseland, and Day 1996
- ^j CORE 1995

APPENDIX F

Conservation and Tourism Development Interests Identified in Question 14

Bay of Fundy Ecosystem Partnership (BoFEP)	NB Nature Trust
Bay of Fundy Tourism Partnership (BoFTP)	North American Bird Conservation Initiative (NABCI)
Bird Studies Canada	Nova Scotia Tourism
Canadian Wildlife Service (CWS)*	Photographers/photography clubs
Conservation Council of New Brunswick (CCNB)	Planners: provincial, regional, municipal
Department of Fisheries and Oceans (DFO)	Real estate developers
Ducks Unlimited	Regional development committees, and associations (ACOA)
Eastern Habitat Joint Venture (EHJV)	Residents' Association Members
Experimental Energy	Sandpiper Festival Committee
Forest Stewardship Council	Schools
Forestry Interests	Town of Sackville*
Fort Folly First Nation	UNESCO Biosphere Reserve Committee
Fundy Model Forest	United States Fish and Wildlife Service
Governments: federal, provincial (NB, NS), municipal*	Universities
Harvesting operations	Village of Dorchester*
International: Caribbean, Americas	Watershed groups
Local businesses	Western Hemispheric Shorebird Reserve Network (WHSRN)
Local residents/landowners*	Wildlife Habitat Canada
Local tourism operators and businesses*	Youth
Local/regional tourism industry associations*	Other: private donators, everyone
Naturalist's Societies	
Nature Conservancy of Canada (NCC)*	
Nature lovers	
NB Department of Environment and Local Government	
NB Department of Natural Resources*	
NB Department of Tourism and Parks*	
NB Department of Transportation	
NB Federation of Naturalists	
NB Land Trust	
NB Museum	

*Denotes ten most frequent responses.

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